‘HOMEGROWN’ MACROECONOMIC FRAMEWORK

By

Dr. Hafiz A. Pasha, Shahid Kardar and Muhammad Imran*

The recent medium-term projections by some of the major multilateral agencies have created a strong sense of apprehension about the future prospects for the economy of Pakistan. For example, the World Bank expects the GDP growth to be 3.4 percent in 2018-19, down to 2.7 percent in 2019-20 and then rising somewhat to 4 percent in 2020-21. The IMF’s projections in its latest World Economic Outlook project the GDP growth rate to remain locked in the range of 2 to 3 percent only from 2018-19 to 2023-24. Presumably, this is based on the assumption that Pakistan will not go into an IMF Program.

The problem with these projections is that there are no methodological notes to support these projections. Are they based on formal macroeconomic modeling of a country’s economy or are largely the result of subjective judgments influenced primarily by on-going trends? In the latter case, are they internally consistent?

The objective of this report is to develop a proper Macroeconomic Framework for Pakistan by construction of a Macro-Econometric Model. The model enables different policy simulations to be undertaken with different levels and combinations of major policy variables related to fiscal, monetary, trade and other policies.

The projections for the key macroeconomic variables are based on the assumption that Pakistan will shortly negotiate an Extended Fund Facility (EFF) with the IMF which will be operative from 2019-20 to 2021-22. The size of the Program is expected not to exceed significantly the remainder of the SDR Quota of the country with the IMF after accounting for the earlier releases from 2013-14 to 2015-16 in the previous EFF. As such, the size of the impending Program is relatively small at $6 to $8 billion.

1. THE MODEL

The Macro-Econometric Model for Pakistan[1] has 46 equations. Time series data from 1990-91 to 2017-18 has been used. This is the first time in the past many years that such a Model has been built for Pakistan. It ensures the reliability and consistency in the impact of policy variables on macroeconomic outcomes.

The following key medium-term relationships with lags emerge on average from estimation of the Model:

---

*Dr. Hafiz A. Pasha is former Federal Minister, Mr. Shahid Kardar is former Governor of SBP and Mr. Muhammad Imran is the Research Fellow.

[1] *The specification of the model is available on request to hafiz.pasha@gmail.com.*

(i) A 1 percent higher growth rate of the GDP leads to 0.7 percent increase in the volume of imports while a 1 percent depreciation in the value of the rupee leads to a fall in the volume of imports of 0.2 percent.

(ii) A 1 percent growth rate in the volume of world trade leads to a rise in the volume of Pakistan's exports of 0.6 percent while a 1 percent depreciation in the value of the rupee leads to 0.7 percent increase in the volume of exports.

(iii) A 1 percent decrease in the value of the rupee leads to a rise in the domestic price index of 0.4 percent.

(iv) A 1 percent higher growth rate of the GDP leads to 1.1 percent increase in the tax revenues in the presence of an unchanged tax system.

(v) A rise in the nominal interest rate by 1 percentage point leads to a decline in the real level of private investment by 0.8 percent. A 1 percent higher growth rate of the GDP leads to an increase in private investment by 1.1 percent.

2. THE TARGETS

The key targets in the 'Homegrown' Macroeconomic Framework are as follows:

GDP Growth Rate: The GDP growth rate is not expected to be significantly above 3 percent in 2018-19 as the economy has visibly slowed down. Given the strong stabilization measures required in 2019-20, the GDP growth is likely to remain, more or less, unchanged. Thereafter, it could rise to 4 percent in 2020-21 and reach 4.5 percent by 2021-22. Beyond this, as the deficits come down substantially, the years, 2022-23 and 2023-24 can witness substantial expansion in aggregate demand leading to a GDP growth rate approaching 6 percent in 2023-24.

Level of Investment: The cut in the national PSDP is likely to imply a significant fall in the overall investment to GDP ratio in 2018-19. With the continuation of relatively high interest rates and higher prices of imported capital goods there is the likelihood that the investment level will remain relatively low up to 2021-22. More expansionary policies and a major fall in the interest rate could lead to a jump in the investment level to over 17.5 percent of the GDP by 2023-24. Simultaneously, the size of the national PSDP and other public development expenditure should rise to above 4 percent of the GDP.

Employment: The increase in number of jobs is likely to fall sharply in 2018-19 and 2019-20. It could rise to above 1 million in 2020-21 and attain the target of 2 million by 2023-24. The unemployment rate will rise initially and then fall.

Rate of Inflation: The rate of inflation is likely to reach a peak double-digit rate in 2019-20 due particularly to the continuing depreciation of the rupee and higher indirect tax burden. It will remain high single-digit the next two years and the target is to bring it down to below 5 percent from 2021-22 onwards.

Current Account Deficit: The current account deficit exceeded 6 percent of the GDP and is likely to be close to 4.5 percent of the GDP in 2018-19. Beyond this, there is need for a sharp reduction in this deficit to almost 2 percent of the GDP by 2021-22. This level should not be significantly exceeded thereafter.

The Tax-to-GDP Ratio: The tax-to-GDP ratio had risen to 13 percent of the GDP by 2017-18. However, with slow growth in tax revenues in 2018-19 it is likely to fall below 12.5 percent of the GDP in 2018-19. Maximum effort will have to be made to boost tax revenues in 2019-20 by over 1 percent of the GDP. This effort will need to continue until the tax-to-GDP ratio rises to 16 percent by 2023-24. Various studies, including that by UNESCO, have estimated the tax revenue potential of Pakistan at 16 percent of the GDP. Over the next five year period, the great challenge will be to raise the tax-to-GDP ratio by 3.5 percent of the GDP.

Budget and Primary Deficit: The primary deficit was 2.2 percent of the GDP and the overall budget deficit was 6.6 percent of the GDP in 2017-18. The latter is likely to rise to almost 7 percent of the GDP in 2018-19 while the primary deficit could fall below 2 percent of the GDP. The buildup of public debt is crucially dependent on the size of the primary deficit. As such, a key proposed target is to eliminate the primary deficit by 2020-21. By 2021-22, the budget deficit should be down to 4 percent of the GDP and remain close to this level thereafter. At this time, the primary surplus will be significantly positive. The level of public debt as a percentage of the GDP should start falling from 2021-22 onwards.

3. THE POLICY AGENDA

The primary objectives behind the design and implementation of the policy agenda are to reduce substantially the 'twin' deficits while preserving the growth momentum to the extent possible. It is expected that the process of structural adjustment will take place primarily in the first two years, 2019-20 and 2020-21. Thereafter, the economy can get on gradually to a trajectory of higher growth, reaching a GDP growth rate of almost 6 percent by 2023-24.

The key elements of the policy agenda are described below:

Containment of Imports: The Government has already introduced a number of measures to restrict the level of imports. The rupee has been depreciated by 16 percent up to now in 2018-19. Today, there is no significant overvaluation of the rupee. Luxury goods imports have been restricted by the imposition of large regulatory duties and 100 percent cash margin requirements. However, their coverage is only 6 percent of imports currently.

The approach adopted is to ensure that in the future there is no significant overvaluation of the rupee. A 15 percent real depreciation of the rupee is envisaged during 2019-20 and 2020-21. Simultaneously, it is proposed to widen the coverage of the cash margins of up to 30 percent. Imports of major essential goods like POL products, fertilizer, medicines, pulses and edible oil should not be subject to cash margin requirements. In addition, it is proposed to raise the maximum import tariff from 20 percent to 25 percent to provide more protection to domestic industry.

Promotion of Exports: A large number of steps have already been taken to promote exports. These include depreciation of the rupee, lower power tariffs, duty exemption on imported inputs for exports, issuance of promissory notes against refunds due and an export incentive scheme. However, despite these wide-ranging measures there has been no visible improvement in exports. It appears that exporters have largely opted initially for increase in their rupee profit margins. As such, the benefit of the devaluation has only been passed on partially to buyers in the form of lower dollar prices.

The policy agenda for promoting exports will include the payment automatically to exporters of the export incentive at the time of receipt of the export earnings by the commercial banks. Also, the export incentive scheme will need to be widened to cover a large number of emerging exports. Export-oriented SMEs should be given preferential access to credit and energy.

Tax Revenue Mobilization: This is the critical area if the size of the fiscal deficit is to be controlled. Apparently, the IMF Framework is proposing generation of up to Rs 700 billion through taxation proposals in the budget of 2019-20. This is excessive and while imposing an intolerable burden on the people will suffocate growth in the economy.

The 'Homegrown' Macroeconomic Framework proposes additional taxation of Rs 650 billion in 2019-20 and 2020-21 combined. Additional revenue of over Rs 100 billion is likely to be generated in 2019-20 by the restoration of taxes on mobile phone cards by the Supreme Court recently. The primary focus will be on generating at least half the additional revenues from direct taxes. Reforms in the Federal income tax will include reduction in tax expenditures, scaling down of the exemption limit, extra profit taxation, transition from schedular to comprehensive income taxation, broadening the tax base of capital gains tax, provision of incentives for filing returns and so on. In the realm of indirect taxes, the primary emphasis will be the move to a nationally integrated value added tax on goods and services, rationalization of import tariffs and broadening the tax base of excise duties by levy of a 'green' tax on polluting industries. Simultaneously Provincial direct taxes like the agricultural income tax and the urban Immoveable property tax will need to be developed. The potential additional revenue from these two taxes is almost Rs 100 billion.

Managing Expenditure: Current expenditure has been characterized by, more or less, runaway growth in 2018-19.This is due particularly to higher debt servicing caused by the major jump in interest rates. The Macroeconomic Framework, which includes the Budgetary Framework, is based on a strong effort to reduce the size of the Federal Government and only limited increase in current expenditure of Provincial Governments linked to the completion of development projects, especially in the social sectors. Further, the defense budget may be subjected to voluntary restraint. Also, subsidies and grants will need to be reduced. A policy of no increase in salary and allowances or pensions may also have to be followed in 2019-20, except for low level employees.

Development spending is projected to show low real growth in the first two years. Thereafter, it can begin to grow somewhat rapidly. As such, priority will need to be attached to avoid 'spreading too thin' and allocate bulk of the funds to relatively mature on-going projects especially in water resources, power transmission and distribution sectors and CPEC. In addition, escalation in energy tariffs is proposed in 2019-20 and 2020-21.This will prevent further accumulation of circular debt. Beyond 2020-21, access to cheaper sources of electricity and reduction in losses should obviate the need for further tariff escalation.

The magnitude of the policy variables over the next five years are given in Table 1.

Table 1
Magnitude of Policy Variables

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Level of Interest Rate *(%)*	11.0	11.5	11.5	10.0	9.0	8.0
Revenue from Taxation Proposals *(Rs in Billion)*	-150	350	300	200	200	250
Current Expenditure*(Growth Rate)*	20.0	12.5	10.0	10.0	12.5	12.5
Development Expenditure	-20.0	12.5	12.5	15.0	17.5	20.0
REER (1990-91 = 100)	100.0	→	85.0		→	95.0
Energy Costs Increase	15.0	15.0	10.0	-	-	-

3. THE MEDIUM-TERM MACROECONOMIC FRAMEWORK

The magnitudes of the policy variables are fed into the Macro-Econometric model to yield the following projections of key macroeconomic magnitudes:

GDP Growth Rate: The GDP growth rate is likely to be low in 2018-19 at 3.2 percent. It is expected to rise somewhat to 3.9 percent in 2019-20 due to reduction in the trade deficit in goods and services. Thereafter, the growth rate is likely to reach 4.5 percent in 2020-21; 5 percent in 2021-22 and come close to 6 percent in 2023-24.

Rate of Inflation: The average rate of inflation is estimated at 8.3 percent in 2018-19. A peak rate of inflation is likely to be attained in 2019-20 of 11.5 percent due to a rise in inflationary expectations, higher indirect taxation and decline in the value of the currency.

Rate of Investment and Savings: The rate of investment is likely to fall sharply in 2018-19 to 15.1 percent of the GDP from 16.4 percent of the GDP last year. It is likely to remain low in 2019-20 and 2020-21 due to the continuation of relatively high interest rates and a limit to the growth in public development spending. Following the resort to more expansionary policies from 2021-22 onwards, the overall rate of investment is expected to rise significantly to 17.5

percent of the GDP by 2023-24.Simultaneously, the rate of savings will increase to 15.4 percent as the current account deficit declines. In particular, the rate of public savings could rise sharply.

Current Account Balance: This is probably the most important magnitude in the Macroeconomic Framework. With containment of aggregate demand, some depreciation of the rupee and other policy measures described above the current account deficit is likely to fall from $19 billion to $11.8 billion in 2018-19 and to $7.3 billion in 2019-20. Thereafter, it should remain low at about 2 percent of the GDP, which is even less than the minimum safe level.

Table 2
Medium-Term Macroeconomic Framework

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
				(% Change)			
GDP at factor cost	**5.2**	**3.2**	**3.9**	**4.5**	**5.0**	**5.4**	**5.8**
Rate of Inflation	**3.9**	**8.3**	**11.5**	**9.5**	**4.6**	**4.7**	**4.9**
Investment and Savings				**(% of GDP)**			
Investment	16.4	15.1	15.0	15.1	15.9	16.7	17.5
Savings	10.3	10.7	12.1	12.9	13.9	14.6	15.4
Current Account Balance							
US$ in Billion	**-19.0**	**-11.8**	**-7.3**	**-5.6**	**-5.2**	**-5.7**	**-6.4**
As % of GDP	**-6.1**	**-4.4**	**-2.9**	**-2.2**	**-2.0**	**-2.1**	**-2.1**
Budget Deficit	**-6.6**	**-6.9**	**-5.8**	**-4.5**	**-4.0**	**-4.0**	**-4.1**
Primary Deficit (-) / Surplus (+)	-2.2	-1.7	-0.3	+0.7	+1.1	+1.0	+0.9
Employment (Increase, 000s)	**1,710**	**794**	**989**	**1,102**	**1,554**	**1,871**	**2,153**
% Change in Incidence of Poverty	**-1.0**	**2.0**	**2.0**	**0.8**	**0.0**	**-0.5**	**-0.8**

Budget Deficit: The budget deficit is likely to peak at 6.9 percent of the GDP this year. A major effort at mobilizing more revenues and economizing on public expenditure could bring it down to 5.8 percent of the GDP in 2019-20. Thereafter, it should fall gradually to 4 percent of the GDP by 2021-22. The target is to eliminate the primary deficit by 2020-21. This will ensure that the public debt to GDP ratio will start falling.

Turning to the socio-economic consequences, the prospects for employment and the likely trends in poverty are highlighted below.

Employment: During the period of stabilization, the rate of unemployment is likely to rise. In 2018-19 and 2019-20 less than one million jobs may be created in the presence of annual expansion in the labor force of almost 1.8 million workers. Gradually, conditions in the labor market are likely to improve. However, only in 2023-24 is the employment generation likely to exceed 2 million, the annual target set by the PTI Government.

Poverty: The unfortunate likely reality is that from 2018-19 to 2020-21 the incidence of poverty will increase in the country. Almost 9 million people could fall below the poverty line during these two years. Poverty will only begin to be successfully tackled from 2022-23 onwards, albeit at a modest rate.

The summary position of the balance of payments is given in Table 3.

Table 3
Balance of Payments – (US$ in Billion)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Trade Deficit in Goods & Services	-36.9	-31.7	-28.1	-27.3	-28.1	-29.9	-32.1
Exports	30.1	32.2	34.6	36.9	40.0	43.9	47.9
Imports	-67.0	-63.9	-62.7	-64.3	-68.0	-73.9	-80.0
Primary and Secondary Income	**17.9**	**19.9**	**20.8**	**21.7**	**22.9**	**24.3**	**25.7**
Current Account Deficit	**-19.0**	**-11.8**	**-7.3**	**-5.6**	**-5.2**	**-5.6**	**-6.4**
Financial Account	**13.7**	**12.2**	**5.9**	**7.4**	**7.5**	**8.5**	**10.5**
Others	-1.0	-0.7	2.1	0.8	-0.2	-1.1	-1.1
Balance of Payments	**-6.3**	**-0.3**	**0.7**	**2.6**	**2.1**	**1.7**	**3.0**
Reserves with SBP	**9.8**	**9.5**	**10.2**	**12.8**	**14.9**	**16.6**	**19.6**
Import Cover (in months)	**1.7**	**1.8**	**2.0**	**2.4**	**2.6**	**2.7**	**3.0**

Based on the presence of the IMF EFF of $6 billion over the next three years and success in rolling over deposits with SBP, the balance of payments position should gradually improve from 2019-20 onwards, especially with some front loading of IMF financing. Consequently, reserves with the SBP are likely to more than double over the next five years. This will raise the import cover from two months in 2019-20 to three months in 2023-24.

The Current Account deficit is projected at around $13 billion for the two years 2019-20 and 2020-21. Repayments due are roughly $42 billion on external debt (based on original maturity) covering government and private debt, Chinese, Saudi and UAE deposits with SBP and

Chinese Yuan currency Swaps. With a target for a build-up of foreign currency reserves to approximately 2.5 months by the close of 2020-21 from the expected level of 1.8 months by the end of 2018-19 the achievement of the net inflow on the Financial Account of $13.3 billion over these two these years would be contingent upon the following.

(i) The rollover or rescheduling into long term loans of repayments in excess of $20 billion in respect of the Chinese government and commercial debt and the Yuan currency Swap of $3 billion, the debt of the Islamic Development Bank and the Chinese SAFE Deposits and the Saudi and UAE deposits with the SBP. For debts not rolled over there would have to be fresh debt taken of the equivalent amount.

(ii) If the debts due in (i) above are indeed rolled over as proposed then additional debt of $10 billion would still have to be raised in the form of IMF's EFF facility, inflows of Program and Project Loans from the multilaterals-World Bank and ADB- and mobilization of funds from global financial institutions owing to the improved access to international financial markets as a result of the Program agreement with the IMF.

Finally, the Budgetary Framework is presented in Table 4. In line with the targets mentioned above, the tax-to-GDP ratio should reach 16 percent of the GDP by 2023-24. The big annual increase is in 2019-20 of 1.2 percent of the GDP. FBR revenues should also jump to 13.5 percent and Provincial tax revenues to 2 percent of the GDP by 2023-24.

Table 4
Budgetary Framework, 2017-18 to 2023-24 – (% of GDP)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
REVENUES	**15.2**	**14.5**	**15.5**	**16.2**	**16.8**	**17.3**	**17.7**
Tax Revenues	**13.0**	**12.5**	**13.7**	**14.4**	**15.0**	**15.6**	**16.0**
FBR Tax Revenues	11.2	10.7	11.8	12.3	12.8	13.2	13.5
Other Federal Taxes	0.6	0.7	0.6	0.6	0.5	0.5	0.5
Provincial Tax Revenues	1.2	1.1	1.3	1.5	1.7	1.9	2.0
Non-Tax Revenues	**2.2**	**2.0**	**1.8**	**1.8**	**1.8**	**1.7**	**1.7**
EXPENDITURE	**21.8**	**21.4**	**21.0**	**20.4**	**20.8**	**21.3**	**21.8**
Current Expenditure	**17.4**	**18.2**	**18.1**	**17.5**	**17.4**	**17.7**	**17.8**
Federal	**11.4**	**12.2**	**12.0**	**11.6**	**11.6**	**11.6**	**11.6**
Debt Servicing	4.4	5.2	5.5	5.2	5.1	5.0	5.0
Other Federal Taxes	7.0	7.0	6.5	6.4	6.5	6.6	6.6
Provincial	**6.0**	**6.0**	**6.1**	**5.9**	**5.8**	**6.1**	**6.2**
Development Expenditure	**4.4**	**3.2**	**3.2**	**3.2**	**3.4**	**3.6**	**4.0**

DEFICIT							
Budget Deficit	**-6.6**	**-6.9**	**-5.8**	**-4.5**	**-4.0**	**-4.0**	**-4.1**
Primary Deficit (-) / Surplus (+)	**-2.2**	**-1.7**	**-0.3**	**+0.7**	**+1.1**	**+1.0**	**+0.9**

The containment of public expenditure has to be largely resorted to up to 2020-21. Thereafter, development expenditure, in particular, can rise significantly. A larger allocation will need to be made for social protection programs. Overall, the budget deficit is expected to fall from 6.9 percent of the GDP this year to close to 4 percent of the GDP by 2021-22. Consequently, the public debt to GDP ratio will start falling from 2020-21 when a primary surplus is generated for the first time.

In conclusion, Pakistan will need to pursue an agenda of deep and wide-ranging reforms with the umbrella of an IMF EFF, especially over the next two years. There is ideally a need for the Government to develop a broad-based political consensus on the design and implementation of the reforms. The nation can then eventually move on to the path of higher and more inclusive growth. We wish the Government success in its efforts.