



Annual Economic review of 2021-22

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next

Pakistan Economy

July 22, 2022

The year, 2021-22, has just come to an end. It was a year characterized by considerable uncertainty both on the economic and political fronts. The new coalition government, which was inducted into power in early April 2022, took time initially to take the urgent policy actions.

Pakistan Economy

However, by now, the petroleum prices have been raised by as much as 66 percent to 85 percent in relation to the level following the price reduction by the previous Prime Minister in end-March 2022. Big increases in the gas and electricity tariffs are pending and will be implemented shortly.

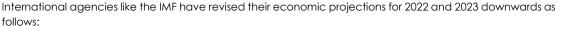
| Key Data | |
|-------------------------------|--------|
| KSE100 Index | 39,832 |
| KSE-All Share Value (PKRmn) | 4,283 |
| KSE-All Share Value (USDmn) | 19.0 |
| KSE-All Share Volume (Shmn) | 158.0 |
| Market Capitalization (PKRtn) | 6.7 |
| Market Capitalization (USDbn) | 29.6 |
| 1 Year High | 48,112 |
| 1 Year Low | 40,389 |
| Source: PSX. Next Research | |

These steps have been taken to facilitate the completion of the pending seventh review of the IMF program. The staff review process is at its final stages. The federal budget of 2022-23 had to be revised substantially to meet the IMF requirement of a primary surplus, with adequate resource mobilization and expenditure containment. The IMF has shared the draft agreement on policies with the government. Hopefully, the Extended Fund Facility will become operative once again soon and the due installments of the loan will be released by the IMF.

Source. I sh, Next Research

1. The Global Economy

The global economy had shown a strong recovery in 2021 after the containment of the pandemic, COVID-19. The year 2022 also started on a positive note. But the onset of the Russia-Ukraine war has led to supply shortages, escalation in commodity prices and a worsening of expectations in stock and foreign exchange markets.



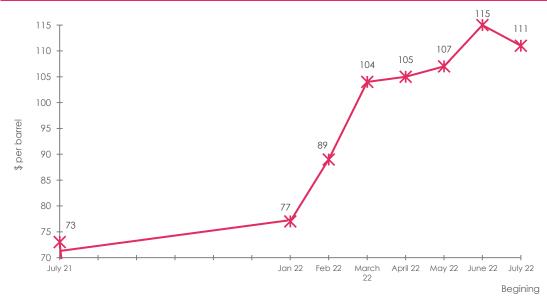
- Global growth is projected to slow from 6.1 percent in 2021 to 3.6 percent in 2022 and 2023. This is 0.8 and 0.2 percentage points lower than projected in January.
- War induced price increases and broadening price pressures have led to 2022 inflation projection of 5.7 percent in advanced economies and 8.7 percent in developing economies – 1.8 and 2.8 percentage points higher than projected in January.

The pressure on commodity prices is amply demonstrated by the escalation in the price of (Brent) crude oil, as shown in Chart 1 after February 2022.



Source: PSX, Next Research

Chart 1: Brent Crude Oil Price in 2021-22 (\$ per barrel)



2. Pakistan Economy: GDP Growth

One of the unexpected, pleasant surprises is the revelation of the Pakistan Economic Survey for 2021-22 that the economy has registered a high growth rate of 5.97 percent during the year, as shown in Table 1. This comes after 2020-21 when the economy showed a strong recovery with a growth rate of 5.74 percent. Seldom has the country seen two consecutive years of near 6 percent GDP growth.



Table 1: GDP and Sectoral Growth Rates, 2020-21 and 2021-22 (%)

| | | 2020-21 (Revised) | 2021-22 (Provisional) |
|-------------|------------------------------|----------------------|--------------------------|
| Agriculture | | 3.5 | 4.4 |
| of whic | h: Major Crops | 6.0 | 6.6 |
| | Minor Crops | 8.2 | 5.5 |
| Industry | | 7.8 | 7.2 |
| of whic | h: Large-Scale Manufacturing | 11.5 | 10.5 |
| | Electricity and Gas | 6.2 | 7.9 |
| Services | | 6.0 | 6.2 |
| of whic | h: Wholesale & Retail Trade | 10.6 | 10.0 |
| GDP (fc) | | 5.7 | 6.0 |

Source: PFS

Apparently, both the major crop and large-scale manufacturing sectors have shown outstanding performance with growth rates above 6 percent and 10 percent respectively in both 2020-21 and 2021-22. Similarly, the relatively large wholesale and retail trade sector has shown growth of 10 percent or more during the last two years.

The growth rate of the different expenditure components of the GDP is shown in Table 2.

Table 2: GDP and Expenditure Growth Rates 2020-21 and 2021-22 (%)

| | 2020-21 | 2021-22 |
|------------------------------------|---------|---------|
| Household Consumption Expenditure | 9.3 | 10.1 |
| Government Consumption Expenditure | 1.8 | -3.4 |
| Total Investment | 4.7 | 2.5 |
| Export of Goods and Services | 6.5 | 8.4 |
| Import of Goods and Services | 14.5 | 15.6 |
| GDP at Market Prices | 6.5 | 6.2 |

Source: PES

The numbers in Table 2 provide the first indication that the GDP growth rate in 2021-22 is overstated. Household consumption expenditure is shown as having increased in real terms by as much as 10 percent. This is completely contrary to trends at the ground level whereby households in Pakistan have had to cut back real consumption spending in the face of high inflation.

A deeper look also reveals that some sectoral growth rates are overstated. The preliminary estimate of the GDP of 2021-22 is based primarily on data for the first nine months. A Statistical Annexure has been attached to this Annual Review on Overstatement of the GDP growth rate in 2021-22.

Overall, the GDP growth rate in 2021-22 is unlikely to have approached 6 percent. It is more likely to be closer to 4.8 percent. Detailed illustrations are provided in statistical annexure at the end of the report.

3. Investment

Table 3 shows that total fixed investment has not been very buoyant in 2021-22, with an overall growth rate of only 2.5 percent. Table 3 also shows the trend separately in private, public and government investment.

Table 3: Growth in real Private, Public Sector and Government Investment (%)

| | 2020-21 | 2021-22 |
|----------------|---------|---------|
| Private Sector | 2.5 | -0.5 |
| Public Sector | 6.1 | -4.5 |
| Government | 14 | 18.5 |
| TOTAL | 4.7 | 2.5 |

Source: PES

It is not surprising that the level of private investment has declined in 2021-22 in the presence of rising interest rates. The SBP policy rate reached the peak level of 13.75 percent by May 2022. Similarly, the investment level of public sector enterprises has contracted because of reduced access to funds.

The positive development is the high double-digit growth in government investment through the PSDP. The big increase is especially in development spending by the provincial governments in the presence of a rapid growth in revenue transfers from the federal government.



Overall, the level of investment and savings remain low in Pakistan, as shown in Table 4. The investment level stands at 13.4 percent of the GDP in 2021-22. For a sustained 5.5 to 6 percent growth rate, the level of investment will have to rise to between 18 percent and 20 percent of the GDP.

Table 4: Level of Investment and Savings 2020-21 and 2021-22 (% of GDP)

| | 2020-21 | 2021-22 |
|------------------------|---------|---------|
| Total Fixed Investment | 12.9 | 13.4 |
| Public | 3.0 | 3.4 |
| Private | 10.0 | 10.0 |
| National Savings | 14.1 | 11.1 |

Source: PES

4. Inflation

Pakistan today is in the grip of high double-digit inflation. The increase in the CPI on a year-to-year basis reached a peak of 21.3 percent in June 2022. There have been only two times in history when such high rates of inflation were approached. The first time this happened was in the years 1973-74 and 1974-75 in the aftermath of a large devaluation of the rupee by 134 percent. more recently, the year, 2008-09, saw inflation at over 17 percent due to the big rise in international commodity prices, especially of oil.

The monthly inflation rates are presented in Table 5.

Table 5: Monthly Rate of Inflation in 2021-22 (Year-to-year) (%)

| 2021-22 | Food Prices | Non-Food Prices | Overall CPI |
|-----------|-------------|-----------------|-------------|
| June | 10.6 | 9.3 | 9.7 |
| July | 8.1 | 8.6 | 8.4 |
| August | 9.5 | 8.2 | 8.4 |
| September | 9.8 | 8.3 | 9.0 |
| October | 8.1 | 9.8 | 9.2 |
| November | 9.9 | 12.5 | 11.5 |
| December | 10.1 | 13.8 | 12.3 |
| January | 13.2 | 12.4 | 13.0 |
| February | 14.4 | 11.3 | 12.2 |
| March | 15.1 | 11.7 | 12.7 |
| April | 16.9 | 11.8 | 13.4 |
| May | 17.6 | 12.0 | 13.8 |
| June | 25.8 | 19.2 | 21.3 |

Source: PBS

The overall rate of inflation has risen rapidly from November 2021 onwards and the acceleration was the highest in the month of June when it rose to 21.3 percent from 13.8 percent in May.

Food prices have risen at a faster rate, reaching 25.8 percent by June. Domestic supply shortages have contributed to very high rates of increase in prices of wheat, vegetables and fruits, meat and chicken. The rise in import prices in \$, added to by the large devaluation of the rupee after March, have led to big jump in price of vegetable ghee, spices and pulses.

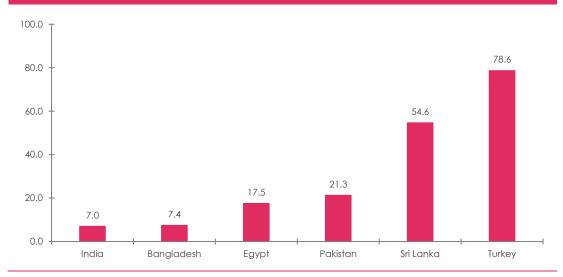
Within non-food prices, the big increases have taken place in electricity charges of 34.7 percent, in motor fuel of 95.7 percent, in transport charges of 34.8 percent and in liquified hydrocarbons of 63.5 percent. It is estimated that almost 30 percent of the jump in the rate of inflation from July 2021 at 8.4 percent to 21.3 percent in June 2022 is due to higher electricity and fuel prices.

Pakistan has faced a 'double whammy'. The first is due to the jump in international commodity prices, especially from March 2022 onwards. The second is the result of the rapid depreciation of the rupee also after March 2022 by almost 15 percent.

A comparison is made in Chart 2 of the on-going rate of inflation in some developing countries in June 2022. Pakistan is in the middle. Bangladesh and India have rates of inflation of 7 percent. Two countries, with big external debt problems, Sri Lanka and Turkey, have rates of inflation of 54.6 percent and 78.6 percent respectively.



Chart 2: Rate of Inflation in Selected Developing Countries



Inflation rates have also risen in developed countries to 8.6 percent in the USA, 9.1 percent in the UK and 8.6 percent in the Euro Area. This is leading to an increase in global interest rates which will make external borrowing even more expensive for Pakistan.

5. Balance of Payments

The most critical area for Pakistan today is the external balance of payments. With low reserves and without the umbrella yet of an operational IMF program, there are apprehensions that Pakistan will find it increasingly difficult to meet its external payment obligations.

Table 6 gives the BOP figures for July 2021 to May 2022 and for May 2022 respectively.

Table 6: Balance of Payments, July to May 2021-22 (\$ million)

| | July to | July to May | | May | |
|----------------------|---------|-------------|-------|--------|--|
| | 2020-21 | 2021-22 | 2021 | 2022 | |
| Current Account | -1,183 | -15,199 | -640 | -1,425 | |
| Capital Account | 202 | 188 | 8 | 4 | |
| Financial Account | 5,731 | 8,448* | 1,214 | 174 | |
| Errors and Omissions | -815 | -387 | -211 | 117 | |
| Balance of Payments | 3,935 | -6,950 | 371 | -1,130 | |
| IMF | -799 | -734 | 0 | 0 | |
| Change in Reserves | 3,156 | -7,684 | 371 | -1,130 | |

*Inclusive of \$2773 million in SDRs. Source: SBP

The current account deficit has risen to \$15.2 billion in the first eleven months of 2021-22. It is likely to approach \$16.5 billion by the end of the year. This will be the second highest ever deficit after 2017-18. It was also relatively high on a monthly basis at \$1.4 billion in May 2022.

Transactions in the financial account of the balance of payments in 2021-22 were facilitated by the release of \$2.8 billion SDRs to Pakistan. Consequently, the net inflow into the financial account shows an increase of 47.4 percent. However, this is not large enough at \$8.4 billion to fully finance the large current account deficit.

Consequently, there is an overall deficit in the balance of payments of almost \$7.7 billion, as compared to a surplus of \$3.2 billion in the corresponding period of 2020-21. Reserves have tumbled from \$17.3 billion at the start of 2021-22 to only \$9.8 billion as of end June 2022. This is adequate to provide import cover for only 1.5 months. The situation will only improve after the IMF program becomes operational once again.

A look at the current account position in Table 7 indicates a very big increase in the goods trade deficit from \$24.8 billion to \$36.1 billion, a jump of 45.5 percent. The year, 2021-22, will end with the largest ever trade deficit. Remittances have shown a modest growth rate of 6.3 percent.

The financial account of the balance of payments presents a depressing picture in May 2022. The net inflow is only \$174 million as compared to \$1214 million in May 2021. There is, in fact, a negative inflow into the



government account with only \$169 million of disbursement and \$823 million of amortization payment. This demonstrates the increasingly precarious nature of the external inflows into Pakistan.

Table 7: The Current Account in the Balance of Payments (\$ mn)

| | July to May | | | May | May | |
|-----------------------------|-------------|---------|------|--------|--------|-------|
| | 2020-21 | 2021-22 | g(%) | 2021 | 2022 | g(%) |
| Current Account | -1,183 | -15,199 | | -649 | -1,447 | |
| Balance in Goods | -24,824 | -36,129 | 45.5 | -2,304 | -3,181 | 13.4 |
| Exports | 23,147 | 29,333 | 26.7 | 2,130 | 2,485 | 16.7 |
| Imports | 47,971 | 65,462 | 36.5 | 4,934 | 5,666 | 14.8 |
| Balance in Services | -2,223 | -3,966 | 78.4 | -132 | -380 | α |
| Balance in Primary Income | -4,024 | -4,856 | 20.7 | -304 | -348 | 14.4 |
| Balance in Secondary Income | 25,888 | 29,752 | 14.9 | 2,600 | 2,484 | -7.8 |
| Remittances | 26,736 | 28,410 | 6.3 | 2,507 | 2,333 | -16.9 |

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6. Public Finances

Source: SBP

The federal budget for 2022-23 was presented after extensive discussions with the IMF staff. However, the IMF was not satisfied with the initial budget estimates. Consequently, a revised budget has been presented to the National Assembly just before the end of the financial year.

The salient features of the federal budget for 2022-23 are presented in Table 8.

Table 8: Federal Budget Estimates for 2022-23 (Rs in Billion)

| | Revised 2021-22 | Budget Estimate 2022-23 | g(%) |
|------------------------------------|--------------------|----------------------------|-------|
| TOTAL REVENUES | 7,365 | 9,405 | 27.7 |
| Tax Revenues (FBR) | 6,050 | 7,470 | 23.5 |
| Non-Tax Revenues | 1,315 | 1,935 | 47.1 |
| Transfer to Provinces | -3,541 | -4,373 | 23.4 |
| NET REVENUE RECEIPTS | 3,824 | 5,032 | 31.6 |
| TOTAL EXPENDITURE | 9,133 | 9,579 | 4.9 |
| Current Expenditure | 8,531 | 8,709 | 2.1 |
| Development Expenditure | 602 | 870 | 44.5 |
| FEDERAL DEFICIT | -5,309 | -4,547 | -14.4 |
| Provincial Surplus | 570 | 750 | 31.6 |
| OVERALL BUDGET DEFICIT | -4,739 | -3,797 | -20.0 |
| Primary Surplus | -1,596 | 153 | |
| Overall Budget Deficit as % of GDP | -7.1 | -4.9 | |

Source: Budget-in-Brief, MOF.

The budget is very ambitious in nature and seeks to achieve a primary surplus for the first time of Rs 153 billion, as compared to a large primary deficit of Rs 1596 billion in 2021-22, according to the revised estimates.

The overall budget deficit will be targeted at 4.9 percent of the GDP in 2022-23, as compared to the likely outcome of 7.1 percent of the GDP in 2021-22. A steep reduction of 2.2 percent of GDP in the budget deficit has never been achieved before.

The ambitious targets include an increase of almost 24 percent in FBR revenues in 2022-23. The focus in the budget is on more progressive taxation and on enhancement in corporate and personal income tax rates as shown Box 1. Consequently, based on the taxation proposals in the budget, the growth in income tax revenues is expected to be as high as 36.2 percent. More modest growth of 16 to 17 percent is anticipated in indirect taxes.

The Finance Bill of 2022 has introduced the following:

- i) A 'super tax' of 1 to 4 percent on all firms. 13 sectors with windfall gains will pay the super tax at 10 percent for one year.
- ii) The personal income tax on salaried tax has been compressed from 12 to 7 slabs.

An extraordinarily large increase is targeted for in non-tax revenues of over 47 percent. This will be realized only if the petroleum levy fetches revenue of Rs 855 billion, to be achieved by a stepwise increase at Rs 10 per liter in July, rising to Rs 50 per liter by March 2023.



Box 1: Taxation Proposals in Income Tax

| The major taxation proposals are as follows: | | |
|--|---|--|
| INCOME TAX | | |
| Section 4C: | Super Tax on High earning persons and companies | |
| Section 7E: | Tax on deemed income from real estate exceeding Rs 25 million | |
| Section 99E: | Payment of tax through electricity connections | |
| Section 236Y: | Advance tax on persons remitting amounts abroad through credit or debit or pre-paid cards | |
| Division-I: | Revision of Personal Income Tax Rates | |
| Division-II: | Revision of Rates of Tax of Companies | |

Source: The Finance Bill, 2022

An extremely tight budget is proposed for current expenditure as shown in Table 9. The growth rate has been limited to only 2 percent.

Table 9: Federal Budget Estimates of Current Expenditure (Rs in Billion)

| | Revised 2021-22 | Budget Estimate 2022-23 | g(%) |
|-----------------------------|--------------------|----------------------------|-------|
| Mark-up Payments | 3,143 | 3,950 | 25.7 |
| Pensions | 540 | 609 | 12.8 |
| Defense Services | 1,480 | 1,563 | 5.6 |
| Grants & Transfers | 1,090 | 1,174 | 7.7 |
| Subsidies | 1,514 | 664 | -56.1 |
| Running of Civil Government | 530 | 553 | 4.3 |
| Emergency Provision | 232 | 195 | -16.0 |
| TOTAL | 8,531 | 8,708 | 2.0 |

Source: Budget-in-Brief, MOF.

This is based on a big cut in the subsidy bill by Rs 850 billion, equivalent to a reduction of over 56 percent, to be achieved primarily by a huge decline in subventions to the power and gas sector. The assumption is that the big, proposed hike in tariffs will stop the increase of circular debt in the energy sector.

Modest increases are also proposed in the budget for defense, grants and running of civil government. The only big increase is in mark-up payments of 25.7 percent, due to significantly higher interest rates and depreciation of the rupee.

As shown in Table 8, a big increase of 44.5 percent is targeted in development expenditure, although it will still be lower in real terms as compared to the PSDP spending five years ago. Further, the provincial governments are expected to generate a surplus of Rs 750 billion. This should be possible if FBR achieves fast growth in tax revenues, leading to bigger transfers.

Overall, there is need to reiterate that the federal budget for 2022-23 is very ambitious and targets for a very large budget deficit reduction and generation of a big primary surplus. There are many risk factors including the following:

- (i) Reducing the current account deficit in the external balance of payments to a manageable level will require strong curtailment of imports. This will limit the growth in the import tax base and consequently in revenues from customs duty and import sales tax. In particular, the near doubling of domestic petroleum product prices should lead to a containment in demand and in revenues thereof.
- (ii) Given the impending large increases in electricity and gas tariffs and the jump in POL prices, there will be strong upward pressure on government operating costs. It will be difficult to limit defense spending and running of civil administration to the budgeted levels.
- (iii) Given the big recent jump in the rate of inflation, the SBP may contemplate further enhancements in the policy rate. This will put pressure on the costs of debt servicing.
- (iv) A big risk is with the likely state of the power sector. If there continue to be large fuel shortages due to extremely high international prices, then with lower level of electricity generation fixed costs per kwh will be higher and revenues may not be adequate. This will imply the need for larger subsidies to the sector.



Overall, implementation of the federal budget of 2022-23 will require an exceptionally high quality of public financial management. If the IMF program is extended for one more year up to September 2023, then many of the key performance criteria will relate to public finances.

7. The Outlook for 2022-23

The primary determinant of the outlook for the economy of Pakistan in 2022-23 is success in meeting the external financing requirements and maintaining a reasonably large level of foreign exchange reserves. Otherwise, risk perceptions will be at the peak and this will lead to a big fall in foreign investment. Further, the rupee will be volatile and subject to depreciation and inflation will remain at a high double-digit rate.

The federal budget documents indicate the expected level of external financing in 2022-23, as shown in Table 10. The gross inflow is anticipated at \$29.6 billion, including some roll-over, as compared to the inflow in 2021-22 of \$21.3 billion. Big increases are targeted in program and commercial bank loans.

External loan repayment is projected to increase sharply to \$21.2 billion in 2022-23 from \$13.8 billion in 2021-22. Therefore, the net inflow in 2022-23 of external financing is estimated at \$8.4 billion. Inflows by the private sector should raise this to over \$10 billion. As such, this is the maximum size of the current account deficit that can be financed without depletion of foreign exchange reserves. All these projections are conditional on the presence of an IMF program. The present program comes to an end in September 2022. The finance minister has indicated that an extension of one year will be sought for in the existing program with some additional funding.

Table 10: The Sources and Level of External Finance in 2022-23 (\$ billion)

| | 2021-22 | 2022-23 |
|--------------------------------|---------|---------|
| | (R.E) | (B.E) |
| A. PROJECTED LOANS | 1.3 | 1.4 |
| B. PROGRAMME LOANS | 3.7 | 6.7 |
| C. OTHER FINANCING | 16.3 | 21.5 |
| IDB | 1.3 | 1.2 |
| Saudi Arabia (Oil Facility) | 0.4 | 0.8 |
| Saudi Arabia (Time Deposit) | 3.0 | 3.0 |
| Commercial Bank Loans | 4.6 | 9.5 |
| SAFE China Deposit | 4.0 | 4.0 |
| IMF Loan for Budgetary Support | 1.0 | 3.0 |
| D. TOTAL FINANCING | 21.3 | 29.6 |
| E. LOAN REPAYMENT | 13.8 | 21.2 |
| F. EXTERNAL RESOURCES (NET) | 7.5 | 8.4 |

Source: Budget- in- Brief, MOF

Finally, there is need to focus on the outlook for the major macro-economic variables in 2022-23, subject to normalcy in external transactions as described above.

The Annual Plan of 2022-23, prepared by the Planning Commission, contains the official targets for next year. These are presented in Table 11, along with our expectations.

Table 11: Annual Plan Targets of Macroeconomic Variables in 2022-23

| | Annual Plan Target | Our Expectations |
|--------------------------------------|--------------------|------------------|
| GDP Growth Rate (%) | 5.0 | 3.5 to 4.0 |
| Rate of Inflation (%) | 11.5 | 18.0 to 20.0* |
| Current Account Deficit (\$ billion) | 9.0 | 8.0 |
| Budget Deficit (% of GDP) | 4.9 | 6.0 |

Source: Planning Commission * As per SBF

The critical target is the reduction in the current account deficit from close to \$16.5 billion in 2021-22 to \$8 billion next year. This will require the use of very contractionary fiscal and monetary policies. Consequently, achievement of a GDP growth rate of 5 percent is highly unlikely. The inflation rate will probably come down gradually from 21.3 percent in June 2022 and average from 18 to 20 percent in 2022-23 according to the SBP. The budget deficit target of 4.9 percent of the GDP is apparently infeasible for reasons given above and containing it to 6 percent of the GDP is more likely. In conclusion, the year 2022-23 is likely to be characterized by considerable political and economic uncertainty. We hope and pray that there is no crisis in coming months. The likelihood of this has fortunately been diminished by the IMF staff agreement on the 14th of July with the government of Pakistan on the completion of the seventh and eighth reviews and on the memorandum of policies. The program has also been extended to June 2023 with some additional funding.

Statistical annexure overstatement of the GDP Growth rate in 2021-22



The objective of this statistical note is to highlight that there is a likelihood that the preliminary GDP growth rate estimate for 2021-22 by the PBS is overstated at 5.97 percent.

The sectors where the growth rate is probably overstated are identified below along with the collateral evidence as to why there is overestimation of the growth rate.

Major Crops

A comparison is made in Table S-1 between the crop-wise growth rates as reported in the Pakistan Economic Survey and the growth rates given in the July 2022 publication of *World Agricultural Production* of the US Department of Agriculture for Pakistan.

Table S-1: Growth Rate of Output of Major Crops in 2021-22 (%)

| | Weight (%) | Pakistan Economic Survey | USDA |
|-----------|------------|--------------------------|------|
| Wheat | 40.1 | -3.9 | -3.9 |
| Maize | 16.4 | 18.9 | 6.3 |
| Rice | 12.1 | 10.7 | 3.3 |
| Cotton | 12.6 | 17.9 | 17.9 |
| Sugarcane | 18.8 | 9.4 | 9.4* |
| TOTAL | 100 | 7.2 | 3.9 |

^{*}Output of sugarcane by country not included in the USDA report. It appears that the growth in output of maize and rice has been significantly overstated in the Pakistan Economic Survey.

Overall, the growth rate of the major crop sector is likely to be significantly lower. This is not surprising given some reduction in the availability of water and a big decline in fertilizer use, especially of phosphate.

Minor Crops

The growth rate of the minor crop sector in 2021-22 has been reported at 5.4 percent. However, as shown in Table S-2, there has been much higher inflation last year in the prices of vegetables and fruits. This indicates the presence of significant supply shortages. Therefore, the relatively high growth rate of 5.4 percent is unlikely.

Table S-2: Rate of Inflation* in Prices of Fruits and Vegetables (%)

| | | • | |
|------------------|----------------|-----------|-----------|
| | Weight in food | June 2021 | June 2022 |
| Fresh Fruits | 4.72 | 12.8 | 38.6 |
| Potatoes | 1.48 | 16.4 | 4.5 |
| Onions | 1.95 | -5.7 | 124.3 |
| Tomatoes | 1.14 | 19.7 | 121.7 |
| Fresh Vegetables | 5.03 | 11.5 | 16.4 |
| TOTAL | 14.32 | 10.8 | 45.5 |

Large-Scale Manufacturing

The growth rate of the large-scale manufacturing sector is shown as exceptionally high at 10.5 percent in 2021-22. This is despite the presence of significant gas and power loadshedding, especially in recent months. The other problem is the big divergence in the growth rate between the estimate with base year of 2015-16 and that with the base year of 2005-06, as shown in Tale S-3.

Table S-3: Growth Rate of the Quantum Index of Manufacturing with different Base Years – 2021-22

| QIM Base Year | Growth Rate (YOY) – (%) | | |
|---------------|-------------------------|------------|--|
| WIM buse real | May | July – May | |
| 2005-06 | 9.9 | 7.1 | |
| 2015-16 | 21.4 | 11.7 | |

The big reason is the inclusion of more industries in the estimate with the base year of 2015-16. In particular, three industries have been included with extremely high growth rates of output in 2021-22, as shown in Table S-4.

Table S-4: New High Growth Industries not included in the QIM of 2005-06 but in 2015-16 (%)

| | Weight (%) | Growth Rate of Industry | Contribution to Growth Rate of QIM |
|--------------------------------|------------|-------------------------|---------------------------------------|
| Manufacture of Weaving Apparel | 6.08 | 49.7 | 3.02 |
| Manufacture of Furniture | 0.51 | 233.1 | 1.19 |
| Manufacture of Footballs | 0.32 | 43 | 0.14 |
| TOTAL | | | 4.35 |



The growth rates are way beyond the limits of credibility. Therefore, the growth rate with the base-year of 2005-06 is more likely.

Electricity, Gas and Water Supply

This sector is shown as having achieved a high growth rate of 7.9 percent in 2021-22. The fundamental problem is that there is an extraordinarily large increase in circular debt during the year to Rs 850 billion, compared to Rs 130 billion in 2020-21. This is bound to have drastically reduced the value-added by the sector in 2021-22, and to a big fall in the growth rate.

Construction

The prime determinant of the growth in the sector is the magnitude of increase in the input of cement. According to the PBS, there has actually been a small decline in the consumption of cement within Pakistan in 2021-22. As such, the reported growth rate of 3.1 percent ins highly unlikely.

Wholesale and Retail Trade

This is a relatively large sector. It is shown as having achieved double-digit growth rate of above 10 percent both in 2020-21 and 2021-22. However, application of the standard methodology for growth rate estimation in Table S-5 reveals that the growth rate is closer to 8.5 percent.

Table S-5: Contribution of Trading in Different Types of Goods to Wholesale and Retail Trade

| | Weight in Value-Added | Growth Rate (%) | Contribution |
|---------------------------|-----------------------|-----------------|--------------|
| Crops | 11.8 | 4.0 | 0.47 |
| Livestock | 9.1 | 3.3 | 0.3 |
| Large-Scale Manufacturing | 52.7 | 7.5 | 3.95 |
| Small-Scale Manufacturing | 5.7 | 8.9 | 0.51 |
| Imports | 20.7 | 15.6 | 3.22 |
| TOTAL | 100 | | 8.45 |

GDP

Overall, the estimated growth rate of the GDP is likely to be closer to 4.8 percent, as shown in Table S-6. This is significantly lower than the reported growth of almost 6 percent by the PBS.

Table S-6: Estimated GDP growth rate in 2021-22

| | Value Added 2020-21 | Growth Rate in 2021-22 | Value Added 2021-22 |
|-------------------------------|------------------------|---------------------------|------------------------|
| GDP | 36572 | 4.8 | 38327 |
| AGRICULTURE | 8421 | 3.5 | 8717 |
| Major Crops | 1594 | 4.0* | 1657 |
| Minor Crops | 1155 | 3.5* | 1195 |
| Cotton Ginning | 103 | 9.2 | 112 |
| Livestock | 5269 | 3.3 | 5442 |
| Forestry | 177 | 6.1 | 188 |
| Fishing | 122 | 0.4 | 123 |
| INDUSTRIAL SECTOR | 6910 | 4.4 | 7212 |
| Mining & Quarrying | 694 | -4.5 | 663 |
| Large-Scale Manufacturing | 3241 | 7.5* | 3484 |
| Small-Scale Manufacturing | 705 | 8.9 | 768 |
| Slaughtering | 442 | 6.2 | 469 |
| Electricity, Gas and Water | 866 | 0.0* | 866 |
| Construction | 963 | 0.0* | 963 |
| SERVICES | 21241 | 5.4 | 22398 |
| Wholesale & Retail Trade | 6633 | 8.5* | 7197 |
| Transport and Storage | 3818 | 5.4 | 4024 |
| Accommodation & Food Services | 520 | 4.1 | 541 |
| Information & Communication | 933 | 6.0* | 989 |
| Finance & Insurance | 686 | 4.9 | 720 |
| Real Estate | 2080 | 3.7 | 2157 |
| Public Admin & Security | 1820 | -1.2 | 1798 |
| Education | 1058 | 8.6 | 1149 |
| Health | 585 | 2.2 | 598 |
| Other Private Services | 3107 | 3.8 | 3225 |

^{*}Different growth rates to those estimated by the PBS