PROGRAM ECONOMIC ASSESSMENT

A. Introduction

1. This economic analysis follows the Asian Development Bank (ADB) Guidelines for the Economic Analysis of Projects (2017)\(^1\) and Guidance Note for the Economic Assessment of Policy-Based Lending (2020).\(^2\)

B. Economic Analysis

2. **Strong recovery in economic growth.** Pakistan’s gross domestic product (GDP) growth rebounded strongly to 3.9% in fiscal year (FY) 2021 from a COVID-impacted negative growth of 0.5% in FY2020. The government supported broad-based recovery and improved economic activities in FY2021’s recovery plan in March 2020 and budgetary measures in FY2021 through temporary fiscal stimulus, social safety nets, monetary policy support, and targeted financial initiatives. Private consumption, which constitutes 81.6% of GDP, rebounded strongly in FY2021 to contribute 6.0 percentage points to GDP growth, reflecting improved consumer confidence, a record increase in workers’ remittances, and cash transfers to the impoverished through the Ehsaas Emergency Cash Program. However, growth in public consumption slowed as the government sought to consolidate its fiscal position by curtailing subsidies and gradually scaled back measures to mitigate the economic impact of COVID-19. Inflation declined from 10.7% in FY2020 to 8.9% in FY2021, but rising food and energy prices kept it above the central bank’s 6.5% target for the year. The current account deficit eased slightly from the equivalent of 1.7% of GDP in FY2020 to 0.6% in FY2021, driven by healthy growth in remittances.

3. Even before the pandemic, Pakistan’s economy was struggling. However, the outbreak of COVID-19 has pushed it into a recession in FY2020—the second time in the country’s history after 1952. Poverty incidence, measured at $3.2/day, has risen from 35.4% in 2019 to 39.1% in 2020; it is projected to remain around 31.9% even in 2021\(^3\). The COVID-19 pandemic has also highlighted the need to improve the fundamentals of the energy sector. Due to lockdowns and to cope with the health sector challenges, electricity demand from hospitals and essential services has increased. The government’s overriding reform is to bring an end to the chronic financial problems of the electricity system, making it self-reliant to support economic growth to meet the challenges of supporting post-COVID-19 economic recovery.

4. **The Extended Fund Facility of the International Monetary Fund.** In July 2019, the Government of Pakistan secured the International Monetary Fund (IMF) Extended Fund Facility (EFF) to restore economic stability and catalyze external financial support. The EFF is worth $6 billion and covers 39 months. The energy sector reform is one of the main focuses of the EFF program. Power and gas prices were further adjusted upward to reduce quasi-fiscal losses and subsidies. For the fiscal reform, import duties and nonessential and luxury goods charges were raised to compress imports. New taxes and higher tax rates were introduced, and the concessionary tax regime was largely eliminated to achieve a revenue target for lowering the primary deficit. Moreover, social spending was expanded through the social safety net program to protect the poor. As a prior program action, the government had already brought the exchange rate close to market equilibrium in the second half of FY2019 to reinstate competitiveness and rebuild foreign exchange reserves. Under the IMF’s stabilization program, fiscal consolidation measures were temporarily set aside in FY2020 as Pakistan responded to the unprecedented public health and economic challenges from the COVID-19 pandemic. A return to the IMF EFF program in FY2021 is expected to facilitate a

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reduction in the fiscal deficit, ensure debt sustainability, and support improved economic performance. The second through fifth review of IMF’s EFF was completed in the middle of February 2021, and on 24 March 2021, the IMF Board disbursed $500 million for budget support. With a tentative disbursement of $1 billion, the sixth review was targeted for approval by the end of June 2021. However, the staff-level agreement of the sixth review did not conclude and push through due to slow progress on fiscal, taxation, and energy sector reforms agreed between the IMF and the government. The IMF mission for the sixth review and Article IV review was fielded in Doha, Qatar, on 4 October with a staff-level agreement expected to conclude by the end of October 2021 and possible board approval and disbursement in November 2021.

5. **Inefficiencies in the energy sector.** Pakistan’s energy sector remains saddled with significant inefficiencies. These inefficiencies and distortions lead to high financial, technical, governance, and infrastructure deficits, culminating in high energy costs, low business productivity, large quasi-fiscal losses, and liquidity crises. The energy sector’s critical problems are (i) accumulation of circular debt due to uncontrolled flows, (ii) expensive generation fuel mix, (iii) uncompetitive power market structure, (iv) blocked tax refunds due to high incidence of taxation on electricity and gas prices, (v) unbudgeted subsidies, (vi) lack of integrated planning, and (vii) high capacity payments to power suppliers. These add to longstanding structural weaknesses in the energy sector, such as high transmission and distribution (T&D) losses due to outdated and inadequate infrastructure, insufficient revenue collection, and high theft to undermine fiscal sustainability and underscore other macroeconomic challenges.

6. Pakistan’s energy sector has been a major retardant of economic growth. The energy crisis has resulted in a loss of $82 billion in GDP between 2007 and 2020, and a 23% reduction in per capita GDP. The total economic cost of distortions in the power sector in Pakistan is estimated to be $17.69 billion (about 6.5% of GDP) in FY2015. Lower economic growth has led to millions of job losses and impeded new job creation. According to a conservative estimate, 10.9 million jobs could have been saved and/or created between FY2008 to FY2017 in the absence of an energy crisis. On average, the fiscal costs of the crisis are estimated at 1.2% of GDP each year over the period FY2007–FY2019 (footnote 4).

7. **Continued high costs of energy despite improved supply.** The government managed to reduce the power demand-supply deficit by adding 12.2 gigawatts to the national grid from 2016 to 2018 amid the completion of power plants through the China–Pakistan Economic Corridor initiative. During FY 2021, the total electricity generation in the country, including the power plants in CPPA-G and KE Systems, was recorded as 143,090.6 GWh, compared to 133,727.2 in the previous fiscal year. It is well known that sustained access to cost-effective energy positively correlates with macroeconomic benefits as it lowers the business cost to boost economic activities and generate employment. However, energy cost in Pakistan remains high even though the power demand-supply gap was filled, rendering the industry uncompetitive in the international market. Pakistan’s average industrial tariff rates of electricity are highest at PRs18.8 per kilowatt-hour (kWh) vis-à-vis Bangladesh, India, and Vietnam, which range between PRs6 and PRs12 per kWh. The higher cost of power generation (about PRs16 per kWh weighted average) results from multiple system inefficiencies, such as high T&D losses and theft, insufficient revenue collection, and the energy mix dominated by thermal generation based on expensive imported oil. Evidence

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9 Exchange rate of PRs165 per United States dollar is used to convert $0.072 per kWh weightage average cost.
shows that the economic costs of Pakistan’s energy sector inefficiencies are large at $18 billion (or 6.5% of GDP) in FY2015, stemming mainly from businesses’ productivity losses. The absence of capacity payments monitoring, i.e., fixed payments to power suppliers, against actual generation implies that there are likely excessive payments during the underutilized capacity time with an additional fiscal burden.

8. **Huge circular debt undermining the electricity system’s sustainability.** The major energy challenge of a chronic supply shortfall, accompanied by significant underinvestment in energy-related infrastructure, was resolved in 2019. The economy currently suffers from a severe cash flow crisis, resulting in a massive circular debt that undermines the sustainability of the electricity system and poses a grave threat to stable socioeconomic development. The energy sector’s circular debt has been consistently growing due to the nonpayment of obligations by consumers, distribution companies, and the government, reaching an alarmingly high level. The circular debt rose from 1.6% of GDP (PRs161 billion) in 2008 to 5.2% of GDP (PRs2,150 billion) at the end of FY2020 and further increased to PRs2,400 billion in December 2020 (footnote 5). As of 30 June 2021, the circular debt stood at PRs2,280.15 billion (footnote 8), expanding by 6.0% during the fiscal year. Unresolved governance issues, operational inefficiencies, and planned increases in installed capacity imply that the circular debt issue will exacerbate in the years to follow. With a debt-to-GDP ratio of 83.5% in FY2021, Pakistan cannot afford to accumulate more debt and must act fast to halt further debt build-up.

9. The energy sector’s circular debt is one of the most formidable macroeconomic challenges that the country faces at present. The circular debt issue and causes leading to it must be addressed adequately to ensure the viability of the power sector and Pakistan’s long-term energy security. The accumulation of circular debt has adversely impacted industrial performance and productivity, suppressing output and value-added and elevating production costs. The energy-intensive large-scale manufacturing industry suffers the most due to the absence of a reliable, low-cost energy supply. In instances where industrial units have the capacity for electricity generation, the per-unit cost of production rises considerably. Pakistan’s power sector woes have eroded export competitiveness, slowed new investment and job creation across sectors, and raised inflationary pressures. Pakistan’s export revenues have dwindled in the face of fierce competition from regional competitors who are able to produce cheaper energy.

10. **Enormous fiscal burden of the circular debt.** Burgeoning debt destabilizes Pakistan’s fiscal management and constrains the government’s spending on much-needed infrastructure development and socioeconomic welfare. In recent years, the government has steadily reduced the budgetary outlay on subsidies to the power sector and has introduced a surcharge to try to cover the full cost of providing electricity. The surcharge, however, does not yet fully cover costs, resulting in about PRs100 billion in liabilities accumulating on the books of distribution companies each year. The accumulating circular debt affects the macroeconomy through its effect on domestic bank credit. In Pakistan, the total advances of the banking sector in FY2017 were PRs6.2 trillion, of which PRs1.0 trillion (17%) was for the energy production and distribution sector. Large-scale borrowing by power sector players from the domestic banking sector to cover working capital and liquidity challenges augments the fragility of the banking sector and reduces the availability of credit for other sectors.

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13 State Bank of Pakistan.
11. **Accumulating circular debt.** Accumulated losses of large public sector enterprises (PSEs) have begun to increase more rapidly since FY2017, adding further pressure on the government’s fiscal position. Energy sector PSEs, which comprise roughly 60% of total PSEs’ assets, have been a major driver of these accumulating losses.\(^\text{14}\) Spending on public subsidies for the power sector (i.e., PRs139.5 billion or 67% of total subsidies in FY2021) has declined over the years but continues at about 0.3% of GDP in FY2021, contributing to high fiscal deficits.\(^\text{15}\) Outside the budget, power sector circular debt is another drain on the limited fiscal resources. Due to persistent failure to implement reforms, the stock of circular debt has grown from around PRs450 billion in FY2013 to PRs2,280 billion at the end of FY2021 (around 4.8% of GDP). The main contributors to these new arrears were high T&D losses due to lack of corresponding downstream investments to augment power, delays in updating tariffs, and provision of unbudgeted subsidies. The government has taken steps to address some arrears sources by (i) investing in infrastructure to reduce technical losses, (ii) launching an antitheft drive and stepping up enforcement to increase collections, (iii) adjusting tariffs gradually to cost recovery levels by 7.0% during the first half of FY2020 in two steps, and (iv) budgeting or eliminating power sector subsidies. These efforts showed positive results, with the accumulation of new arrears falling from about PRs38 billion per month in FY2019 to around PRs10 billion per month in the first quarter of FY 2020. However, energy sector reforms largely stalled during the second half of FY2020 amid the COVID-19 pandemic, causing circular debt to increase. This, coupled with additional electricity subsidies of about 0.5% of GDP to support businesses and the poor, caused power tariffs to rise in FY2021 to improve the sector’s viability and tackle rising arrears.

12. **Measures addressing the energy sector challenges.** Addressing the challenges in the energy sector continues to be a priority of the government as it seeks to bring financial sustainability to the sector. ADB is supporting these reforms through the three subprograms of the proposed Pakistan Energy Sector Reforms and Financial Sustainability Program (Energy Program) during 2019–2022. The three subprograms are interlinked and envisaged to put the sector on track by curbing the flow of circular debt to make the sector financially viable. This will also address the sector’s governance and infrastructure constraints to stop the government bleeding caused by fiscal transfers through subsidies.

13. **Importance and relevance of reforms.** Lockdowns and COVID-19-related measures have accentuated the need for a more efficient energy sector to support business and economic recovery. In going forward, the demand for a more reliable and sound energy sector is also expected to increase to facilitate online systems and digitalization of various services. A financially sound energy sector would improve economic resilience by (i) providing the necessary fiscal space and thereby help upscale productive investments, and (ii) supporting broad-based economic growth. The ease of doing business in Pakistan also depends to a great extent on the availability and provision of affordable and uninterrupted electricity supply. Viewed in this context, improving energy efficiency, better tariff design, and efficiency in subsidy delivery are all important aspects of energy sector policy. More importantly, while the COVID-19 pandemic has exposed the weaknesses of the economy, building resilience across various sectors would hinge critically upon secure, reliable, and affordable provision of electricity services. The proposed reforms, while supplementing the government’s own reform agenda, will help improve the energy sector performance and set the strategic direction in the post-COVID-19 economic policies. Even otherwise, as economic recovery takes place, the business will account for an increasing share of energy demand. Investment in grid and utility modernization and upgrading the infrastructure will therefore be instrumental for economic recovery and job creation. In this light, energy sector reform program is timely and crucial in addressing prevailing and new constraints arising from the ongoing pandemic.


C. Economic Benefits from the Energy Sector Reform

14. **Promoting inclusive growth.** An efficient, reliable, and affordable energy access is critical for promoting sustained high inclusive growth. Energy is a core enabling input that facilitates development across the agriculture, manufacturing, and services sectors. The World Bank Enterprise Survey results show that almost 70% of Pakistan's business managers identified a lack of reliable and affordable power as a significant constraint to their firm's operations and growth.\(^{16}\) ADB analysis demonstrates a strong positive correlation among energy consumption, investment, and GDP per capita growth during 1971–2013 modeled in a long-term cointegration framework.\(^{17}\) The study also shows that, on average, Pakistan's manufacturing production unit lost 3.5 labor hours in a day resulting in 22% output reduction amid power shortages.\(^{18}\) This is because a well-functioning energy sector acts as the “oxygen” of the economy and the lifeblood of growth, as without it, countries can neither build and/or run the factories and cities that provide goods and services, jobs, and homes, nor can people enjoy the amenities that make life more enjoyable. Energy disruptions and shortages are also major impediments to the economic progression of socially disadvantaged people, adversely affecting their income, children's educational attainment, health, and gender equality.

15. **Subprogram 2 reform actions.** These should help strengthen economic competitiveness and reduce fiscal and external vulnerabilities. Reform actions implemented under subprogram 2 will complement and build on the reforms introduced under subprogram 1, along with laying the foundation for subprogram 3. Together, the program will help secure a reliable, sustainable, and affordable energy sector for considerably enhancing Pakistan's productive and fiscal capacities. This is critical given the high continued economic costs of Pakistan's energy sector's weaknesses.

16. Actions under reform area 1 will contribute to overcoming inefficient tariffs, high T&D losses, and lack of integrated planning to help control flow accumulation and stock reduction of circular debt. Consequently, public subsidies and quasi-fiscal losses will be reduced for debt reduction and higher productive investments in infrastructure and education to promote long-term economic growth. Moreover, reform area 1 will help lower energy generation costs in the long run to enhance firms' competitiveness, exports, and foreign reserves. Reform area 2 actions will help arrest administrative and operational inefficiencies by improving accountability, along with facilitating the unbundling of the gas sector into T&D companies for strengthened sector governance. The successful implementation will encourage private sector participation and eventual graduation to an accountable, competitive power market to lower business input costs and inflation and expand productive fiscal capacity amid reduced subsidies to foster economic growth. Reform area 3 actions will help minimize gas grid and off-grid losses and power generation dependency on imported expensive fuel for improved indigenous energy supply and infrastructure. This will decrease oil and gas imports to strengthen the country's current account and foreign exchange reserves position for enhanced macroeconomic buffers. Finally, the effective implementation of subprogram 2 reforms should also lead to indirect second-round economy-wide positive flow-on impacts by triggering backward and forward supply chain linkages to promote economic activities and achieve further fiscal and external sustainability.

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\(^{17}\) ADB. 2020. *Report and Recommendation of the President to the Board of Directors: Proposed Programmatic Approach and Policy-Based Loan for Subprogram 1 to the Islamic Republic of Pakistan for Energy Sector Reforms and Financial Sustainability*. Economic Analysis (accessible from the list of linked documents in Appendix 2). Manila.

D. Conclusion

17. The overall Pakistan Energy Sector Reforms and Financial Sustainability Program aims to help address the energy sector’s critical binding constraints, which are considerably reducing the businesses’ productivity, competitiveness, and fiscal space, along with raising debt to undermine growth prospects. Subprogram 2 reform actions will support and augment recently initiated government reforms to help address the circular debt problem, strengthen institutional and regulatory distortions, and improve gas infrastructure and supply, which should help lower macroeconomic vulnerabilities and generate sustainable and balanced growth for jobs and poverty reduction.