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Editorial

Dear Readers,

We are pleased to share that the Pakistan Institute for Parliamentary Services (PIPS) has become the first parliamentary institution having membership with the International Federation for Library Association and Institutions (IFLA-PARL) Library and Research Services for Parliaments, having a member base from around 150 countries in all regions, making it the most international library organisation in the world.

The Institute continued its legislative, research and capacity building activities as well as enhanced outreach to Members of the Parliament as envisioned by the Board of Governors led by the Honourable Speaker, National Assembly/ President PIPS BoG. PIPS setup an Information and Services Desk at the library of the National Assembly of Pakistan as a direct access to the Members viz a viz utilization of wide range of services in offer to individual MPs and committees.

As per the tradition, this Special Issue of the PIPS Parliamentary Research Digest on Economy and Budget includes analytical article on state of economy, circular debt in power sector, agricultural sector rural economy in addition to geographical indications for trade. We welcome feedback of our invaluable readers. Please do not hesitate to send your feedback or contact for any of our services at research@pips.gov.pk

Muhammad Rashid Mafzool Zaka
Director General (Research)



Pakistan Institute for Parliamentary Services organized a seminar on Constitution and Parliament with the students of Government College University, Faisalabad on Wednesday, May 29, 2024

ANALYSIS

Government Budget and the Current Economic State: Challenges and the Way Forward

Dr. Wasim Shahid Malik
and Mr. Muhammad Shuaib Malik¹

1. Introduction

The evaluation of an economy's performance encompasses both short-term and long-term perspectives. Over time, policymakers strive to enhance the populace's living standards by sustaining robust GDP growth rates and improving social indicators. Short-term policy objectives involve stabilizing economic activity to mitigate cyclical budget deficits, interrupted economic growth, and cyclical unemployment. In contrast, long-term growth policies aim to elevate living standards. Annually, the government formulates a budget outlining its revenues and expenditures for the fiscal year, aligning them with long-term objectives and priorities and establishing annual goals for various economic and social indicators.

It is crucial to acknowledge that no government can fulfill all its objectives within a single fiscal year or even a five-year span. Therefore, rational expectations are essential. Policy objectives often entail trade-offs. For instance, achieving a higher GDP growth rate may result in heightened inflation, while maintaining price stability may necessitate reduced output. Likewise, stabilizing the exchange rate could deplete foreign exchange reserves and disrupt exports and imports due to an overvaluation or undervaluation of the domestic currency. Furthermore, a significant portion of expenses, such as salary payments, principal and interest payments, defense expenditures, and ongoing project financing, cannot be substantially adjusted within a single budget. Consequently, the government has limited flexibility to modify budgeted amounts. Considering these factors, let's explore the challenges confronting the Pakistani economy.

GDP² Growth Rate and Inflation Rate³

Over the past five decades, the Pakistani economy's average annual GDP growth rate has remained below 5%, translating to less than 3% per capita. While this performance does not fall into the poor category, it falls short of the 7 to 8% growth rate required to generate adequate employment opportunities for the country's unemployed youth⁴. It is essential to consider the influence of various conflicts, shifting demographics, and the transitions of power between civilian and military regimes when evaluating the overall economic performance, which can be perceived as satisfactory.

The Pakistani economy has displayed significant fluctuations in economic activity, accompanied by a low GDP growth rate. Despite achieving a peak growth rate of 5.5 percent in FY2018 and an average growth rate of 4.7 percent from FY2014 to FY2018, the sustainability of this growth has been compromised by macroeconomic imbalances, particularly the escalating fiscal and current account deficits. These persistent twin deficits have posed consistent challenges to the Pakistani economy, with the substantial trade deficit and fiscal deficit values causing concern in the fiscal year 2018. These fluctuations can be attributed to political instability, heavy reliance on external capital inflows, inconsistency in domestic policies, and external factors beyond the control of domestic policies. For

¹ The first author is a macroeconomic expert and works for an EU-funded PFM project and the second author is serving as Deputy Economic Advisor at the Ministry of Finance, Islamabad

² GDP is defined as market value of all goods and services newly produced in one year in the economy or sum of private sector and government sector incomes.

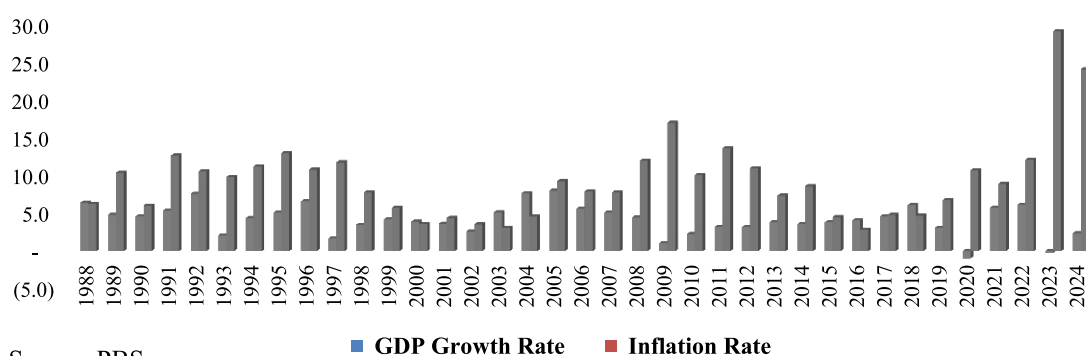
³ Inflation rate is defined as the percentage growth rate of a price index that measures average change (compared to base year) in prices of goods and services.

⁴ The average GDP growth rate of Asian Tigers was about 6% over the period 1960 – 90.

instance, the GDP growth rate in the 1990s remained volatile due to political instability, dropped following the nuclear blast, rose significantly after 9/11 due to increased remittances and monetary expansion, and reached historic lows in 2009 due to an oil price hike, financial crisis, and monetary contraction stemming from the depletion of foreign exchange reserves.

Including strategies in future budgets that focus on achieving inclusive GDP growth and long-term sustainability is crucial. This can be accomplished by aligning domestic policies with the government's long-term objectives and priorities and ensuring they are consistent over time. To increase government autonomy, it is essential to implement institutional reforms that promote transparency in policy actions and hold the government accountable when objectives are unmet. In addition to boosting exports, the government should prioritize domestic commerce, especially small enterprises, and develop policies to reduce the cost of doing business. Decentralizing government authority and devolving it to the local level will improve the delivery of public services. Urban planning should transform municipalities into catalysts for growth. The aim of domestic policy should be to decrease the economy's vulnerability to external disruptions. It is essential to gradually increase investments in human capital by providing better health facilities and improving the literacy rate. Addressing energy scarcity should be a top priority.

Figure 1: GDP Growth Rate and Inflation Rate



The average inflation rate over the past two decades has stood at 10.4%, experiencing fluctuations ranging from 3% to 29%. During periods of stable exchange rates, there was an observed increase in domestic demand, leading to heightened government spending and consumption, consequently resulting in a notable surge in imports. Delays in implementing necessary adjustments for energy prices, the exchange rate, and fiscal accounts have led to the depletion of foreign reserves and an escalation in borrowing. To avert similar crises in the future, Pakistan must address fundamental structural challenges and expeditiously execute fiscal, monetary, and exchange rate measures to stabilize the economy. Inflation diminishes the purchasing power of individuals whose incomes are not fully indexed to inflation. It impacts the wealth distribution between borrowers and lenders while augmenting the tax burden on salaried individuals. A low but positive inflation rate is imperative for sustaining economic growth, whereas high and volatile inflation creates uncertainty and impedes economic progress.

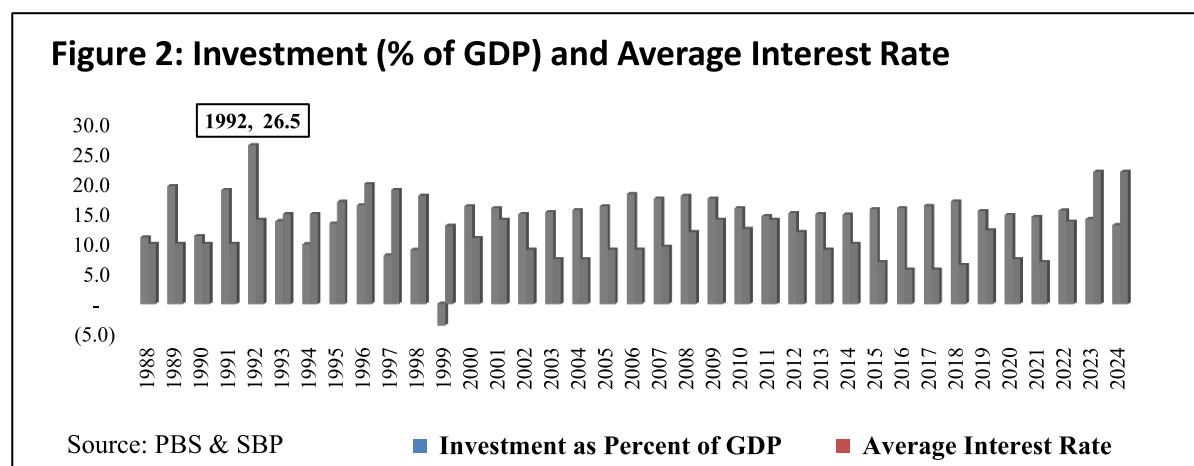
In Pakistan, monetary expansion/contraction and external factors such as exchange rates and oil prices have significantly influenced the inflation rate. During the 1990s, the inflation rate rose due to currency devaluation. Following the events of 9/11, the inflation rate increased due to a rise in remittances and subsequent monetary expansion. The price hike in 2009 was attributed to a significant increase in world oil prices. The inflation rate is relatively low due to decreased oil prices worldwide.

In Pakistan, inflation has become a significant economic challenge. This issue has been developing over the past thirty years and has been exacerbated by fiscal measures implemented since August 2019 to address rising fiscal and current account deficits. In November 2021, food and non-food components of inflation exceeded single digits, drawing attention to the problem. By fiscal year 2023,

the average CPI inflation rate had risen to 29.2 percent, peaking at 38 percent year-over-year in May 2023. This increase affected all CPI components, with food and energy exceeding core inflation. The Russia-Ukraine conflict in fiscal year 2023 triggered the global economic crisis, leading to energy and food supply chain disruptions. Depleted foreign exchange reserves in Pakistan led to currency depreciation, worsening inflation. Additionally, the 2022 flooding caused significant economic damage, particularly in the agricultural industry. The floods disrupted the supply of perishable goods, driving up their prices. Furthermore, inflationary pressure was fueled by excessive aggregate demand driven by political and economic uncertainty.

2. Public and Private Investment

The investment-to-GDP ratio has consistently declined since 1992, when it was 26.5% of GDP. Currently, it stands at about 13% (Figure 2).



Developing countries have a lower capital-output ratio than developed countries, meaning that capital in developing nations is more productive. Increasing capital leads to learning-by-doing, which boosts labor productivity and encourages business expansion. According to economic theory, investment is influenced by three key factors: GDP growth rate, interest rates, and share prices on the stock market. Factors such as low interest rates, high GDP growth rates, and high share prices motivate firms to increase their investments in physical capital. Despite low interest rates and a strong stock market performance, investment has not picked up. The investment-to-GDP ratio remains insufficient to promote sustainable growth. This suggests that other important factors, beyond interest rates and stock market performance, determine investment in Pakistan. The following are potential explanations for the low investment-to-GDP ratio.

I want to emphasize that in Pakistan, there is a focus on rent-seeking activities rather than wealth-creating activities. Economic agents in the country generate revenue through innovation, creation, or extracting value from existing resources and knowledge. However, Pakistan's incentive structure, policies, and institutions encourage rent-seeking activities and discourage innovation. Working as a civil servant or real estate agent is more advantageous than working as an entrepreneur or scientist. Additionally, conducting business in Pakistan is expensive and time-consuming, as it can take up to 3 months to get an electricity connection through the regular procedure, and the process for other utilities can be even lengthier. This discourages investment and hinders economic development.

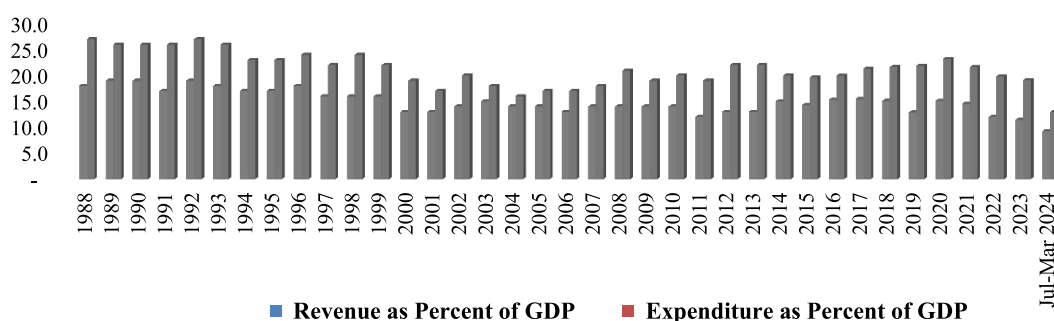
Similarly, excessive government regulation restricts the availability of commercial land in urban areas, making it challenging for small businesses to find a location to operate. Additionally, public investment as a percentage of GDP remains high and displaces private investment, although it is significantly lower than it was until the early 1990s. While the government should not be involved in business operations, it continues to provide private products in Pakistan that could be more efficiently supplied by the private sector, thus degrading the delivery of public services. Furthermore, private-sector credit has been replaced by government-provided financing via the banking sector. The

government is a client that purchases loans in quantity and assumes no default risk. Banks find it more convenient to extend loans to the government rather than engage in high-risk lending activities to retail consumers in the private sector.

3. Fiscal Issues

In the previous fiscal year, Pakistan had a budget deficit of around 7.7% of GDP, resulting from government expenditures exceeding revenues. This percentage is slightly lower than the three-decade average of 6% and significantly less than the level recorded in 2012, which was 9.0%. Despite experiencing economic expansions and contractions in the past, Pakistan continues to have a budget deficit, indicating the presence of underlying structural issues. To address this, the government has focused on a combination of strategies to reduce government expenditures and increase the revenue-to-GDP ratio (refer to Figure 3).

Figure 3: Revenue - Expenditures Gap (% of GDP)



Source: Ministry of Finance

The current issue with revenue targets is not because revenue collection agencies are underperforming but rather due to the process of establishing these targets. The process starts with creating an expenditure plan, estimating anticipated aid/grants, determining a budget deficit target, and only then setting a revenue target from the remaining amount (planned expenditures minus grants and budget deficit). However, since revenues are treated as a residual, they often do not meet the intended targets, leading to significant consequences in fund allocation. When revenues fall short, expenses are reallocated, prioritizing nearly fixed costs like salaries while cutting back on development expenditures. This flawed approach disrupts the declared fiscal policy in the annual budget and undermines the budget's credibility. Additionally, in the early 1990s, the ratio of development expenditures to current expenditures was over 0.3, but it progressively declined to 0.11 in 2002. It started to recover in 2003 and is now close to 0.3 again.

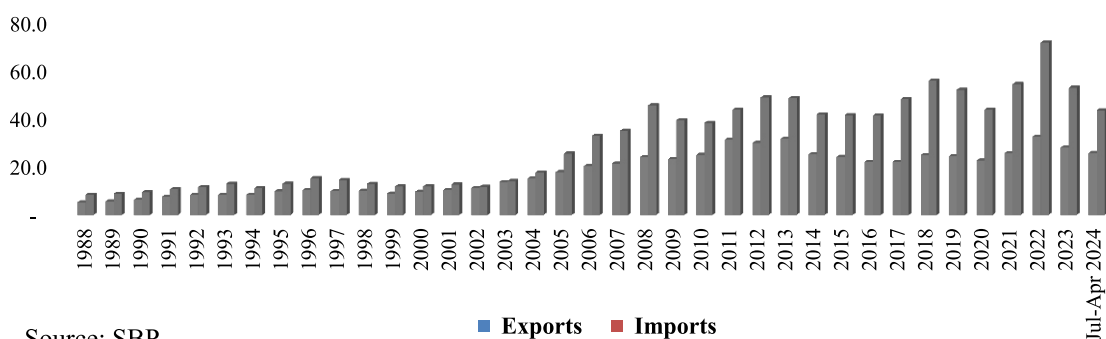
Expenditures for development significantly contribute to economic growth by improving physical infrastructure and human capital. After the 7th National Finance Commission (NFC) Award, the provincial share of the federal divisible pool increased to 57.5%. Additionally, following the 18th amendment to the Constitution of Pakistan, provinces are now responsible for collecting certain taxes, such as the Goods and Services Tax (GST) on services. However, this increased share may reduce provinces' incentive to generate revenue. The combination of reduced effort at the provincial level and inadequate revenue target setting at the federal level has severe consequences for provincial budgets. For example, the target set by the Federal Board of Revenue (FBR) was Rs 9,415 billion, while the budgeted expenditure amounted to Rs. 14,485 billion. Revenues in July and March totaled Rs 6,712 billion, while expenditures stood at Rs 13,683 billion. It is likely to be challenging to achieve the FBR target, which will impact the allocation of resources to provinces and influence decisions in the annual budgets of provincial administrations.

4. External Accounts

External accounts involve financial activities such as grants, portfolio investments, and transactions related to the real sector, including importing and exporting goods and services. The external sector is closely connected to the domestic real and monetary sectors. Additionally, fluctuations in exchange rates are influenced by external sector activities, making them a significant macroeconomic indicator. The government implemented measures to control imports in response to ongoing macroeconomic imbalances. This improved the current account's performance and helped offset external pressures. As a result, risks associated with difficulties in external financing were reduced. Consequently, the trade deficit of goods decreased substantially, amounting to \$15.8 billion. The significant decline in the trade deficit of goods can be attributed to a sharp reduction in imports (8.0 percent), driven primarily by decreased domestic demand, import management strategies, and lower global commodity prices.

While increasing imports could be seen as a positive development, the lack of export growth is worrying. When a nation's economy grows, it typically leads to an increase in the importation of machinery and raw materials, which can benefit the economy. However, despite the focus on promoting exports, they are declining. One factor contributing to this imbalance between imports and exports is the overvaluation of the country's currency. Over the past thirty years, the value of the Pakistan Rupee has decreased against the US Dollar by an average of 6.7% annually, while the inflation rate has averaged 8.6% annually during the same period. This has led to the Rupee becoming overvalued, resulting in a trade imbalance due to the rising cost of products compared to the dollar's appreciation.

Figure 4: Exports and Imports of Pakistan (\$ billion)



Foreign remittances have increased significantly over the past fifteen years. Before 2001, annual remittances were less than \$2 billion, but now they exceed \$18 billion. These remittances play a significant role in financing the trade deficit. The large influx of foreign currency helps stabilize the exchange rate and promote monetary expansion, stimulating economic activity. Currently, the exchange rate remains stable, and this stability was supported by the accumulation of foreign exchange reserves fueled by substantial remittances, an IMF loan, and a decrease in crude oil prices.

5. Social Sector

Over the past fifty years, Pakistan's GDP growth rate has been below the level needed to address youth unemployment. However, the country's economic performance has not been extremely poor or exceptionally strong. Despite this, social indicators have remained at a low level. Pakistan's Human Development Index (HDI) stands at 0.540, placing the country at 164 out of 193 countries in the global ranking, categorizing Pakistan as having 'low' human development. The 2023/2024 Report highlights that Pakistan's HDI and global ranking have been negatively affected by ongoing social, economic, and political challenges, including macroeconomic difficulties and the long-term impact of the 2022 floods, despite effectively managing the COVID-19 pandemic. Table 1 presents the current status of some social indicators.

Table 1: Social Indicators

Item	Current Situation
Literacy Rate 2021	62.2
Infant Mortality Rate (per 1000 live births) 2021	52.8
Birth rate (Crude) -(per 1000 people) 2021	7
Maternal mortality ratio (per 100,000 births) 2019	186

Source: PBS

The Ministry of Finance provides estimates of the total public expenditure on health and education in its PRSP progress reports. According to the reports, there has been a significant decrease in the proportion of GDP allocated to education expenditures, dropping from 2.1% of the GDP in 2017-18 to 1.3% in 2021-22. On the other hand, health expenditures have increased from 1.1% to 1.4% of the gross domestic product. The World Bank's Pakistan Development update, April 2024⁵, anticipates that the poverty headcount rate, as assessed at the lower-middle-income country poverty line of US\$3.65/day in 2017 purchasing power parity (PPP), is expected to remain around 40 percent during FY24-26. The report also highlights anticipated adverse effects on human development outcomes, including suboptimal growth, elevated inflationary pressures resulting from ongoing import management measures, and potential cuts to public spending on social sectors.

6. Concluding Remarks

Pakistan possesses a developing economy with an approximate GDP per capita of \$1680. The GDP growth rate has historically lagged, averaging 4.5 percent annually and maintaining volatility. Over the last five decades, the annual inflation rate has averaged more than 8% while historically fluctuating between 2% and 30%.

In light of the prevailing economic circumstances, policymakers are presented with a distinctive and advantageous opportunity to prioritize reform initiatives that foster sustainable development in the long run. Throughout the economic history of Pakistan, policies have consistently centered on stabilizing economic activity and short-term governance. In contrast, expansionary policies leading to substantial yet unsustainable increases in the GDP growth rate have minimal impact on future living standards. However, significant outcomes can be derived from a modest but sustained rise in the GDP growth rate, with greater emphasis on enhancing human capital and developing social infrastructure.

The potential reforms encompass granting autonomy to institutions such as research institutes, hospitals, and law enforcement agencies, ensuring policy transparency to garner public support and minimize uncertainty, holding policymakers accountable for unmet objectives and targets, and bolstering the economy through human capital development and social infrastructure enhancement, among others. While these examples do not encompass all possible changes to expedite Pakistan's economic growth, they provide a foundation for reform initiatives. Although it is improbable that all these issues will be immediately resolved, the reform process can be set in motion with the forthcoming budget.

⁵ <https://thedocs.worldbank.org/en/doc/140b30353b40dbb294cca42bcb86529a-0310062024/pakistan-development-update-april-2024-fiscal-impact-of-the-federal-state-owned-enterprises>

ANALYSIS

The State of Agriculture and Rural Economy of Pakistan: Challenges and Way Forward

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1. Introduction

Pakistan, a nation of over 220 million people, faces a unique challenge: ensuring food security for its growing population while grappling with a complex web of issues within its agricultural and rural sectors. Despite significant urbanization, agriculture remains the backbone of Pakistan's economy, employing over 42% of the workforce and contributing roughly 18% to the GDP.¹ However, the sector is plagued by numerous challenges, hindering its potential to contribute meaningfully to national development and improve the lives of millions residing in rural areas.

This piece endeavors to explore the prevalent state of agriculture in the country while also delving into the status of its rural economy. It discusses the key drivers that affect the agrarian produce and yield, the livestock and fisheries industry, while also assessing the state of infrastructure and other basic services in the rural parts of the country. Furthermore, another pertinent dimension the essay encompasses is the dismal socioeconomic conditions that continue to prevail in the rural areas of Pakistan.

The literature on the subject matter reveals unanimity of opinion among researchers where the major challenges plaguing the sector have been recurring brought up. Water scarcity, climate change, and inefficient resource management remain the primary issues that are spotlighted consistently.² In addition to these grim conditions, the limited market access to farmers, and the existence of an indirect channel passing through the hands of the middlemen, consequent in low-income levels, and serves as an impediment for drawing investment into the sector.³

This research utilizes data from credible sources such as the World Bank, FAO (Food and Agriculture Organization), Pakistan Bureau of Statistics, and research papers published by reputable academic institutions. By critically analyzing this data and drawing insights from existing research, this essay proposes a set of actionable solutions aimed at revitalizing Pakistan's agricultural and rural sectors. By critically analyzing this data and gathering insights from existing research, this essay presents forth a set of executable recommendations aimed at reviving Pakistan's agricultural and rural sectors.

2. Current State of Agriculture and Rural Economy

Agricultural Production and Productivity

Pakistan's agricultural yield is fairly dominated by a few primary crops, making up a sizeable portion of the cumulative cultivated land, including wheat, cotton, rice, and sugarcane. While

¹ Mahmood Ahmad, ed. *Water Policy in Pakistan: Issues and Options*, (Springer, 2023).

² Md Hosenuzzaman, Mohammad Golam Kibria, and Md Anwarul Abedin "Surface and Underground Water Challenges in the Delta Region of Bangladesh," In *Surface Environments and Human Interactions*, ed. Rajat Mazumder and Rajib Shaw (Singapore: Springer, 2024), 65-94.

³ Rashed Al Mahmud Titumir, Tanjila Afrin, and Mohammad Saeed Islam, "Water Resources: Provision, Distribution and Sustainable Production," In *Natural Resource Degradation and Human-Nature Wellbeing: Cases of Biodiversity Resources, Water Resources, and Climate Change*, ed. Rashed Al Mahmud Titumir, Tanjila Afrin, and Mohammad Saeed Islam (Singapore: Springer Nature Singapore, 2023), 147-254.

production has increased over the past few decades, yield levels remain stagnant compared to regional and global averages.⁴ This stagnation can be attributed to several factors, including:

- **Water scarcity:** Pakistan is a water-stressed country, and over 90% of water usage is linked with agrarian needs. Inefficient irrigation systems and over-extraction of groundwater resources add insult to the injury.⁵
- **Soil degradation:** Unsustainable agricultural techniques and practices, such as exorbitant usage of fertilizers and pesticides, have resulted in soil erosion and a dip in soil fertility.⁶
- **Limited access to modern technologies:** The adoption of modern-day farming machinery and techniques such as precision agriculture and leveraged varieties of crops is scarce due to financial constraints and a lack of training and awareness among farmers.⁷

3. Livestock and Fisheries

The otherwise overlooked sector of Livestock and Fisheries accounts for a considerable contribution to livelihood in rural areas. The sector faces many hurdles that serve as roadblocks for its growth, including:

- **Animal diseases:** Severe outbreaks of diseases like Foot-and-Mouth Disease (FMD) and Peste des Petits Ruminants (PPR) factor into cattle mortality rate, impacting economic sustenance for farmers.
- **Inadequate infrastructure:** The livestock sector's potential and the scope for growth is not fully leveraged. The sector suffers from a dearth of properly functioning storage facilities, Veterinary services, and limited access to markets, among other hurdles.
- **Limited investment in research and development:** The research and development in the livestock sector fails to flourish as investment remains grimly scarce. This reflects a lack of focus on the growth of the sector, as limited breeding programs are available in the country. Moreover, the gap in productivity needs to be addressed by investing in research for developing high-yield breeds.

The fisheries sector faces similar challenges, in terms of negligence and the lack of adequate investment. Other problems plaguing the sector's growth include the exploitative scale of fishing, water contamination, and limited investment in aquaculture.

4. Rural Infrastructure and Services

While some rural areas in the country have basic infrastructure like a network of roads, electricity, and gas in place, others still are without such basic structures. Besides infrastructure, healthcare services, education, and other essential life amenities also remain inaccessible for a wide populace living in rural areas. A report published by the Asian Development Bank in 2021 reveals that the total of rural households with improved sanitation facilities stands at a disconcerting percentage of 62%. The literacy rates reported through the same source present an even dismal state of literacy in rural areas which stands at only 58%, in comparison with urban areas standing at 79%.⁸

⁴ C. R. Mehta, and Uday R. Badegaonkar. "Sustainable management of crop residues in Bangladesh, India, Nepal and Pakistan: challenges and solutions," (2023).

⁵ Anja du Plessis, "Water resources from a global perspective." In *South Africa's Water predicament: Freshwater's unceasing decline*, (Cham: Springer International Publishing, 2023) 1-25.

⁶ R. Kumar, R. Kumar, and O. Prakash, "The impact of chemical fertilizers on our environment and ecosystem," (2019).

⁷ Santoshi Rudrakar, and Parag Rughani, "IoT based agriculture (Ag-IoT): A detailed study on architecture, security and forensics," *Information Processing in Agriculture* (2023).

⁸ Shazia Perveen, "Drinking water quality monitoring, assessment and management in Pakistan: A review," *Heliyon* 9, no. 3 (2023).

5. Socioeconomic Conditions:

Poverty remains a significant concern in rural Pakistan, with a higher prevalence compared to urban areas.⁹ This is further compounded by income inequality and gender disparity. Women often face limited access to land ownership, resources, and education, hindering their ability to contribute to agricultural development and improve their livelihoods. Rural-urban migration, fueled by the search for better employment opportunities and basic services, further strains the already limited resources in rural areas.

6. Challenges and Constraints

Climate Change and Environmental Issues

The alarming rates at which climate change has been exacerbated over the last few decades have consistently jeopardized the growth of the country's agriculture and rural landscapes. Weather patterns have undergone drastic changes, reflected in temperature rise, untimely rains, and increased frequencies of droughts and floods. These changes meddle with the production cycles leading to crop failures.¹⁰ These erratic patterns have raised serious concerns over the long term state of water security, as well.

Water Scarcity and Management

Water scarcity is one of the salient factors that pose grave challenges to the growth of the sector. The issue is furthered by ill water management practices that reflect the inefficiency of the management systems at large.

The existing irrigation system is structurally inefficient, with unlined canals that allow huge water seepage and significant water loss. Moreover, heavily resorting to groundwater extraction has depleted aquifers, leading to land subsidence and saltwater intrusion in coastal areas.

Market Access and Price Fluctuations

Easy access to markets remains an incontestably large issue that the sector faces. Moreover, smallholder farmers suffer in acquiring fair prices for their yield. The prevalence of segregated agricultural marketing and the lack of direct access give rise to a significant loss in produce after harvest and eventually, translate into reduced profits for farmers.

Technological Adoption and Innovation

Agricultural productivity and effective allocation of resources cannot be completely leveraged without introducing modern farming techniques and inventory like precision agriculture, drip irrigation, and extremity-enduring crop varieties.¹¹ And the reason that small-scale farmers lack on this front is limited or inadequate financing and extension services.

The Way Forward: Strategies for Progress

Modernization and Technological Advancement

- **Promote research and development:** In the face of the grim Climate Change situation that the world grapples with today, investment in research must emphasize finding climate resilient techniques and developing crop varieties that withstand droughts and other unfavorable climate conditions.

⁹ Manzoor Hussain Memon, "Poverty, gap and severity estimates for disaster prone rural areas of Pakistan," *Social Indicators Research* 166, no. 3 (2023): 645-663.

¹⁰ Zafar Imran, "The 'Press and Pulse' of Climate Change Strains Farmers in Pakistan," *Bulletin of the Atomic Scientists: Online* (2023).

¹¹ Hassina Ait Issad, Rachida Aoudjit, and Joel JPC Rodrigues, "A comprehensive review of Data Mining techniques in smart agriculture," *Engineering in Agriculture, Environment and Food* 12, no. 4 (2019): 511-525.

- **Facilitate technology adoption:** Government subsidies and training programs can encourage farmers to adopt modern technologies like precision agriculture and drip irrigation systems.
- **Public-private partnerships:** Collaboration between public and private sectors can facilitate the development and dissemination of innovative agricultural technologies.

Water Management and Resource Conservation

- **Modernize irrigation infrastructure:** Upgrading canals with lining and efficient water distribution systems can significantly reduce water losses.
- **Promote water conservation practices:** Encourage farmers to adopt water-saving techniques like drip irrigation and rainwater harvesting.
- **Demand management:** Implementing water pricing policies that reflect the true cost of water can incentive more efficient water use.

Market Reforms and Value Addition

- **Improve market access:** Developing efficient market infrastructure, including cold storage facilities and improved transportation networks, can connect farmers directly to consumers and reduce post-harvest losses.
- **Empowerment of farmers' organizations:** Supporting the formation and strengthening of farmer cooperatives can provide farmers with greater bargaining power and access to markets.
- **Promote value addition:** Encouraging the processing and marketing of value-added agricultural products can increase profitability for farmers and generate additional employment opportunities.

Rural Development and Social Uplift

- **Investment in rural infrastructure:** Increased government spending on infrastructure development, including roads, electricity, and communication networks, is essential for rural development.
- **Improve access to education and healthcare:** Expanding access to quality education and healthcare services in rural areas can empower rural communities and improve their livelihoods.
- **Gender equality initiatives:** Policies promoting women's land ownership, access to credit, and education are essential for unlocking their full potential and contributing to agricultural development.

7. Conclusion and Policy Recommendations

Key Findings

This essay has covered many of the aspects of the current state of agriculture and the rural economy in Pakistan. It has revealed a complex both challenges and opportunities. The analysis has identified several key findings:

- **Resource Scarcity:** Water scarcity stands as a barrier to agricultural development. Inefficient irrigation practices, and the looming threat of climate change and glacial melt, exacerbate water stress. Soil degradation and unsustainable practices further diminish agricultural productivity.
- **Limited Market Access and Technology Adoption:** Smallholder farmers are often trapped in a cycle of low profitability due to limited access to markets and technologies. The dominance of middlemen in the agricultural marketing system reduces farmers' share

of profits. Additionally, the low adoption of technologies like precision agriculture and drought-resistant crop varieties restricts agricultural productivity and resource efficiency.

- **Socioeconomic Disparity:** Rural Pakistan grapples with poverty, income inequality, and gender disparity. Limited access to education, healthcare, and financial services impedes rural development. It restricts the potential of rural communities to contribute meaningfully to the national economy. Women face additional challenges due to limited land ownership and unequal access to resources and education.
- **Infrastructure Deficiencies:** The lack of adequate infrastructure in rural areas hinders progress. Poor road connectivity, insufficient electricity supply, and limited access to storage facilities create logistical challenges for farmers thus stifling agricultural growth.

Policy Recommendations for a Multi-Pronged Approach

To address these challenges and unlock the vast potential of Pakistan's agricultural and rural sectors, a multi-pronged approach is necessary. The following policy recommendations aim to provide a road map for sustainable agricultural development and rural uplift:

Increased Investment in Agriculture

- **Boosting Research and Development (R&D):** A significant increase in public and private sector investment in agricultural R&D is crucial. This investment should be directed toward developing drought-resistant crop varieties, climate-smart agricultural practices, and resource-efficient technologies.
- **Infrastructure Development:** Modernization of irrigation infrastructure, including investments in canal lining, efficient water distribution systems, and rainwater harvesting initiatives, can significantly reduce water losses and ensure equitable water distribution. Upgrading rural roads and storage facilities will improve connectivity and reduce post-harvest losses.
- **Promoting Technology Adoption:** Government subsidies, coupled with training programs, can provide incentive for smallholder farmers to adopt modern technologies. This can involve establishing demonstration farms showcasing the benefits of precision agriculture techniques, drip irrigation systems, and efficient use of fertilizers and pesticides.

Strengthening Institutional Frameworks

- **Water Management Reform:** Revamping water management institutions with a focus on transparency, accountability, and inclusivity is essential. Empowering local communities through Water Users Associations (WUAs) can promote sustainable water management practices and ensure equitable water distribution.
- **Revitalizing Agricultural Extension Services:** Reinvigorating and modernizing agricultural extension services can bridge the knowledge gap between research and practice. Extension workers equipped with the latest knowledge and technologies can provide crucial support to farmers in adopting innovative farming methods and improving agricultural productivity.

Public-Private Partnerships

- **Leveraging Private Sector Expertise:** Forging strong partnerships between the public and private sectors can leverage private sector expertise, resources, and innovation for agricultural development. Public-private partnerships can be instrumental in developing and disseminating new agricultural technologies, establishing efficient market linkages, and attracting investment in rural infrastructure development.

- **Corporate Social Responsibility (CSR):** Encouraging agricultural corporations to engage in CSR initiatives that support smallholder farmers can foster sustainable development. This may involve providing training programs, establishing buyback centers with fair pricing mechanisms, and assisting farmers in adopting sustainable agricultural practices.

Climate-Smart Agriculture

- **Building Resilience:** Developing and promoting climate-smart agricultural practices that are resilient to changing weather patterns and extreme weather events is crucial. This includes promoting drought-resistant crop varieties, diversifying cropping patterns, and adopting soil and water conservation techniques.
- **Investing in Climate Change Mitigation and Adaptation:** Increased investment in renewable energy sources can reduce dependence on fossil fuels and provide clean energy for rural communities. Additionally, investing in early warning systems for extreme weather events can help farmers prepare and mitigate losses.

Social Uplift Initiatives

- **Investing in Rural Education and Healthcare:** Expanding access to quality education and healthcare services in rural areas is fundamental for long-term development. Encouraging girls' education will empower women to participate more actively in agricultural activities and contribute to household income. Investing in healthcare infrastructure and improving access to essential medical services will enhance the well-being of rural communities.
- **Social Safety Nets:** Implementing robust social safety net programs, such as cash transfer programs and food security initiatives, can provide a crucial safety net for vulnerable populations in rural areas, particularly during droughts, floods, or other natural disasters. These programs can help alleviate poverty, improve food security, and foster resilience among rural communities.

Gender Equity and Women's Empowerment

- **Land Ownership Rights:** Ensuring secure land ownership rights for women is critical for empowering them to participate more effectively in agricultural activities and benefit from their labor. This can involve legislative reforms and supporting women's access to land inheritance and registration processes.
- **Financial Inclusion:** Providing women with access to credit and financial services can empower them to invest in agricultural inputs, improve their farms, and increase their income. Microfinance initiatives tailored to meet the needs of rural women can be a powerful tool for promoting gender equality and agricultural development.
- **Skills Development and Training:** Investing in skills development and training programs specifically designed for women in agriculture can equip them with the knowledge and skills necessary to adopt modern farming techniques, manage their farms effectively, and participate in agricultural value chains.

Market Reforms and Value Addition

- **Enhancing Market Access:** Developing efficient market infrastructure can help a great deal. Cold storage facilities and improved transportation networks can connect farmers directly to consumers and reduce post-harvest losses. Establishing farmer-producer organizations (FPOs) can empower farmers to collectively bargain for better prices and improve their market access.

- **Promoting Value Addition:** The processing and marketing of value-added agricultural products, if encouraged, can significantly increase profitability for farmers. This can involve but is not limited to, investments in food processing facilities, promoting cottage industries for agro-processing, and facilitating market linkages for processed agricultural goods.

8. The Way Forward

Revitalizing Pakistan's agricultural and rural sectors is a complex but not-so-unachievable goal. It necessitates a collective effort from the government, private sector, civil society organizations, and most importantly, the farmers themselves. Pakistan can unlock the vast potential of its agricultural sector by implementing the proposed policy recommendations.

A revitalized agricultural sector can deliver multiple benefits for Pakistan. It can ensure:

- food security for its growing population,
- create employment opportunities in rural areas,
- contribute significantly to national economic growth.

More importantly, it can empower rural communities, bridge the income gap, and deliver a more equitable and sustainable future for all Pakistanis.

The journey towards a successful and self-sustainable agricultural and rural economy in Pakistan requires a long-term vision, full commitment, and continuous innovation. By embracing these challenges with a spirit of collaboration and a commitment to sustainable development, Pakistan can transform its rural landscape and pave the way for a brighter future.

ANALYSIS

An Analysis of Circular Debt of Power Sector in Pakistan: Challenges and Way Forward

Dr. Ghulam Mustafa

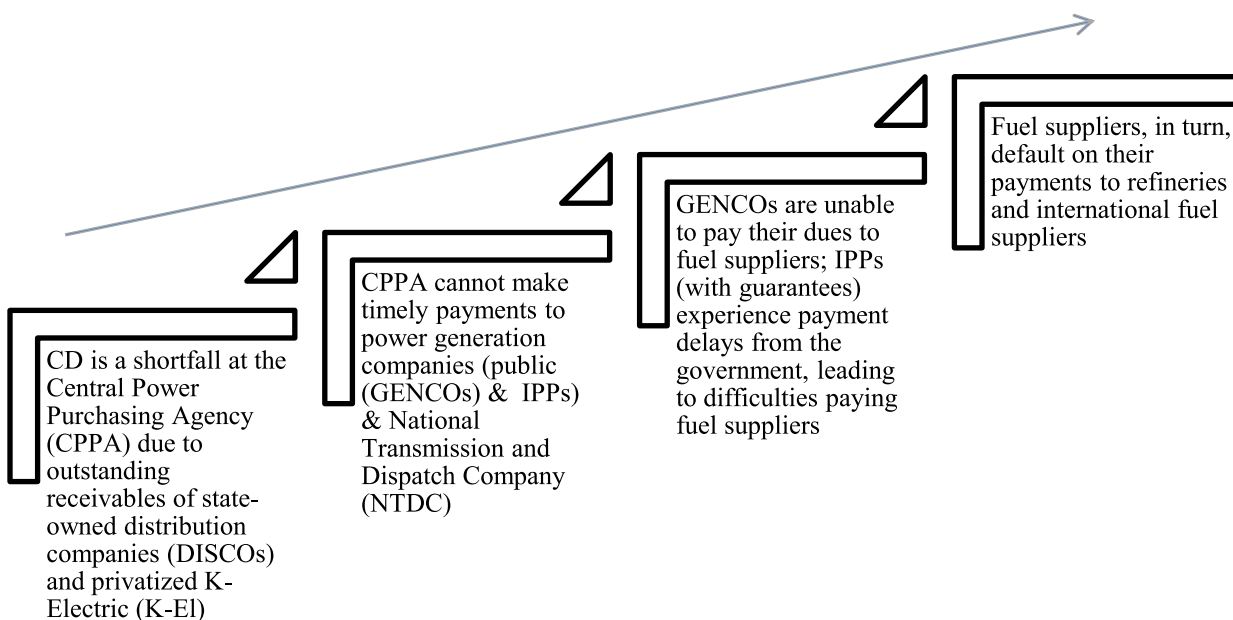
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1. Introduction

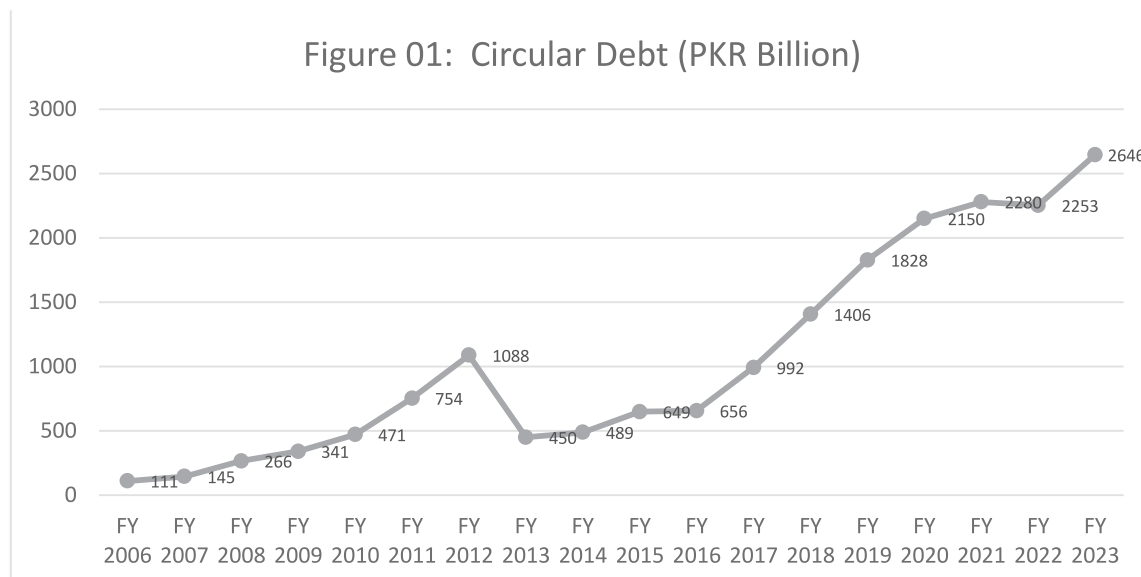
It is widely recognized that the energy sector plays a pivotal role in achieving a country's state's socio-economic development and economic growth. Electricity is a versatile form of energy that contributes to maintaining growth and development in the agricultural, industrial, and various services sectors and also affects domestic households as well. Keeping in view the significance of energy sector, the provision of affordable and clean energy is weaved up in the 2030 Agenda for Sustainable Development under SDG-7. Therefore, it is crucial to ensure that energy is available and at a reasonable cost to maintain a country's competitiveness in the global arena, and to achieve SDG-7 as well.

Circular debt occurs when one entity facing problems in its cash inflows holds back payments to its suppliers and creditors. Thus, problems in the cash inflow of one entity cascade down to other segments of the payment chain. In Pakistan, the energy sector has faced this issue for several years.

Looking into the history, Pakistan's power sector has been experiencing an adverse crisis since 2005 owing to the ailing financial condition of the sector and wrong policy choices—the recent energy crisis led to an exemplary increase in electricity tariffs, thus adversely affecting economic activities. A power sector financial deficit has turned into the prevalence of circular debt. It emerges due to the inability of the Central Power Purchasing Agency (CPPA) to recover outstanding receivables from state-owned distribution companies including privatized K-Electric. This generates a circle of inability to pay other stakeholders—From distribution companies (DISCOs) to CPPA, and CPPA to generation companies (GENCOs), and from GENCOs to fuel suppliers (see following flow chart).



Since its inception in FY 2006, the circular debt (CD) has been increasing and getting worsened. It was observed PKR 111 billion in 2006 and it went increasing significantly after that, and has reached now PKR 2.3 trillion as of June 30, 2023 (see figure 01). The cumulative losses since FY2006 have crossed Rs 6 trillion (3% of current GDP).



Source: Power Division, Ministry of Energy

The CD is affecting the power sector's health and further weakening Pakistan's already struggling economy. Maintaining macroeconomic sector efficiency has become challenging for fiscal and administrative managers; the industrial sector is adversely affected. Simply, it has become the white elephant for the government of Pakistan.¹

2. Reasons of Circular Debt (CD)

Through the secondary research analysis of the published reports and research papers², we can find the major reasons, which are discussed as follows.

(i) Wrong and Costly Policy Choices

Lack of informed long-term vision in policymakers has cost Pakistan dearly. Although private capital via Independent Power Producers (IPPs) has increased installed capacity, it has also raised generation costs due to ballooned capacity payments. Government planning and bidding inefficiencies have led to costly direct deals with IPPs, while strict take-or-pay contracts with sovereign guarantees have created severe financial issues in the power sector. The absence of competitive bidding and non-transparent procurement processes have raised concerns about corruption, leading to disputes over rates and payments. Policies supporting guaranteed capacity payments have significantly increased electricity generation costs. The 1994, 2002, 2013, and 2015 power policies resulted in an expensive fuel mix and

¹ Malik, A. Power Crisis in Pakistan: A Crisis in Governance? PIDE Monograph No. 4, Pakistan Institute of Development Economics, Islamabad (2012).

Malik, A. Circular debt: An unfortunate misnomer. PIDE Working Paper Series 2020: 20

Malik, A. Power Sector Woes. Business Recorder, August 30, 2023

² Cheema, T.B, Haque, N. U. and Malik, A. Power Sector: An Enigma with No Easy Solution. Book published by PIDE-RASTA (2022).

Hassan, M. A., Khan, S. U., Zia, M. F., Sardar, A., Mehmood, K. K., & Ahmad, F. Demand-Side Management and Its Impact on the Growing Circular Debt of Pakistan's Energy Sector. *Energies*, 16(15), 5680 (2023)

USAID. Causes and Impact of Power Sector Circular Debt in Pakistan. Study commissioned by the Planning Commission of Pakistan and Funded by United States Aid for International Development, Islamabad (2013).

payments in US dollars, stressing foreign exchange reserves. Unplanned capacity additions have further escalated capacity purchase prices, causing a rise in the power purchase price. National Electric Power Regulatory Authority (NEPRA) needs to ensure compliance with generation licenses and implement proper monitoring and auditing to reduce costs and excess profitability. The structural rigidity from long-term contracts and lack of competitive bidding have forced consumers to pay uncompetitive electricity prices, exacerbating financial losses and increasing arrears³.

Rising Footprints of Government

According to the research, conducted by PIDE⁴, footprints of the government in the energy sector have crossed 60 percent of the GDP, which results in the following undesired outcomes.

- Rising inefficiency in state-owned distribution and generation companies
- Increasing government's guarantees and subsidies provided by the government.
- It all accumulates and increases the size of the circular debt

(ii) Shortage of Transmission and Distribution (T&D) Network

Pakistan faces a significant shortage in transmission and distribution (T&D) networks. Investments aimed at increasing generation capacity have not been matched by equivalent investments in downstream T&D infrastructure. As a result, capacity payments are being made, but there is insufficient infrastructure to transmit the available electricity to consumers. More than one-fourth of generated electricity is lost due to dilapidated networks, theft, and inadequate energy accounting. The T&D capacity is significantly less than the installed generation capacity, with the transmission network capable of handling only 23,000 MW at peak, and experiencing loss levels of nearly 3 percent. System constraints prevent the evacuation of about 10 GWh of generation. This mismatch between generation and T&D networks is another factor contributing to the capacity trap, depleting the sector's liquidity and exacerbating circular debt problems. Given the slow economic growth, maintaining current levels of capacity payments per unit is challenging, as this would require a significant increase in energy sales. Furthermore, there have been no substantial efforts to boost electricity supply in Sindh, Baluchistan, and KP, where many areas still lack connection to the national grid.⁵

(iii) Sub-optimal Energy Mix

Over 40 percent of Pakistan's power generation relies on imported fuels, making the sector vulnerable to international fuel price hikes and rupee devaluation, which worsen the deficit. Policymakers have historically chosen quick fixes, neglecting long-term strategies. The generous tariffs offered to IPPs in the 1990s, if extended to hydro projects, could have improved the power sector's stability. Despite shifting from oil (from 47 percent in FY1998 to 7.4 percent in FY2019), the reliance on other imported fuels like RLNG has grown significantly (from 0.7 percent in FY2015 to 23 percent in FY2019), and coal's share rose from 0.5 percent in FY2014 to 13.3 percent in FY2019. The new coal-fired power plants, mostly using imported coal, remain costly due to rupee devaluation, thus maintaining Pakistan's dependence on expensive imports. So, overly-reliance on imported fuels brought about the inefficient and costlier fuel-mix, which burdened finances with subsidies and circular debt⁶.

³ NEPRA. State of Industry Report, National power Regulatory Authority (2018, 2022).

⁴ Haque, Nadeem Ul, and Raja Rafi Ullah. "Estimating the Footprint of Government on the Economy." *The Pakistan Development Review* 61, no. 4 (2022): 551-562.

⁵ Malik, A. IMF Program and Energy Crisis. Business Recorder, February 15, 2023.

Malik, A. Power Sector Woes. Business Recorder, August 30, 2023.

⁶ NEPRA. State of Industry Report, National power Regulatory Authority (2018).

PIDE. Framework of Economic Growth, Pakistan Institute of Development Economics, Islamabad. Report on the Power Sector, Prepared by Committee for Power Sector Audit, Circular Debt Resolution and Future Roadmap, Ministry of Energy, Pakistan (2020).

(iv) **Subsidies and Pricing Strategy**

The electricity subsidy system in Pakistan, characterized by cross-subsidization and an inability to pass on actual costs to consumers, exacerbates the circular debt issue. These subsidies, introduced as welfare measures, burden the government and are often passed on to compliant consumers through taxes, and tariff hikes. Despite international evidence suggesting their inefficiency, subsidies persist, with the largest portion directed towards inter-DISCO tariff differentials (NEPRA). The policy of maintaining uniform tariffs across different regions, regardless of efficiency levels, further strains the government's finances and distorts investment decisions. Subsidies aimed at protecting end-consumers, such as K-Electric, contribute to the persistence of the problem. Moreover, subsidies to sectors like agriculture tube wells and domestic consumers below 300 units exacerbate fiscal constraints and distort market dynamics. Without reform, the circular debt issue is likely to persist, hindering the development of the power sector⁷.

(v) **Operational Performance**

Consumer end tariffs in Pakistan are profoundly affected by transmission and distribution (T&D) losses, with even slight increases in losses leading to substantial tariff hikes due to higher generation costs. NEPRA employs a policy tool to set T&D loss targets for each DISCO, aiming to incentivize operational efficiency improvements. However, the lack of penalties for non-compliance allows DISCOs to remain inefficient, relying on subsidies to cover deficits. Domestic consumers, often subsidized, significantly contribute to T&D losses, primarily through theft facilitated by corrupt DISCO officials. Corruption and negligence at senior management levels exacerbate technical losses, as bribery culture inhibits investment in theft control measures.

(vi) **Commercial Efficiency**

The low recovery ratio of DISCOs significantly contributes to the circular debt crisis in Pakistan's power sector. Despite NEPRA counting 100 percent recovery in tariff determination, actual reported recovery percentages for DISCOs remained around 90 percent in FY2019, resulting in an annual shortfall of approximately Rs. 130 billion. Deteriorating recovery ratios over the years, except for a few exceptions like FESCO and LESCO, indicate systemic issues across DISCOs. Even efficient utilities like IESCO witnessed a decline in recovery ratio from 98 percent in FY2008 to 88 percent in FY2019. Moreover, the agriculture sector, with a recovery ratio of 48 percent, stands out as the sector with the lowest recovery.

Operational and commercial inefficiencies, largely attributed to governance problems within DISCOs, compound the issue. Delays and disputes over multi-year tariff determinations have led to increased losses for DISCOs like IESCO, GEPCO, and FESCO, with gross receivables from these entities rising significantly. QESCO's low recoveries are primarily due to subsidy policies on tube-wells and delays in tariff notifications, with agriculture consumers constituting a significant portion of defaulters. Furthermore, over 5.3 million electricity consumers, despite being defaulters, continue to receive electricity, contributing to the mounting debts. Political interference, security conditions, and mismanagement exacerbate the situation, with DISCOs like PESCO, QESCO, HESCO, and SEPCO being major defaulters. Mismanagement in billing practices also adds to the losses, costing the sector billions annually. These issues underscore the urgent need for comprehensive reforms within Pakistan's power sector⁸.

⁷ SBP. Evaluating the Fiscal Burden of State-owned Enterprises in the Power Sector, Special Section 2, The State of Pakistan's Economy, State Bank of Pakistan (2019).

Awan, H. S., G. Samad & N. Faraz. Electricity Subsidies and Welfare Analysis: The Perspective of Pakistan. PIDE-Working Paper 2019: 164 (2019).

⁸ NEPRA. State of Industry Report, National power Regulatory Authority (2018, 2022)

(vii) Regulations

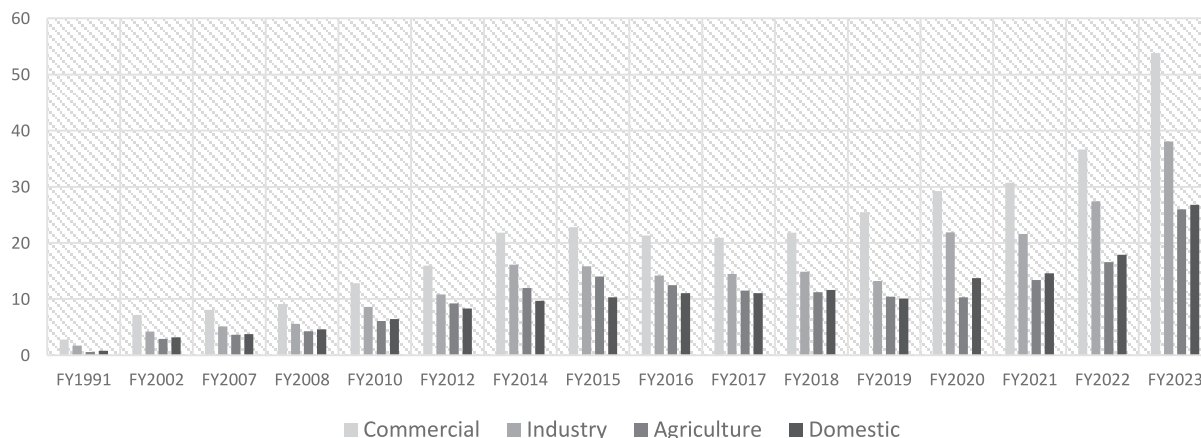
The weak administrative governance within NEPRA has hindered its effectiveness in regulating the power sector. The lack of autonomy and professional expertise, coupled with limited authority to supervise and control, has impeded NEPRA's ability to establish a rational pricing regime. NEPRA's method of tariff determination has been criticized for contributing to issues like system losses, rising costs, and high tariffs, exacerbating the circular debt problem. Moreover, NEPRA's inability to hold DISCOs accountable for operational and commercial inefficiencies, or to enforce penalties for poor performance, underscores its regulatory shortcomings.

NEPRA's failure to develop a robust regulatory framework for ensuring reliable, efficient, and affordable electricity further highlights its ineffectiveness. Despite its mandate to attract investment in the power sector, NEPRA has not significantly facilitated projects generating electricity from renewable sources, partly due to government influence and delays in market entry regulation. Additionally, inconsistencies between NEPRA and the Oil and Gas Regulatory Authority (OGRA) create regulatory disharmony, sending mixed signals to investors and disrupting pricing strategies between gas and electricity sectors. These regulatory challenges underscore the need for comprehensive reforms within NEPRA to address systemic issues in Pakistan's energy sector.

3. Impacts of Circular Debt (CD)

Since its inception, CD's most immediate impact has been on utilizing existing installed capacity. Consequently, most of the thermal power plants were forced to operate at a very low capacity factor; thus, there was a massive increase in power load-shedding. The country lost between 2000 MW to 2500 MW of potential thermal power generated by private power companies as they remained off-grid due

Figure 02. Average Sale Rate (Rs/ KWh) in DISCOs



to the non-availability of fuel supply coupled with a lack of funds due to swelling dues in its early years. This trend continued. As a result of fuel shortages due to insufficient payables to power generation companies, power outages lasting 8 to 10 hours have occurred many times in recent years, leading to a little capacity utilization of thermal power plants and increased load-shedding. This has impacted consumer-end tariffs for all categories of consumers. Despite Pakistan's government providing substantial subsidies to the power sector, the average consumer-end tariff has increased substantially.

For the industry, the electricity tariffs have increased by more than 640% since 2007, this sudden increase will likely harm the industry's competitiveness and export gains from the last two years. Additionally, if electricity tariffs continue to rise, manufacturing costs will increase, resulting in a liquidity crisis due to decreased profitability. Ultimately, this will lead to a contraction of the

manufacturing sector, which will have negative implications for employment. This has been proven through empirical examination of firm-level data conducted by PIDE.⁹

4. Way Forward

The available literature¹⁰ has suggested a number set of policy choices to tackle the exacerbating gigantic problem of circular debt, which are outlined as follows.

- By reducing the footprint of the government in the power sector, a competitive electricity market and an effective regulatory framework are the ultimate solution to major incumbent problems in the power sector.
- There is a dire need to bring a reform in the state-owned companies of the power sector. For this purpose, the following are the key areas to reform them.
 - Companies are required to bring innovative leadership with a commercial-minded strategy.
 - Decentralized decision-making is required through better operational and financial management, and make companies accountable for their decisions.
 - Adaption of new technologies such as pre-paid and post-paid smart meters, to increase transparency in billing and manage demand while decreasing reliance on meter readers.
- We need to move on corporate and commercial model for energy sector. All power related companies such as DISCOs, state-owned generation companies (GENCOs) and the NTDC should be listed in the stock exchange, with a limit of 5% share for each shareholder. Institutional investors (pension funds) must come and run the business, and not the private conglomerates.
- Using this capacity in productive activities (where payment is relatively more certain, e.g., industry) is crucial to prevent this amount from being added to the circular debt. That is, by offering tariffs to the productive sectors without any cross-subsidy.
- Instead of relying on revenue-based load shedding, it is essential to use technology and management with innovative ideas to address non-compliant areas and integrate them into the mainstream.
- There is also a need to verify IPPs' claims regarding their ability to supply power. IPPs may be receiving compensation for electricity they cannot generate. It is necessary to impose a complete moratorium on new IPPs. Let the market decide about new capacity additions through competition.
- Instead of following a policy of increasing tariffs, there is a need to eliminate a uniform tariff policy. Tariffs should be non-discriminatory (without cross-subsidy) and based on total cost recovery. A flat rate is the most efficient way to maximize revenue.

⁹ Malik, A., Mustafa, G. and Zia, U. Energy Reforms for Export Oriented Units in Pakistan. Report by PIDE Energy Cell (2023).

¹⁰ Malik, A. and Mustafa, G. Power Sector Debt and Pakistan's Economy. PIDE Working Paper (2024).
Malik, A. Circular debt: An unfortunate misnomer. PIDE Working Paper Series 2020: 20 (2020).

CONCEPT

Exploring the Economic Potential of Geographical Indications (GIs) in Pakistan Challenges and Way forward

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Abstract:

Pakistan's rich cultural diversity, spanning agriculture and non-agriculture sectors, offers a transformative path to global competitiveness through Geographical Indications (GI). This research delves into Pakistan's GI landscape, exploring its international significance while addressing inherent challenges and opportunities. Pakistan's agricultural bounty, exemplified by Basmati rice and Sindhri mangoes, holds promise for international recognition, fostering economic growth for local farmers. Similarly, in non-agricultural domains like crafts and textiles, GIs safeguard cultural heritage while stimulating economic avenues. Yet, challenges loom—such as navigating global trade intricacies, protecting intellectual property, and fostering domestic cooperation. Strategic interventions are essential, including strengthening legal frameworks, investing in authentication technology, fostering collaborations, and promoting market access through effective branding. This research charts a course for Pakistan's sustainable economic growth through GI, offering recommendations for policy interventions and budget allocations in the Annual Budget 2024-25.

Keywords: Geographical Indications (GIs), Pakistan, Economic Potential, Challenges, Opportunities, Collaboration, Market Access, Branding, Policy Interventions.

1. Introduction to Geographical Indications (GIs):

Geographical Indications (GIs) serve as powerful markers of origin, intricately linking products to their geographical roots and the craftsmanship integral to their creation. More than mere labels, GIs embody the unique attributes and cultural heritage of a region, setting products apart in the market.¹ They provide consumers with a guarantee of authenticity, offering insights into a product's origin, intrinsic qualities, and production methods. The allure of GI-certified goods resonates with discerning consumers worldwide, reflecting a willingness to invest in and appreciate these distinctive offerings.²

Pakistan's landmark enactment of the Geographical Indications (Registration and Protection) Act in March 2020 represents a significant milestone in safeguarding its indigenous treasures. This legislation shields Pakistani products from exploitation by foreign entities, ensuring recognition and protection for goods that embody the nation's rich heritage. Notably, the registration of 10 GIs, including iconic products like Basmati rice, Sargodha Kinnnow, Sindhri Mango, Chaunsa Mango, Hyderabad Bangles, Aseel Dates etc. underscores Pakistan's commitment to preserving its unique identity and fostering economic growth.³

¹ Michael Blakeney, "Proposals for the International Regulation of Geographical Indications," *The Journal of World Intellectual Property* 4, no.5 (2005): 629-652.

² Georges Giraud, "Range and Limit of Geographical Indication Scheme: The Case of Basmati Rice from Punjab, Pakistan," *International Food and Agribusiness Management Review* 11, no.1 (2008).

³ <https://ipo.gov.pk/>.

However, despite these achievements, challenges persist. A multitude of products is currently undergoing scrutiny and registration, highlighting the need for continued efforts to safeguard Pakistan's diverse array of goods. Strengthening the GI ecosystem is crucial for bolstering consumer trust, ensuring equitable returns for small and medium enterprises (SMEs), and enhancing Pakistan's global competitiveness.

Amidst Pakistan's agricultural abundance and artisanal traditions lies immense potential for leveraging GIs to drive economic growth. Products like Basmati rice and Hyderabad Bangles resonate globally, reflecting Pakistan's rich heritage and quality craftsmanship. The Geographical Indications (Registration and Protection) Act of 2020 paves the way for sustainable growth and recognition in the international market, positioning Pakistan as a global hub for authentic and culturally rich products.⁴

By spearheading the registration of GIs, Pakistan has laid the groundwork for safeguarding its unique products and fortifying the economic landscape for local artisans, farmers, and SMEs. Moving forward, continued investment in the GI sector will be essential for realizing Pakistan's economic potential and solidifying its position on the global stage.⁵

2. Pakistan's Geographical Indications' Landscape:

Pakistan's Geographical Indications (GIs) landscape showcases the country's agricultural and cultural wealth, offering a promising avenue for economic development and cultural preservation. The agricultural sector, thriving in diverse landscapes from Punjab and Sindh's fertile plains to the mountainous regions of Khyber Pakhtunkhwa and Balochistan, cultivates a plethora of unique crops owing to varied climatic conditions and soil compositions.

Basmati rice, a globally coveted variety renowned for its aroma and slender grains, finds its origin in Punjab and parts of Sindh, making it a prime candidate for GI recognition.⁶ Similarly, Sindhri mangoes and Sargodha Kinnow, celebrated for their succulent sweetness and distinctive flavors, represent Pakistan's tropical richness and hold immense potential for GI recognition.⁷ Beyond these, Chaunsa mangoes from Multan in Punjab exemplify the nation's prowess in producing superior-quality fruits, warranting GI recognition to enhance their global desirability.⁸

Pakistan's cultural diversity, spanning from the Himalayan borders to the Arabian Sea shores, manifests in a myriad of arts, crafts, and traditions unique to each province. Punjab's Chinioti Inlay Furniture and Phulkari embroidery, Sindh's Sindhi Topi and Ajrak, KP's Swati Topi and Balochistan's Balochi embroidery depict the craftsmanship and heritage of their respective

⁴ Lanye Zhu, "An Analysis of China's System of Protecting Geographical Indications," *Asian Journal of Comparative Law*, (2015).

⁵ WTO, "Australia - Certain Measures Concerning Trademarks, Geographical Indications and other Plain Packaging Requirements Applicable to Tobacco Products and Packaging," *Dispute Settlement Reports* 2018.

⁶ Mustafa Khan, Arzu Khan, & Muhammad Ashfaq, "Is Geographical Indication System an Opportunity for Developing-8 (D-8) Countries? An Evaluation of Registered Rice Production," in *Modern Techniques of Rice Crop Production*, ed. Naeem Sarwar, Atique-ur-Rehman, Shakeel Ahmad, and Mirza Hasanuzzaman (Singapore: Springer, 2022).

⁷ C. Herrero Latorre, R. M. Pena Crecente, S. Garcia Martín, & J. Barciela García, "A fast chemometric procedure based on NIR data for authentication of honey with protected geographical indication," *Food Chemistry* 141, no. 4 (2013): 3559-3565.

⁸ Syed Turab Raza, Abid Hameed Khan, Asifa Hameed, Noor Muhammad, Abdul Ghaffar Grewal, Muhammad Tariq Malik, Muhammad Imran, Ghulam Mustafa, & Atif Iqbal, "A Review on White Mango Scale Biology, Ecology, Distribution and Management," *Agriculture* 13, no. 9 (2023).

regions.⁹ These cultural treasures, along with proposed GIs like the Kalashi Dress, not only preserve tradition but also contribute to economic growth by showcasing Pakistan's cultural diversity on a global platform.

In the realm of non-agricultural GIs, Pakistan boasts unique products like Pink Rock Salt from Khewra Salt Mines and gemstones from Gilgit-Baltistan, each holding significant economic potential and cultural significance. These products, with their distinct qualities and heritage, attract global attention and contribute to tourism and regional development.¹⁰ Furthermore, promoting non-agricultural GIs fosters innovation, tourism, and economic prosperity while safeguarding cultural identity and combating smuggling.¹¹

Harnessing Pakistan's GI potential presents an opportunity to drive sustainable growth, preserve cultural heritage, and enhance the country's global competitiveness. Through strategic investment, promotion, and international collaboration, Pakistan can leverage its agricultural and cultural treasures to ensure economic prosperity and cultural preservation for future generations.¹²

3. Analysis of Geographical Indications (GIs) in Global Economies and Pakistan's Potential:

3.1. Economic Impact of Global GIs before and after Registration:

An examination of renowned Geographical Indications (GIs) worldwide, particularly from India, China, and Turkey, sheds light on their transformative effects on economies. The following tables provided offer a comprehensive overview of the economic impact of Geographical Indications (GIs) before and after their recognition in three distinct regions: India, China, and Turkey. In India, renowned GIs such as Darjeeling Tea and Alphonso Mango experienced a significant transformation following their recognition. Before GI recognition, these products faced challenges such as limited global recognition, lower prices, and a lack of competitive advantage. However, after GI recognition, there was a notable improvement in market reputation, global demand, and premium pricing in international markets. This shift is exemplified by the substantial increase in exports led growth rates, with Darjeeling Tea experiencing a growth from 5% to 25% and Alphonso Mango from 3% to 15% after recognition.

Similarly, in China, famous GIs like Longjing Tea and Pu-erh Tea witnessed a remarkable enhancement in economic impact post-GI recognition. Pre-recognition, these products struggled with limited global recognition, low consumer trust, and lower prices. Nevertheless, after obtaining GI status, there was a significant improvement in market reputation, global demand, and pricing, leading to sustainable production practices. Notably, the exports led growth rates for both Longjing Tea and Pu-erh Tea saw substantial increases after recognition, from 5% to 20% and from 6% to 15%, respectively. Moving to Turkey, notable GIs such as Turkish Tea (Rize Tea), Antep Baklava, and Argan Olive Oil underwent a similar transformation. Before GI recognition, these products faced challenges akin to those encountered by their Indian and Chinese counterparts, including limited global recognition and low market share. However, post-GI

⁹ Zahid Rasool, & Khalid Khurshid, "Role of Pakistani Universities in promoting Culture of Peace for achieving Sustainable Development Goals," *Journal of Development and Social Sciences* 4, no.2 (2023): 480-495.

¹⁰ Omar Abdullah, Sobia Bashir, & Rafia Naz Ali, "The Potential Geographical Indications in Pakistan," *The Journal of Social Sciences Review* 3, no. 1 (Winter 2023): 335-346.

¹¹ Zakaria Sorgho, & Bruno Larue, "Geographical indication regulation and intra-trade in the European Union," *Agricultural Economics* 45, no. S1 (2014): 1-12.

¹² Faisal Mahmood, & Nadia Nasir, "Impact of green human resource management practices on sustainable performance: serial mediation of green intellectual capital and green behavior," *Environmental Science and Pollution Research* 30, no. 39 (July 2023): 1-17.

recognition, there was a significant uptick in market reputation, global demand, and premium pricing in international markets. This positive shift is reflected in the considerable increase in exports led growth rates for these Turkish GIs, showcasing growth rates ranging from 15% to 20% after recognition.

Overall, the tables underscore the transformative impact of GI recognition on the economic performance of products, highlighting how it has led to enhanced market reputation, increased global demand, and substantial growth in exports led growth rates across diverse regions and industries.

Indian Famous GIs

S. #	GIs	Economic Impact Before GI Recognition	Economic Impact After GI Recognition	Exports Led Growth (%) Before	Exports Led Growth (%) After
1	Darjeeling Tea (2004)	Limited global recognition, lower prices, low market share, low competitive advantage	Enhanced market reputation, increased global demand, premium prices in international markets, global trade expos	5% (2004)	25% (2023)
2	Alphonso Mango (2018)	Limited global recognition, lower prices, low market share, low competitive advantage	Enhanced market reputation, increased global demand, premium prices in international markets	3% (2017)	15% (2023)

Source: ITC, Indian Patent Office

China's Famous GIs

S. #	GIs	Economic Impact Before GI Recognition	Economic Impact After GI Recognition	Exports Led Growth (%) Before	Exports Led Growth (%) After
1	Longjing Tea (Dragon Well Tea) (2008)	Limited global recognition, low consumers trust, lower prices, low market share, low competitive advantage	Enhanced market reputation, increased global demand, premium prices in international markets, sustainable production	5% (2007)	20% (2023)
2	Pu-erh Tea (2008)	Limited global recognition, lower prices, low market share, low competitive advantage	Enhanced market reputation, increased global demand, premium prices in international	6% (2008)	15% (2023)

S. #	GIs	Economic Impact Before GI Recognition	Economic Impact After GI Recognition	Exports Led Growth (%) Before	Exports Led Growth (%) After
			markets		
3	Wuchang Rice (2014)	Limited global recognition, lower prices, low market share, low competitive advantage	Enhanced market reputation, increased global demand, premium prices in international markets	7% (2013)	18% (2023)

Source: ITC, WIPO, China National Intellectual Property Administration (CNIPA)

Turkish Famous GIs

S.#	GIs	Economic Impact Before GI Recognition	Economic Impact After GI Recognition	Exports Led Growth (%) Before	Exports Led Growth (%) After
1	Turkish Tea (Rize Tea) (2022)	Limited global recognition, lower prices, low market share, low competitive advantage	Enhanced market reputation, increased global demand, premium prices in international markets	6% (2021)	18% (2023)
2	Antep Baklava (2007)	Limited global recognition, lower prices, low market share, low competitive advantage	Enhanced market reputation, increased global demand, premium prices in international markets	8% (2007)	20% (2023)
3	Argan Olive Oil (2010)	Limited global recognition, lower prices, low market share, low competitive advantage	Enhanced market reputation, increased global demand, premium prices in international markets	6% (2009)	15% (2023)

Source: ITC, Turkish Patent and Trademark Office (TÜRKPATENT)

(To be continued in the next issue)

Three Steps to See Expenditure in Budget Documents

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STEP ONE: Open the book titled - “Demands for Grants and Appropriations”

1. Go to the Table of Contents =>
2. See List of Ministries in Alphabetical Order (for example at “c” we will find commerce) =>
3. See Page No. of Required Demand =>

And Honourable MP will get to one page Summary of the demand (Object wise summary) – It gives total amount of grant at the top of page, along with charged and voted bifurcation. The page will only touch upon at major object classification that includes PRIMARILY TOTAL AMOUNTS of Employees’ related expenses, i.e A011 Pay, A012 Allowances, A03 Operating Expenses, A04 Employees retirement benefits, A05 Grants, subsidies and write off loans, A06 Transfers, A09 Physical Assets and A13 Repairs and Maintenance.



STEP TWO: See Pink colored book titled: **Details of Demands for Grants and Appropriations (Volume – I Current Expenditure)**

1. Go to Table of Contents =>
2. See Page No. of Required Demand =>

and Get following details:

- Summary of the demand (Object wise summary)
- Cost centre wise details e.g. Secretariat, National Tariff Commission, Pakistan Institute of Trade & Development, Directorate General of Trade Organizations.



STEP THREE: READING THE SPECIFIC PAGE OF PINK BOOK to find annual budget allocation of a COST CENTRE, that is, those departments who come under specific Division/Ministry and who have asked for Demands for Grants.

- Go to page no. for said cost centre
 - Column 1 ... Functional Classification
 - Column 2 ...Object Classification
 - Column 3...Description of Object Classification
 - Column 4 ... Budget Estimate 2022-23
 - Column 5...Revised Estimate 2022-23
 - Column 6...Budget Estimate 2023-24



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