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> Pakistan is at a critical juncture. It exhibits all the pre-requisites of a dysfunctional state having failed to provide citizens the economic, social and political welfare or justice and peace and security.

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Shahid Javed Burki
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Race to Dominate the Field of Technology

One way Pakistan could begin to ease the enormous burden of external debt it currently carries is to use public policy to develop an export-oriented industry. It has largely failed in this area, relying mostly on textile exports. Here it has run into serious competition from the countries that were able to develop the garment industry producing for exports. Bangladesh is a prime example of a state that has a vibrant garment industry although it does not grow cotton or produce yarn and cloth that goes into the production of garments for exports. Now that Pakistan has missed that particular bus, it could turn its attention on developing one resource that is seen by most in Pakistan as a burden rather than an asset. The reference here is to the country's very young population, one of the youngest in the world.

The government, joining hands with the private sector, should invest in developing institutions that would provide quality education and training to the youth. Thus educated and trained, the youth could develop the sector of information technology which produces services in great demand around the world. China has been a major supplier of these services but here the country is running into some serious constraints. The United States has decided to adopt a series a measures aimed at hurting the computer chip-making industry in China. The American measures have come on top of a serious demographic change in China that has resulted in significantly reducing the rate of population growth. The Chinese population is rapidly aging.

There is a three-way race on developing new technologies. These depend on the quality of the computer chips that are used for such mundane tasks as operating a toaster to advanced endeavors like launching and watching satellites that go round the Earth and perform a variety of functions including providing guidance to car drivers looking for their destinations. The competition is among the United States, China and Taiwan. For half a century designers of computer chips in the United States shrank electronic components to pack more power into tiny silicon pieces. Then about a decade ago, scientists decided it would be cheaper to pack small chips to produce "chiplets" by using advanced packaging technology. "Packaging is where the action is going to be," said Subramaniam Iyer, a professor of technology at the University of California at Los Angeles. He is one of the several Indian scientists who have moved to the United States and work in the areas in which their country had provided education and training in technologies needed by advanced nations.

Chip packaging technologies are dominated by countries in East Asia. Although the United States accounts for around 12 percent of global semiconductor production, American companies provide just 3 percent of production. The Biden administration is now engaged in rectifying this situation. It had Congress approve the CHIPS Act that would provide a total of $52 billion subsidies to reinvigorate domestic chip making industries, including those that do packaging.

This was not the only support the U.S. government was giving to the chip-making industry. in March 2023, President Biden issued a finding that advanced packaging and domestic board production were essential for national security and announced $50 billion in Defense Production Act funding for American and Canadian companies in those fields.

These moves were aimed at slowing down China's advance in these areas. In response, China has begun to push for more independent chip sector. While Western technology and money has pulled out, government funding is flooding in to cultivate home-grown alternatives to manufacture less advanced but still lucrative semiconductors. Chinese enterprises are working with older parts from abroad, building supply chains with countries that have the manpower and basic manufacturing ability to help larger groups in China. This is the space into which Pakistan should work to move.

Shahid Najam
Vice Chairman
The Shahid Javed Burki Institute of Public Policy at NetSol

Need for National Dialogue

A few months back, I was approached by one of the key entities in the power corridors to write an advisory note for consideration. I wish to share only a few excerpts:

"Pakistan is at a critical juncture. It exhibits all the pre-requisites of a dysfunctional state having failed to provide citizens the economic, social and political welfare or justice and peace and security".

"Army, over the decades, has established itself as the strongest institution in the country endowed with highly capable human resource and leadership, robust command and control structure, state of the art systems and technological tools and very well defined standard operating procedures. Above all, it is held in high esteem and revered by the people for its rich and profoundly admirable culture characterized by purpose, passion and professionalism embellished and adorned with a deep sense of patriotism, self-sacrifice and commitment to safeguard the territorial and ideological integrity of the country. However, recently, Army is being confronted with credibility deficit with regards to its perceived role in politics, manipulation of the accountability system and acceptance of corruption especially by the politicians as permissible modus operandi. There is a need for introspection especially on: the ability of the corrupt and self-seeking politicians to outdo (and outwit) army in that while army loses its reputation in the "deals struck", the politicians each time manage to get away with massive corruption and escape the accountability system."

I also recommended army's gradual and steady withdrawal from politics and in the interregnum, its role in establishing true democratic process through strengthening the Election Commission as an independent authority comprising eminent persons of integrity to: (i) hold free and fair elections; and (ii) refrain from indulging into "fixing political problems".

Little heed seems to have been paid. The 9 May condemnable events rightly described by army as a "dark day" which witnessed violent attacks, acts of arson and destruction of military property and very sadly the violation of the sanctity of the "Shuhda Monuments" and the subsequent use of brute and obscene force by the police in total disregard of the rights and dignity of the citizens especially of young women and mothers, elderly and disabled persons, the ordinary political workers and even members of media speaks volumes of the need to reflect and ponder and formulate a collective rational and prudent response. History abounds with incontrovertible evidence that no matter how atrociously the state instrumentalises the media to present "everything under control" picture or demonize its opponents and no amount of force or fear could ever deter the people from abdicating their right of expression of free and collective will. If national dialogue involving all the major stakeholders and organs of the state is not held with urgency and commitment to come out of this messy crisis, the country will further plunge deep into decadence.

Tariq Hussain
Member, Board of Directors
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The Global Road to Net Zero Emissions - Part II

In my March 27,2023 submission I had presented the Road Map of the International Energy Authority (IEA) -Net Zero 2050—prepared in 2021. We are still in 2023 and planning for a desired energy future by 2050. Once humankind achieves that status it will continue to have to neutralize the greenhouse gases (GHGs) we continue to produce. The energy transition will require many new technologies to remove GHGs—CO_2; methane nitrous oxide; ...that we will continue to produce in our transport, agriculture and constructions sectors. The three important ones are CO_2 (79 %) methane (11 %); nitrous oxide (7%). Methane comes from livestock; landfills, and residual fossil fuel use in energy systems. Nitrous oxide comes from use of fertilizer. While methane production is relatively small, its greenhouse effect is 80 times more potent than CO_2.

The amount of GHGs produced is determined by the size of the economy and the country's population. Currently, the United States annually produces 5 million metric tons of CO_2. It has been historically the largest contributor of GHGs.In the mid-2000s, it ceded this status to China. US is now second; and India is third. These historical contributions introduce a moral dimension for determining the relative responsibilities for cutting GHGs in the future. Current "targets" for reduction to net-zero for USA, China, India are 2050,2060 and 2070 respectively.

Table-A presents the current global targets for improving the composition of energy sources for just the electricity sector from 2015 to 2027. Even this single sector transformation will require inter-country co-ordination of policies. The primary effort for successful transformation lies with USA, European Union, China, India, China, but the rest of the world will also have to make massive efforts in all sectors.

Table –A

Energy source composition for the Electricity sector (Percent)

Energy source	2015	2021	2027
Oil	4	2	1
Nuclear	10	10	10
Coal	40	36	30
Natural Gas	22	24	25
Renewables	24	28	34
Total	100	100	100

Source—Science News Page 28. January 28,2023

The changes will require policy coordination, resource transfers from the well-endowed to the less endowed nations. Further, it is important to frame strategies with a long-term focus and concern for the planet as a whole. A longer-term planet wide concern will have to guide international actions.

The current state of international and intra - national conflict is not very reassuring. But, survival of the human race requires that we meet this gigantic challenge together.

Dr. Syed Iftikhar Hussain Shah
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The Shahid Javed Burki Institute of Public Policy at NetSol

Right Time to Move Towards Inflation Hedge

Pakistan faces challenging economic conditions, including the repercussions of the recent flooding and continued policy and political uncertainty. As the country implements policy measures to stabilize macroeconomic conditions, inflationary pressures dissipate, and rebuilding begins following the floods and growth is expected to pick up to 3.2% in FY 2023-24 - still below previous projections. Food prices have risen rapidly in South Asia, especially in Pakistan and Sri Lanka, increasing the risk of food insecurity in the region. Export bans on food, are also increasingly prevalent, could have unintended consequences and exacerbate the increase in global food prices. The recent floods in Pakistan are estimated to have caused damage equivalent to about 4.8% of the GDP. Extreme weather events can exacerbate food deprivation, cut the region off from essential supplies, destroy infrastructure, and directly impede agricultural production.

The rupee's value has fallen sharply, and its foreign reserves have now dropped to precariously low levels. There is a significant external element to the crisis as well, with rising global food and fuel prices in the wake of Russia's war in Ukraine. The combination of all these factors has spelled perhaps the greatest economic challenge Pakistan has ever seen.

Currency depreciation can occur due to factors such as economic fundamentals, interest rate differentials, political instability, or risk aversion among investors. With the government struggling with high import payments, depleting foreign exchange reserves and political uncertainty, the overall value of the Pakistani rupee depreciated by Rs48. In this current precarious economic situation of the country inflation hedge is advised.

Pakistan inflation Summary:

- **Consumer Price Index (CPI) in April 2022** stood at 13.4 percent on a year-on-year (YoY) basis which was up from 12.7 percent in the previous month and **11.1 percent** in April 2021.
- **Consumer Price Index (CPI) inflation in January 2023** accelerated to **27.55 per cent** from 24.47 per cent a month earlier, as the unprecedented surge in food items' prices in the month jacked up the general inflation.

- **Inflation Rate in Pakistan is expected to be 21.00** percent by the end of this quarter. In the long-term, the Pakistan Inflation Rate is projected to trend around 12.00 percent in 2024.

Which Asset Classes Provide Inflation Hedges?

There are 9 Asset Classes for Protection Against Inflation which are:

- Gold
- Bond portfolio
- Commodities
- Real estate
- Exchange traded funds
- Stocks

Amongst all assets, Food Commodities have rallied this year, outperforming equities and scoring their credentials as a hedge against rising inflation. The rise in these commodities have fundamental reasons such as

- Supply disruptions caused by Russia's invasion of Ukraine
- Supply chain issues caused by the pandemic
- Inclement weather conditions and seasonal increases in demand.

Domestic Commodity Prices

The changes in consumer prices are normally reported in terms of year-on-year and month-on-month basis. Seasonal adjustment is particularly useful for analyzing month-on-month changes. The monthly data series of Consumer Price Indices (National CPI, Urban CPI) from April 2022 has been used for seasonal adjustment analysis. The seasonal analysis is carried out without taking trading-day or Islamic calendar month's effects.

Table 1.1: Inflation in domestic food commodities (YoY and MoM in percent) for selected essential food items covering urban CPI Basket in April 2022

SR. No	Food Commodity	UNIT	INFLATION % (YoY)	INFLATION % (MoM)
1.	Rice Basmati	1 Kg	0.6	-1.2
2.	Potatoes	1 Kg	9.6	16.4
3.	Garlic (lehson)	1 Kg	-36.4	-14.8
4.	Ginger (Adrak)	500 Gm	6.7	17.2
5.	Mustard Oil	-	61.76	2.31

Why Investor should move towards inflation hedge?

Cost of food in Pakistan increased 42.94% in January of 2023 over the same month in the previous year. It was the highest reading since comparable records began in September of 2011. As per the World Bank report titled 'Global Economic Prospects-January 2023' released on Tuesday, Pakistan's real GDP was half the pace that was anticipated last June. The report highlighted that in Pakistan, an already precarious economic situation, with low foreign exchange reserves and large fiscal and current account deficits, was exacerbated last August by severe flooding, which cost many lives. The destruction caused by the recent floods is of a higher magnitude, as it has flooded vast areas of cultivated land. According to the most recent FAO statistics, total global potato production is estimated at 371 million metric tons, with 236 million metric tons consumed globally. According to the Ministry of National Food Security and Research, Pakistan, potato production has jumped to 7.74 million tons in 2021-22 as compared to an estimated 4.55 million tons in 2020, which is an increase of almost 50% as compared to the last year. In 2021, the annual export value of raw potatoes amounted to about 4.32 billion U.S. dollars worldwide. In that year, total prepared or preserved potato shipments, including frozen French fries, were valued at around 10.8 billion U.S. dollars worldwide. As per the current scenarios of economic situation of Pakistan internally (inflation, Rate hikes and flooding) & externally (Russia/Ukraine War) the production cost of the domestic products is forecasted to be increased in the upcoming months e.g. if the investor invests in Pakistan in commodities like potato the appreciation rate would be 30% to 60% within the time span of 6 months according to our analysis.

Dr. Muhammad Ejaz Sandhu
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Ideal Fiscal Policy of Developing Countries and Pakistan's Situation

Government decisions on spending and taxation that are intended to improve or maintain the economy as the government is so large and has such an impact on business, therefore decisions it makes has a considerable influence on the economy. The total level of government spending can be changed to help increase or decrease the output of the economy. Some of the type of policies is as follows:

Expansionary Policies: Policies that try to increase the output of the economy

Contractionary Policies: Policies that try to decrease the output of the economy

During a period of excessive inflation (during a period of expansion), the government can either increase taxation or decrease spending. In case of developing countries, governments always try to increase income sources like widen tax base, focus on increase in exports and decrease in imports to maintain balance of payments. In developing countries focus of government is therefore always to maintain balance of payment equilibrium, equitable distribution of income, steady growth, stable prices, low inflation and full employment. In fiscal policy the focus of government is spending on health, education, infrastructure etc. In case of Pakistan to control inflation, the government use only one tool that is to have increase in taxes and interest rate while government should decrease its non-development expenditure. Under current recession the government should focus on widening the tax base as currently around 2% population is paying taxes. All shop keepers in major markets of the cities are currently not paying taxes. Government should take certain measures to collect tax from them as tax collection should be more than 10% of GDP. If the government cuts taxes, they have less money to spend or it goes into debt. As the federal debt is more than 125 billion of dollars, so the government must borrow money by selling bonds.

Government should withdraw all facilities like free petrol, electricity e.g. gas etc. from the employees who can afford such services. Government should play the rule of facilitator for private sector and overall growth of the country should be through private sector. Government should improve governance system which needs overhaul of the system. E-governance should be implemented at all levels so that system can be transparent.

Atr un Nisa
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Pakistan's Economic Update (April 2023)

Pakistan's economy is still facing significant challenges characterized by high inflation and slowdown in economic activity. Nonetheless, some positive signals appear as a result of government's stabilization policies. For instance, the current account of the BOP turned into surplus. This might improve external financing constraints, contribute to more exchange rate stability, and promote confidence in the economy.

In the real sector, During Jul-Mar FY2023, the agriculture credit disbursement increased to Rs 1,221.9 billion from 958.3 billion showing an increase of 27.5 percent over the same period last year. During Rabi 2022-23. During rabi 2022-23 urea and DAP off-take recorded at 3,469 thousand tones (4.5 percent higher than the Rabi 2021-22) and 710 thousand tonnes respectively (23.4 percent less than Rabi 2021-22).

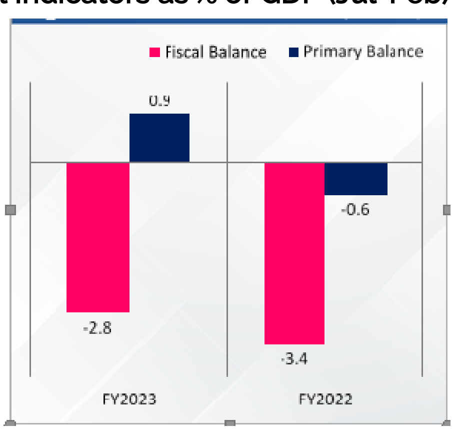
The performance of Largescale of Manufacturing Sector (LSM) sector struggled with a contraction of 5.56 percent during the period of July-Feb FY 2023. This declined was attributed various factors, including synchronized policy measures to address imbalances, distribution in the supply chains and global recessionary pressures. On a YoY basis, LSM declined by 11.6 percent in February 2023 and -0.5 percent compared to the previous month.

The CPI inflation in March 2023 recorded at 35.4 percent (YoY) compared to 31.5 percent in the previous month. On MoM basis it has increased to 3.7 percent in March as compared to an increase of 4.3 percent in the previous month.

The net federal revenues increased by 32 percent to Rs 3133 billion during July- Feb FY 2023 against Rs. 2374 billion in the same period of last year. A significant increase in the revenues has been achieved on an account of 18 percent growth in non-tax revenues. The increase in the non-tax collection is primarily due to higher revenues from the petroleum levy. Furthermore, higher receipts from markup payments, dividend, passport fees, royalties on oil/gas etc have also contributed to substantial increase in non-tax revenues during the first eight months of current fiscal year.

On the other hand, total expenditures grew by 11.5 percent to Rs. 5815 billion during July-Feb FY 2023 as compared to Rs 5214 billion in the same period last year. Current expenditures grew by 15.3 percent to Rs 5529 billion during July-Feb FY 2023 against Rs.4794 billion in the comparable period last year. With the sharp rise in revenues relative to expenditure, the fiscal deficit has been reduced to 2.8 percent of GDP during July-Feb 2023 from 3.4 percent of GDP recorded in the same period last year. Similarly, the primary balance posted a surplus of Rs 781 billion (0.9 percent of GDP) during July-Feb FY 2023 against deficit of Rs 399 billion (-0.6 percent of GDP) last year owing decline in non- mark-up expenditures.

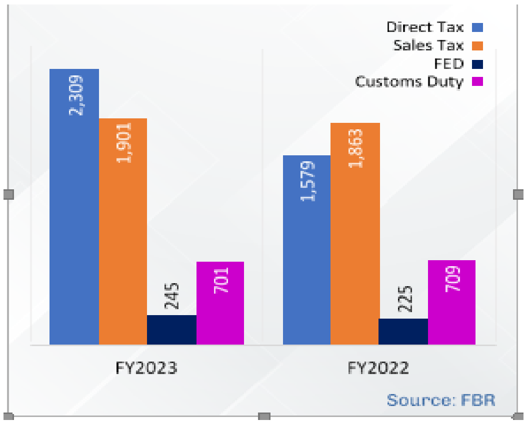
Fiscal Indicators as % of GDP (Jul-Feb)



During the first nine months of FY 2023, the FBR net provisional tax collection increased by 18 percent to stand at 5156 billion against Rs 4376 billion in the same period of last year. The net provisional tax collection for the month of march grew by 15 percent to Rs, 662 billion as compared to Rs. 574 billion in the comparable period last year.

The tax collection remained below the target during Jul-Mar 2023 due to import compression, and a slowdown in the domestic and global economic activities, however, overall tax performance demonstrates the government's strenuous effort to meet the full-year tax collection target.

FBR Tax Collection (Jul- Mar) (Rs Billion)



The current account posted a deficit of $ 3.4 billion during July-Mar FY 2023 as against a deficit of $ 13.0 billion last year, mainly due to contraction in imports. However, the current account posted a surplus of $ 654 million in March 2023 as against deficit of $ 981 million in the same period of last year, largely reflecting an improvement in trade balance. Exports on fob declined by 21.3 percent during Jul-Mar FY 2023 and reached $41.5 billion ($ 52.7 billion last year). Resultantly the trade deficit (Jul-Mar FY 2023) reached $ 20.4 billion as against $ 29 billion last year. (Ministry of Finance/ Economic update)

Aiman Adnan
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Resurgence of Militancy in Pakistan

The recent resurgence of militancy in Pakistan after 2020 has raised concerns and posed significant challenges to the country's security and stability. This resurgence can be attributed to a combination of factors, including regional dynamics, internal vulnerabilities, and the evolving situation in neighboring Afghanistan under the Taliban leadership.

One key factor contributing to the rise in militancy is the shifting dynamics in Afghanistan. Following the U.S.-Taliban peace agreement in February 2020 and the subsequent withdrawal of foreign forces, there has been an uptick in violence and territorial gains by the Taliban in Afghanistan. The porous border between Pakistan and Afghanistan has facilitated the movement of militants, allowing them to regroup, receive support, and launch cross-border attacks. Another factor is the presence of militant sanctuaries within Pakistan's border regions. Despite efforts by the Pakistani government to dismantle these sanctuaries through military operations, remnants of militant groups continue to operate and carry out attacks. Additionally, the involvement of external actors, such as the Tehreek-e-Taliban Pakistan (TTP), and their alliance with other regional militant outfits, has further complicated the security situation.

Furthermore, internal vulnerabilities within Pakistan have also played a role in the resurgence of militancy. Socio-economic disparities, poverty, weak governance, and a lack of opportunities in marginalized areas have made recruitment easier for extremist groups. Moreover, the influence of radical ideologies propagated in certain madrassas has contributed to the radicalization of segments of the population.

The recent Afghan policy of Pakistan has faced criticism on several fronts. One major concern is the alleged continued support and safe haven provided to Afghan Taliban factions within Pakistani territory. Critics argue that this support undermines efforts to achieve peace and stability in Afghanistan, as it allows militant groups to maintain their capabilities and launch attacks across the border.

Another point of criticism is the perceived lack of effective border control and management. The porous border between Pakistan and Afghanistan has long been a challenge in preventing the movement of militants, arms, and illicit activities. Critics argue that stricter border controls and enhanced intelligence sharing are necessary to disrupt militant networks and prevent the cross-border movement of militants.

Although, post APS attack in Peshawar (2014), Pakistan has taken steps to address these concerns and has shown a commitment to countering militancy. Military operations have targeted militant strongholds, leading to significant gains in security. The government has also implemented legislation and established institutions to counter terrorism. Yet, Pakistan's Afghan policy has been criticized for not doing enough to address the root causes of militancy, such as socio-economic disparities and the influence of radical ideologies. Critics argue that a more comprehensive approach, encompassing development initiatives, education reforms, and counter-radicalization programs, is needed to effectively tackle the underlying issues fueling militancy.

Only through a multifaceted approach can Pakistan effectively curb the resurgence of militancy and ensure the peace and stability of the country and the region, upholding its principled stances on issues like the annulment of the merger of FATA with the KP province.

Muhammad Waqas
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Floating Interest Rate: A Quagmire of Burgeoning Debt

On July 9th, 2022, the world bore witness to the unfolding of yet another looming and devastating crisis for third world countries: the debt crisis. Tens of thousands of protestors descended upon the residence of the Sri Lankan president, holding him responsible for an unprecedented economic meltdown that has wreaked havoc on the lives of the nation's 22 million people. This crisis was precipitated by the suspension of payments on the country's staggering $51 billion foreign debt.

Yet, unknown to many around the globe, the aftermath of the most perilous pandemic of the century, Covid-19, has left numerous third world nations tethering on the edge of default or plunging into it. Since 2020, we have witnessed the defaults of Ghana, Lebanon, Argentina, Belize, Ecuador, Suriname, Venezuela, Puerto Rico, and countless others. Meanwhile, countries such as Pakistan, Egypt, El Salvador, Morocco, Senegal, and Ethiopia find themselves precariously poised on the precipice of default.

Dating back to 1960, a staggering number of 146 governments—equivalent to two-thirds of the current universe of 215 sovereigns—have succumbed to defaulting on their obligations. This vicious cycle, perpetually sabotaging the development of third world countries, finds its roots in the failure of the Bretton Woods System. This system, with its fixed exchange rates pegged to gold and the associated interest rate guarantees during sovereign debt defaults, has proven to be inadequate.

However, a closer examination reveals that the Bretton Woods system itself was engineered to primarily benefit private and bilateral lenders, most of whom hail from the first world. This reality is starkly exposed through President Nixon's abandonment of the Bretton Woods Institutions' mandate to maintain the exchange rate fix at $35 per ounce of gold. His admission that the system was originally designed to bolster the economic vitality of US allies in the aftermath of World War II—namely, Western Europe and Japan—against the backdrop of Communist Russia, speaks volumes. "Today, largely with our help, they [former allies] have regained their vitality... But now that [they] have become economically strong... the time has come for exchange rates to be set straight." President Nixon's speech in August 1971.

The ramifications of forsaking the Bretton Woods system, all in the name of rectifying the US trade deficit vis-à-vis Japan, have reverberated far and wide, impacting both first and third world countries. By hedging debt in the late 1970s with floating rates tied to the United States or the London Interbank Offered Rate (LIBOR), first world nations coerced their third world counterparts into perpetually adjusting interest rates on both new and existing loans every six months, tethering them to prevailing market rates (LIBOR or FRB).

However, this floating interest rate mechanism served as a double-edged sword. On one hand, it inflicted crippling blows on already accumulated debt, as evidenced by Mexico's interest bill, which ballooned from $2.3 billion in 1979 to an overwhelming $6.1 billion in 1982. Such exorbitant interest rates rendered borrowers unable to satisfy the ever-increasing debt servicing requirements, let alone make progress on repaying the principal amount.

Additionally, the allure of higher interest rates in first world countries enticed capital flight from cash-strapped third world nations. The research conducted by Frank Morris in 1986 laid bare this reality, revealing that "between 1973 and 1987, a staggering $150 billion in capital from Latin America, primarily flowing after 1979—a period known as the lost decade—flooded into America to purchase treasury bonds."

Thus, the floating interest rates concocted by first world nations, greatly benefitted them while having serious repercussions for the 3rd world countries.

Tabinda Naz
Assistant Manager IT/Knowledge Management
The Shahid Javed Burki Institute of Public Policy at NetSol

On May 18, 2023, the Shahid Javed Burki Institute of Public Policy at Netsol distributed funds among the 15 candidates selected from University of Punjab and 20 candidates selected from the Lahore College for Women University under the Shahid Javed Burki Scholarship Program, Dr. Parvez Hassan Scholarship Program, and Daud Razzaq Scholarship Program. The fee cheques were presented to the students by Mr. Babar Yaqoob (Vice Chairman, Operations), Dr. Ejaz Sandhu (Director, Operation, Education & Learning), Mr. Awais Khalid (Manager, Finance & Operations), and Ms. Aiman Adnan (Research Associate). At BIPP, we firmly believe in the transformative power of education. It is our hope that the financial support provided through these scholarships will enable the recipients to pursue their educational goals with vigor and determination. We have full confidence that these individuals will make valuable contributions to the sustainable development of Pakistan in the years ahead.

On 25th May 2023, Dr. Ejaz Sandhu (Director Operations, Education and Learning BIPP) attended a Pre-Budget Seminar on "Current Economic Scenario & Priorities of Pakistan Budget 2023-24" hosted by the Department of Economics at Lahore College Women University. The objective of the seminar was to provide insight into the upcoming budget and its implications, as well as its potential impact on the economy. This seminar was attended by Mr. Kashif Anwar (President LCCI), Prof. Dr. Bushra Mirza (VC LCWU), Prof. Dr. Muhammad Afzal (Dean Faculty of Arts and Social Sciences LCWU) and Dr. Samia Nasreen (Chairperson of Economics Department LCWU).

On 29th May 2023, Shahid Javed Burki Institute of Public Policy held a meeting at the BIPP premises with the Livestock and Dairy Department, Punjab. The attendees included Mr. Shahid Najam (Vice Chairman, BIPP), Dr. Ejaz Sandhu (Director of Operations, Education & Learning, BIPP), and a delegation from the Livestock Department. The primary focus of the meeting was to discuss the enhancement of livestock productivity, addressing various relevant aspects The discussion revolved around the identification and analysis of existing issues and challenges faced in this domain, as well as the exploration of effective strategies to overcome them. The participants also emphasized the importance of research and development in this context, highlighting the need to foster innovation and advancement. Additionally, all agreed on the formulation of an implementation framework, aiming to establish a structured approach toward achieving the desired outcomes.

On 31st May 2023, Dr. Ejaz Sandhu (Director Operations, Education & Learning BIPP) and Ms. Aiman Adnan (Research Associate BIPP) attended an informative seminar on "Artificial Intelligence in Nursing" hosted by Lahore School of Nursing, University of Lahore. This event explored the profound impact of Artificial Intelligence on the field of nursing, presenting invaluable insights into the ways in which AI is transforming healthcare practices.

A new episode of BIPP's policy hub was released in the month of April. You may watch Mr. Shahid Javed Burki (Chairman BIPP) sharing his views on "Pakistan's relations with Afghanistan". He provided great insights on the historical, political, and economic factors that have influenced the relationship between these two neighboring countries. Please use the below link to watch the full video. https://www.youtube.com/watch?v=yNuIkeATNeE

Areeb Khan
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Industrial Revolution 5.0 - A Better Future

The idea of IR 5.0, also known as the Fifth Industrial Revolution, is gaining traction in the quickly changing world of today. In contrast to its prototypes, aims to create a dynamic equilibrium between human employees and cutting-edge technologies, ushering in a period of collaboration, sustainability, and improved resilience.

Industrial Revolution (IR) 4.0 laid the foundation of digitalization, automation, and artificial intelligence (AI). IR 5.0, on the other hand, goes a step further by highlighting the value of human-centricity and the necessity of environmental stewardship. This new stage of industrialization acknowledges that the blending of human intellect with technology prowess may produce amazing improvements in a variety of fields.

The use of AI-powered robots and smart equipment in the workplace is a crucial component of IR 5.0. These technologies can increase productivity and efficiency by delivering real-time data for decision-making when combined with human expertise. Humans may concentrate on jobs that bring value by using the accuracy and reproducibility of machines, promoting personalization, and enhancing client experiences.

There are numerous industries where IR 5.0 could find use.

1. AI algorithms can analyze enormous amounts of data in the banking sector, enabling precise risk assessment, fraud detection, and individualized financial recommendations. Virtual assistants and chatbots driven by AI are also revolutionizing customer service by offering around-the-clock assistance and improving user experiences.

2. Artificial intelligence powered immersive technologies like virtual reality (VR) and augmented reality (AR), as well as intelligent teaching systems, are revolutionizing education. While automating administrative activities frees up instructors' time to concentrate on providing high-quality instruction, personalized and adaptable learning journeys respond to the individual needs of students.

While embracing IR 5.0's promise, there are a few things to keep in mind. To create a just and inclusive future, ethical concerns about data privacy, algorithmic prejudice, and employment effect must be addressed. In order to maximize the advantages of AI and IR 5.0 while minimizing potential hazards, collaboration between politicians, business executives and society at large is essential.

IR 5.0 offers enormous prospects, but there are still obstacles to overcome. Significant constraints are the high expenditures involved and AI's incapacity to think creatively. It's important to carefully address worries about terrorism, hacking powered by AI and unemployment.

However, IR 5.0 holds unquestionable promise. We can attain unmatched levels of performance optimization by encouraging collaboration between humans and machines. Additionally, this transformation has the power to erase socioeconomic disparities, open up limitless opportunities for people, and improve the earth.

It is essential that we find a careful balance between technology development and human values as we set out on this revolutionary path. We can create the conditions for a better and more successful future for everybody by using the potential of AI and embracing IR 5.0's vision of collaboration and sustainability.

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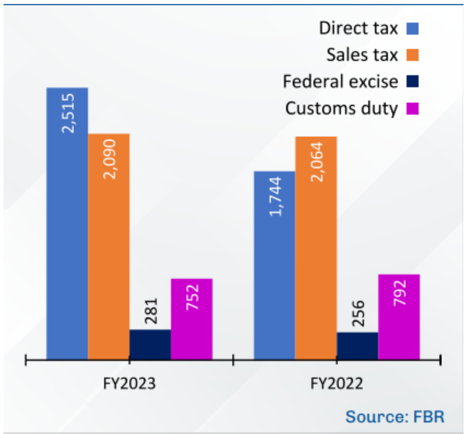
Economic Outlook and Overview

The CPI rose by 36.4 percent annually in April 2023 compared to a gain of 35.4 percent the previous month. Compared to a gain of 3.7 percent in March, it increased on a monthly basis by 2.4 percent in April. From July to April of last year to 28.2 percent this year, inflation as calculated by the CPI was, on average, 11.0 percent lower. The SPI fell 0.42 percent from the prior week's level for the week that ended on May 25, 2023. 16 goods had a decrease in price, 17 items saw no change in price, and 18 items saw an increase.

In comparison to the same period last year, total revenues climbed by 18.1 percent (Rs. 6,938.2 billion) as opposed to 17.7 percent (Rs. 5,874.2 billion). While tax collection increased by 16.5 percent as a result of a considerable increase in FBR tax collection, a significant portion of the gain came from a 25.5 percent increase in non-tax collection.

Tax collection performance has been good despite numerous economic difficulties on a national and international scale. The amount of domestic taxes collected rose by 20.2 percent. Domestically, direct tax rose by 44.2%, largely as a result of various administrative and enforcement measures meant to make taxation progressive and equal. FED increased by 9.8 percent, and sales tax increased by 1.2 percent. In contrast, a fall in imports brought on.

by the import compression policy resulted in a 5.0 percent decrease in customs duty revenue.



The Current Account recorded a deficit of $ 3.3 billion for July through April of FY2023 as opposed to $ 13.7 billion the previous year, primarily as a result of a decline in imports. The current account did, however, report a surplus of $ 18 million in April 2023 as opposed to a deficit of $ 640 million in the same period the previous year, mostly due to an improvement in the trade balance. Exports on FOB decreased by 13.6 percent from July to April of FY2023 to $ 23.2 billion ($26.9 billion the previous year). In the period from July to April of FY2023, imports of fob decreased by 23.0 percent to $ 45.2 billion (from $ 58.7 billion the previous year).

As a result, the trade deficit (July–April FY2023) was $21.9 billion as opposed to $31.8 billion the previous year.

Workers' remittances were $22.7 billion in Jul-Apr FY2023, down from $26.1 billion in the previous period. Remittances were 12.8% lower MoM in April 2023 ($ 2.2 billion) than in March 2023 ($2.5 billion). Share of remittances from Saudi Arabia (July-April FY2023): 23.7 percent ($5400.2 million), United Arab Emirates (17.5 percent ($3987.5 million), United Kingdom (15.0 percent ($3411.9 million), United States (11.4 percent ($2571.4 million), other GCC countries (11.7 percent ($2666.9 million), European Union (11.4 percent ($2590.1 million), Malaysia (0.4 percent ($90.4 million), and other countries (8.9 percent ($2023.2 million).

On May 26, 2023, Pakistan's total liquid foreign exchange reserves reached $ 9.5 billion, with the SBP's holdings at $ 4.1 billion. Reserves held by commercial banks remained at $5.4 billion.

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Advancing Towards a Circular Economy: Urgent Policy Development for Developing Countries

Sustainable development has become a worldwide priority today, and shifting to a circular economy is an essential step. Policymakers in developing countries must prioritize the creation and implementation of comprehensive policies that promote a circular economy to overcome the challenges of rising populations and resource-intensive economies. A circular economy closes the loop by encouraging the 3R's by reducing waste, increasing resource efficiency, and supporting sustainable consumption and production. A circular economy provides various economic, social, and environmental benefits by decoupling economic development from resource depletion.

The Circular economy is currently playing a crucial part in China's five-year plans as well as the EU's "A circular economy in the Netherlands by 2050" was passed in 2018, the major focus was on the construction sector, which used 50% of the country's raw materials. In 2019, the agendas took the form of innovative government buildings that were to be created with as much recycled materials and resources as possible while emitting zero emissions.

When it comes to shifting to a circular economy, developing nations meet obstacles. Their growth is frequently hindered by a lack of financial resources, insufficient waste management infrastructure, and reliance on resource-intensive businesses. Long-term sustainability goals may be overshadowed by the need to address immediate social challenges such as poverty reduction and employment creation. To overcome the challenges and get access, developing nations must prioritize. By providing a supporting framework, creating clear objectives, and offering incentives for firms and individuals to embrace circular practices, policy development may operate as a catalyst for change. Policy interventions can stimulate recycling infrastructure expenditures, support eco-design and product life extension, and reward sustainable consumption behaviours. Furthermore, cross-sector policy consistency, effective regulation, and coordination between the government, business sector, and civil society are critical for the success of implementation.

Embracing a circular economy offers a range of benefits for developing countries. Firstly, it reduces dependence on finite resources, mitigating the risks of resource scarcity and price volatility. Secondly, it promotes job creation through the development of recycling and remanufacturing industries. Thirdly, it minimizes environmental pollution, leading to improved public health and a higher quality of life. Finally, a circular economy encourages innovation and the adoption of sustainable technologies, positioning developing countries at the forefront of the green economy.

Considering the global imperative for sustainable development, developing countries must recognize the urgency of transitioning to a circular economy. By prioritizing policy development, these countries can harness the economic, social, and environmental benefits offered by the circular model. Policymakers play an important role in fostering an enabling environment, incentivizing sustainable practices, and coordinating efforts across sectors. By embracing the circular economy, developing countries can pave the way for a more prosperous, resilient, and sustainable future, while addressing pressing socio-economic challenges and leaving a positive legacy for future generations

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