Policy Challenges for Macroeconomic Management and Growth in Pakistan

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Introduction

It is a pleasure to introduce the papers and proceedings of the 16th International Conference of the Lahore School of Economics, on Management of the Pakistan Economy.

The COVID epidemic of 2019-20 led to a huge decline in economic activity all over the world. And as you remember, commodity prices collapsed, oil prices collapsed, and as we were coming out of it, the Ukraine war started. Following this, oil prices went from $30-$40 to $120 per barrel, energy prices more than doubled and food prices went up dramatically on Pakistan. These conference proceedings discuss the impact of these shocks as well as the current state of the Pakistani economy.

Two or three important points emerge from these conference papers: One is that while we may be tempted to think that the situation was beyond the control of policymakers, it is a source of immense satisfaction that Pakistan has managed the situation. Thanks to the skill of our policymakers, in the State Bank, in the Ministry of Finance, the Ministry of Commerce, and other ministries, we have managed to sustain the Pakistani economy. It is still facing significant challenges but it is steady and I would like to compliment the policymakers, the academics and all of the stakeholders including the international finance institutions and friendly countries for supporting Pakistan over the last three or four years which have been extremely challenging.

Second, we need to take stock of the present situation. The first thing which immediately comes to mind is that the economy has slowed down dramatically with an estimated growth rate of 0.5 percent in 2022-23. Also, our foreign exchange reserves only cover 3 months of imports. The exchange rate has adjusted very dramatically and inflation is extremely high.

But then the question arises of where do we go from here? To answer this, it is important to make some important observations. The first observation is that despite our current state of difficulties and the strict economic programs under which we are trying to operate, we must continue to make a major effort to support and maintain Pakistan's social safety nets. And by this I mean that we should try to maintain income transfer programs and our health programs for alleviating poverty, which we already have in more than three quarters of the country. So we should maintain, and if possible expand, the Benazir Income

Support Program and associated parts of to reduce the burden on the most susceptible members of our society.

The second observation is that we have let our external debt grow to unsustainable levels. This may have been well-intentioned since we have been borrowing heavily in the past and we built up a fair amount of infrastructure. But when the external shocks occurred, the country struggled to get additional money which left us extremely vulnerable. Therefore, I believe that better debt management is essential. And here we need to focus more, in addition to the formal official debt, on contingent liabilities. The Pakistani state has exposed itself to a huge amount of contingent foreign liabilities. I would like to propose that as we take on contingent liabilities, we should put them through the same test which we do from our foreign borrowing, which is that wherever there is a government guarantee, of any particular type, particularly with regard to rates of return, fixed prices, guaranteed repayments, etc., we ask the planning commission to review those contingent liabilities as part of our project evaluations process, even if these projects are in the private sector.

Another issue that needs to be addressed is the need to substantially strengthen the public procurement regulatory, and I would like to extend this not only to the purchasing by our state-owned enterprises, but also for the purchase of critical energy imports by both state and non-state oil companies that sell in Pakistan's regulated energy sector. It is critical that the established procurement procedures be followed and the regulatory process be transparent in order to ensure competitiveness prices and efficiency. And I would also like to suggest that the entire procurement process, as well as instances where exceptions are made, be fully transparent and available on relevant government websites.

The final issue that I would like to highlight is the need to clearly articulate and then ensure the fundamental economic rights of the people of Pakistan. The fundamental right of education is an accepted right but must move to also including health and food security to the list of fundamental rights. These fundamental rights must be backed by clear policies and significant budgetary allocations since these rights are essential for long-term growth which is sustainable and equitable.

I am sure that the papers in this volume will be essential for policymakers, academics, students and stakeholders and I look forward to the important discussions that arise as a result of the work done by the contributors.

Dr. Shahid Amjad Chaudhry
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State of the Pakistan Economy
Estimates of Annual Growth in Pakistan: Financial Year 2023

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Abstract

The Lahore School of Economics macro model forecasts a marginal GDP growth of 0.05% for Pakistan's fiscal year 2023. This minimal expansion is attributed to a combination of supply and demand shocks. Supply shocks include flood damage and import constraints arising from a balance-of-payments crisis. Demand shocks stem from reduced income due to supply shocks and a persistent current account deficit. Inflation, reaching 33.3%, is primarily driven by exchange rate depreciation, with the fiscal deficit and global commodity prices playing secondary roles. The model projects a modest GDP growth of 2.71% for FY 2024, contingent on mitigating supply and demand shocks. However, Pakistan faces significant challenges, including low foreign exchange reserves, a looming current account deficit, and the urgent need for fiscal and monetary policy reforms to address these issues.

Introduction

This report on the state of the Pakistan economy initiates the proceedings of this annual conference on management of the Pakistan economy. It makes for sombre reading at this juncture of the economy in May 2023, with the economy stalled and inflation continuing on the boil. It also comes with a persisting vulnerability in the balance of payments (BOPs), dragging down the country's reserves to rock bottom, necessitating another program of borrowing from the International

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Monetary Fund (IMF). While the last Extended Fund Facility (EFF) has been the 23rd, it has still left reserves parlous, requiring a short-term Stand-By-Agreement (SBA) for nine months, indicating a dependency on these programs.

Growth does not factor into the Fund programs of lending conditionalities. However domestic growth appears to be constrained, apart from one off black swan events like flooding of agriculture, by the external factor of weak BOPs and dwindling reserves. The manufacturing sector particularly, has a high import coefficient, and yet fully liberalizing the current account (CA) by opening all Letters of Credit (LCs) for imports would drain out the last reserves, as the finance minister rightly fears.

The reserves are being exhausted by another factor, on the side of the capital account (KA) outflows. Complementary research at the Lahore School estimates an alarming increase in the capital outflows and shows a strong causality with depreciation of the exchange rate. To facilitate growth through the CA, reserves will need to be propped up by some capital controls, to reduce capital outflows.

The fiscal year FY 2023 also witnessed the highest-ever inflation rate for Pakistan, the overwhelming driver of which, has been the massive depreciation of the exchange rate. As this depreciation is expected to follow some easing during the upcoming FY 2024, inflation is also expected to follow a downward trajectory. While monetary policy is the primary instrument to control this raging inflation, the depreciation of exchange rate needs to be arrested urgently, however, within the working of a market equilibrium—without lowering GDP growth.

Estimates of Annual Growth in Pakistan: Fiscal Year 2023

The Lahore School of Economics macro model for the Pakistan economy projects that GDP growth over the fiscal year FY 2023 (July 2022 – June 2023) will be 0.05% (see Table 1). This flatline estimation for the annual growth rate of GDP for FY 2023 has been due to successive quarters of falling GDP growth in FY 2023. The year-on-year estimation of GDP growth makes it globally comparable to most estimation. Table 1 shows that output in FY 2023 gives an annual GDP growth 0.05% for Pakistan, as compared to FY 2022.

Table 1: Estimates for GDP Growth Rate FY 2023

FY 2022		**FY 2023**
GDP ($ bn)	369.01	369.21
C ($ bn)		266.67
I ($ bn)		59.92
G ($ bn)		46.62
NXn ($ bn)		-2.56
Growth Rate (%)		0.05

Source: Lahore School Modeling Lab Estimate (LSML), 2023

Our estimation of GDP growth is comparable to the estimate of the Government of Pakistan (GOP) of 0.3% for FY 2023 (see Table 2). IMF has a lower estimate of -0.5% for FY 2023. The Asian Development Bank and the World Bank have higher estimates of 0.6% and 0.4% respectively, for FY 2023.

Table 2: Comparable Growth Rate Estimates FY 2023

GOP	0.3%
IMF (April, 2023)	-0.5%
World Bank (June, 2023)	0.4%
Asian Development Bank*(April, 2023)*	0.6%

Source: WEO, IMF (July, 2023), Global Economic Prospects, World Bank (June, 2023), Asian Development Outlook (ADO)

Our estimates are based on supply and demand shocks, which have interacted to flatline output.

Supply shocks

There have been two supply shocks, flood damage, and import constraints resulting in economic uncertainty.

Impact of the Floods on Agriculture

The first negative supply shock observed over Q1 of FY 2023 has been the impact of floods on agriculture. Our estimates show that the flood damage to lives, livelihoods, and incomes, over the first quarter (Q1) of FY 2023, from July 2022 to September 2022, has taken a devastating toll on overall growth.

GOP has estimated the total loss to agriculture at $30 billion, annualized over the whole of FY 2023, while the World Bank reports that agricultural output has actually contracted over FY 2023 for the first time in two decades. Despite these estimates of loss, GOP still gives the agricultural sector a positive growth rate of 1.6%, as seen in Table 3. Albeit, this has been much lowered from the agricultural sector's growth rate of 4.4% in FY 2022.

Table 3: Sectoral Growth Rates

	FY 2022	**FY 2023**
Agriculture	4.4%	1.55%
Industry	7.19%	-2.90%
LSM	10.4%	-9.40%
Services	6.19%	0.90%

Source: Ministry of Finance, 2023

Impact of an Import Constraint on Manufacturing

The supply shock to agriculture, was followed in the rest of the year (quarters two, three and four of FY 2023) by a supply shock to manufacturing growth, which was further hit by import constraints and economic uncertainty. A balance-of-payments (BOP) crisis, with a depreciating exchange rate, and falling reserves for the State Bank of Pakistan (SBP), has imposed these import constraints, especially weakening manufacturing growth. This is primarily due to a significantly high coefficient of the import content of capital goods, intermediate goods, and energy—contributing to value added in manufacturing.

Monthly imports peaked at $6.9 billion in August 2022, which is Q1 of FY 2023. Over the next seven months of FY 2023, they dropped significantly to an average of $5.2 billion huge decline of $1.7 billion. This represents a nearly 25% reduction in imports over the course of FY 2023 (Table 4).

This decline in imports over FY 2023 appears to be a direct result of an import constraint, necessitated by the dwindling reserves of SBP. SBP reserves plummeted drastically from $8.8 billion in August 2022 to $5.6 billion by December 2022, and further to $3.1 billion by January 2023. To prevent further depletion of reserves, the SBP imposed restrictions on letters of credit (LCs) for imports. Without these restrictions, SBP reserves would have been exhausted at a much faster rate.

Our model estimates a significantly high coefficient of 0.52 for the share of capital goods, intermediate goods, and energy imports in total imports. This high import coefficient for these goods then feeds into the total value-added in the economy as a second coefficient. Consequently, the 25% drop in imports passes through both coefficients, resulting in a drop in value added in industry of up to 13%.

The impact of this approximately 13% drop can be seen on Large Scale Manufacturing (LSM) in Table 3—showing that LSM growth dropped from 10.4% in FY 2022, to a contraction of -9.4% in FY 2023. This import shock constitutes the second negative supply shock in Q2 of FY 2023, following on the heels of the first negative supply shock of flood damage in Q1 of FY 2023.

Demand Shocks

The demand side of GDP estimation is predicated on two shocks: first, the reduced income stemming from the supply shock, which subsequently feeds into a demand shock; and second, a continued decline in the current account (CA) balance. The CA deficit is primarily attributed to a fall in demand for exports, with the first seven months of the fiscal year showing successive deficits, ranging between $0.2 billion and $1.2 billion. Despite the downward trajectory of imports, the CA still ran a deficit. Only in the last five months of FY 2023 did the CA break even or run a surplus, but proved insufficient to offset the cumulative deficit of $2.56 billion for the entire fiscal year FY 2023.

Table 4: Current Account Balance, FY 2023

Million US$	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	June-23	FY 2023
Exports-Goods	2,295	2,812	2,501	2,281	2,238	2,306	2,219	2,210	2,438	2,112	2,603	1,896	27,911
Exports-Services	530	575	565	621	650	735	610	569	610	486	607	741	7,299
Primary Income Credit	57	76	124	68	65	85	125	88	44	85	34	61	860
Total Exports	2,882	3,463	3,190	2,935	2,956	3,106	2,914	2,904	3,136	2,642	3,244	2,698	36,070
Imports-Goods	5,385	5,749	4,821	4,653	4,263	4,236	3,929	3,933	3,991	3,769	3,769	3,558	51,994
Imports-Services	789	936	738	701	715	649	592	600	635	667	809	188	8,019
Primary Income Debit	503	248	488	542	612	634	594	557	515	514	581	841	6,579
Total Imports	6,677	6,933	6,047	5,896	5,619	5,519	5,115	5,090	5,141	4,950	5,159	4,587	66,592
Exports-Imports	-3,795	-3,470	-2,857	-2,961	-2,514	-2,513	-2,201	-2,053	-2,025	-2,329	-1,915	-1,889	-30,522
Remittances	2,547	2,558	2,451	2,112	2,320	2,223	1,971	2,017	2,775	2,347	2,400	2,026	27,965
Current Account Balance	-1,200	-676	-316	-849	-276	-290	-230	-36	750	18	485	63	-2,557
Foreign Exchange Reserves	8,395	8,805	7,859	8,759	7,722	5,585	3,086	3,864	4,208	4,458.3	3,679.1	4,466.5	4,466.5

Source: LSML, 2023; SBP, 2023.

These twin demand shocks—reduced income and continued current account deficits due to falling export demand—combined with the twin supply shocks of floods and import constraints, contribute to a flatlining of our estimated GDP growth for FY 2023.

Inflation for the Fiscal Year 2023

Year-on-year inflation for FY 2023 is estimated at 33.3%, compared to FY 2022 (See Table 5). This estimate is is quite comparable to GOP's estimate of 29.0% for FY 2023.

Our model estimates inflation as being driven by four factors: an output gap, the budget deficit, depreciation of the exchange rate, and global commodity prices.

Table 5: Price Model Estimated for FY 2019, FY 2020, FY 2021, FY 2022, and FY 2023

Time Period	Output Gap	Budget Deficit (% of GDP)	Exchange Rate Depreciation	Commodity Prices (Growth Rate %)	Inflation (Model Estimate) (%)	CPI (GOP estimate) (%)
FY 2019	-1.40	7.60	4.44	-1.74	10.30	10.30
FY 2020	-1.70	6.40	0.88	-2.00	5.28	9.30
FY 2021	-1.80	5.20	-0.78	9.07	13.49	8.20
FY 2022	0	7.00	3.59	7.696	15.88	11.00
FY 2023	0	5.00	26.26	2.04	33.30	29.0

Source: LSML Estimations, 2023; State Bank of Pakistan, 2023

Table 5 shows that for FY 2023, the most significant driver of inflation was the massive depreciation of the exchange rate, which amounted to 51% over the four quarters of the fiscal year. This depreciation alone is responsible for contributing nearly three quarters (26.26%) of the year-on-year inflation rate of 33.3% for FY 2023.

The second major driver of inflation for FY 2023 has been the fiscal deficit, estimated at 5.0%. The third driver of inflation, global commodity prices, has eased significantly over FY 2023, growing at just 2.04%. Lastly, the output gap has been disinflationary over the previous three fiscal years (FY 2020, FY 2021, and FY 2022), on account of the Covid-19 pandemic lockdowns. This post-pandemic output gap is estimated to have a neutral impact on inflation, neither disinflationary nor inflationary.

GDP Growth Projections for FY 2024

Our model projects GDP growth for FY 2024, to be 2.71%. This is based on easing some of the supply and demand shocks observed over FY 2024.

The first supply shock observed during FY 2023 was in agriculture, which is expected to ease in FY 2024. The black swan event of flooding in Q1 of FY 2023, is not anticipated to recur, therefore, agriculture is expected to return to its long-run trend growth, approximating 4% per annum. The second supply shock observed during FY 2023 was in manufacturing, which is anticipated to moderate in FY 2024.

The demand shock observed over FY 2023 was for the current account, which is expected to moderate in FY 2024. The current account deficit is anticipated to persist at approximately the same level in FY 2024, but with foreign exchange reserves permitting a higher level of imports to avoid constraining manufacturing.

Therefore, easing of these supply and demand shocks during FY 2024, allow us to project a GDP growth rate of 2.71% for FY 2024. Our model also forecasts that inflation will moderate somewhat in FY 2024, reaching 25.39%, largely attributed to the anticipated easing of exchange rate depreciation.

GOP Emergency Economic Policy over FY 2023

The cusps of economic regimes in Pakistan repeatedly generate the twin whammies of fiscal sustainability and current account sustainability. This time around, a third whammy, stagflation, has been added—plummeting GDP growth and spiraling inflation. Both of these are fueled by the fourth whammy of a viciously depreciating exchange rate.

Therefore, GOP faces a flatlined growth rate of 0.05% over FY 2023. Its foreign exchange reserves have dwindled to approximately $4.5 billion, providing barely a month's worth of imports. The ninth review of the IMF's Extended Fund Facility for the remaining $6 billion deal signed in 2019 lapsed. Instead, GOP is to secure $3 billion through a shorter-term, nine-month Stand-By-Facility (SBF). GOP's immediate fiscal stance to regenerate GDP growth and provide additional welfare is severely limited, in abiding with the terms of this agreement with IMF. A riskily high-projected budget deficit of 6.5% of GDP for FY 2024, has not survived renegotiations with IMF, nor can it survive a possible corner solution of restructuring of debt with bilateral lenders in the future.

The alternative of fiscal reforms, such as raising taxation above 12% of GDP and capping spiraling energy leakages that have been increasing expenditures, is the elephant in the policy room. The current economic regime has not addressed these comprehensive reforms in the budget for FY 2024. A succeeding economic regime will likely need to implement them to achieve fiscal sustainability. So, absenting fiscal reforms have only left GOP with the monetary policy to generate growth and support welfare. Monetary policy, however, is primarily occupied with controlling inflation, raging at 33.3% per annum, primarily through the demand-side policy instrument of the interest rate. Table 6 shows the interest rate

rose from 13.75% to peak at 21% from May 2022 to May 2023, but there is no visible impact on inflation, which rose from 13.8% to peak at 38%, during the same period.

Table 6: Interest Rates and Inflation Rates (May 2022 to May 2023)

	May -22	**June -22**	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**May -23**
CPI (%)	13.8	21.3	24.9	27.3	23.2	26.6	23.8	24.5	27.6	31.5	35.4	36.4	38.0
Interest Rate (%)	13.7	13.7	15.0	15.0	15.0	15.0	16.0	16.0	17.0	17.0	20.0	21.0	21.0

Source: State Bank of Pakistan, 2023

This does not render the demand-side policy instrument of interest rates unnecessary, but it does demonstrate its insufficiency. As we have shown, three-quarters of the inflation rate can be attributed to the massive supply-side cost push of exchange rate depreciation.

Furthermore, research at the Lahore School demonstrates that exchange rate depreciation sets depreciationary expectations in place, leading to increased capital outflows (Mahmood & Chaudry, 2020). Pakistan's weak current and capital accounts (KA), coupled with a weak investment rate of 16% of GDP can ill afford that. This presents GOP with two immediate, almost existential policy objectives, but with tight constraints on the policy instruments it may use.

First, to arrest the depreciation of the exchange rate urgently, but within the working of a market equilibrium. This means avoiding the use of import controls, as agreed with IMF, and which are shown to lower GDP growth. Moreover, it should be done without intervening in the exchange rate market to prop up the rupee, for which the SBP has no reserves left to draw down in open market operations, in any case.

Second, the maintenance and increase of the SBP's reserves, above the current rock-bottom levels of $4.5 billion. This should be achieved implementing port controls or significantly raising the interest rate above the already prohibitive cost of borrowing of 22%. Otherwise, GDP growth would likely remain flatlined in FY 2024.

The only short-run policy solution to reduce capital outflows on the KA is to tighten capital controls. This would circumvent the need for intervening in the CA through import controls. IMF also anticipates that developing countries will resort to capital controls on account of increased capital flight. Given the rising in interest rates in Advanced Economies (AEs)[1], a surge in capital flight from developing countries is expected as investors seek higher yields. Therefore, GOP could explore this policy option of capital controls while remaining within the ambit of the SBA.

[1] For the record, the IMF has countenanced capital controls since the Asian Financial Crisis.

2

Exchange Rate Management: A Case Study of Pakistan 2013-2023

Rashid Amjad* and Almazia Shahzad**

Abstract

Pakistan's most recent economic crisis as witnessed in the 2019-2023 period (high inflation, low growth, low foreign exchange reserves) has also seen the longest period of implementation of a market determined exchange rate regime as part of the IMF conditionalities under its three-year program starting March 2019. This paper analyses this shift away from a managed exchange rate regime towards a market determined regime, over a period of ten years i.e. 2013-2023. We find that between July 2019 and February 2023, the nominal exchange rate depreciated by 114.5 percent against the US Dollar, while the REER index showed a depreciation of 17.4 percent, it has not resulted in a significant increase in exports and imports have remained persistently high. Our analysis shows that even large depreciations do not override the inelastic response of exports to changes in the value of the Pakistani Rupee. We further find that demand for imports is driven by our domestic growth which is stimulated by large fiscal deficit. We also find that compared to other key macroeconomic variables, fiscal deficit contributes the most to building exchange rate depreciation pressures. In the light of these findings we argue that while a market driven exchange rate is a better means of ensuring competitiveness, it still requires prudent degree of management to ensure short-medium term stability in the exchange rate. However, the reserve levels can override any attempt at exchange rate stabilisation.

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Introduction

Exchange rate management in Pakistan has been criticized for its arbitrary nature, lack of clear policy objectives and narrow focus on stabilizing nominal rates rather than maintaining the effective real rate at equilibrium levels. Although equilibrium is difficult to measure, the prevailing view is that the Pakistani Rupee has been overvalued for decades. The overvaluation has discouraged exports, incentivized imports, contributed to the widening of the current account deficit, and the buildup of exchange rate pressures in Pakistan. Interventions by the State Bank of Pakistan have depleted foreign exchange reserves and prolonged the overvaluation. Repeated balance-of-payments crises have led Pakistan to seek IMF financing. Pakistan has entered into as many as twelve agreements with the IMF since 1990, with a key conditionality of these programs being the adoption of a market-determined exchange rate. The most recent experience (2019-2023) of a market driven exchange rate is Pakistan's longest period of implementation.

The aim of this paper is two-fold: First, to analyse the shift in exchange rate management from a managed (2013-18)1 to a market-determined regime (2019-2023). The study explores the impact of this shift on Pakistan's trade competitiveness, including export performance and import compression, and revisits the relationship between exchange rate and key macroeconomic variables. An attempt has also been made to assess the relative magnitude of the impact of macroeconomic variables on the exchange rate. Second, drawing on the findings of this experience, the paper proposes policy measures for managing the current market-driven exchange rate going forward. These measures aim to ensure export competitiveness and absorb external and internal shocks in order to smooth out recurring balance of payment crisis.

1 These refer to fiscal years, i.e. FY 2013 till FY 2018 and FY 2019 till FY 2023. However, FY 2023 is not complete, instead covers the period from July 2022 – February 2023. The same applicable throughout the text, unless stated otherwise.

Key Concepts

Nominal exchange rate is the price of foreign currency ($) expressed in terms of domestic currency (PKR). A decrease in the value represents appreciation of the domestic currency, and an increase indicates depreciation. Comparatively, the real effective exchange rate (REER) is a measure of the value of a currency against a weighted average of its trading partners' currencies, adjusted for relative price levels. REER is an index benchmarked to a base year, the choice of which is arbitrary. The current base year for REER in Pakistan is 2010. The base year value is equated to 100. Although, literature supports that time series patterns in REER series can signal currency over/under valuation, it is better suited to assess the trade competitiveness of an economy. An increase in REER indicates an appreciated domestic currency implying that exports are more expensive and imports cheaper; therefore, loss in trade competitiveness, and vice versa. Higher relative domestic prices create pressure on the nominal exchange rate to depreciate. Yet between 2013 and 2018, the nominal exchange rate depreciated only marginally as it was under a managed regime, leading the REER to indicate appreciation of the rupee, or broadly an overvaluation against the dollar. From 2019 till February 2023 exchange rate was allowed to depreciate, which was reflected in the REER index as a decline. However, data suggests that the rupee may have depreciated more than the change in relative prices between Pakistan and its trading partners.

Literature Review

The debate among economists on whether Pakistan's exchange rate is overvalued remains unsettled. Khalid (2015) examined the claim of PKR overvaluation during the period of March 2014 to January 2015 and argued that not only is the concept of overvaluation not robust—as different measures (PPP, REER, BEER, others) show different results—but with market sentiments strongly driving the exchange rate, targeting a desired PKR would have been "delusional".

However, Hamid & Mir (2017) argue that a consistently overvalued exchange rate has had an adverse impact on Pakistan's exports and manufacturing, with serious negative consequences for the long-term growth of the economy and accentuated short-term risks of recurring balance-of-payment crises.

The International Monetary Fund (IMF) (2022) asserts that commitment to maintaining a market-determined exchange rate is essential for reducing external imbalances and rebuilding foreign exchange reserves. It emphasizes the role of exchange rate as a key shock-absorber against external terms-of-trade shocks and low reserve buffers.

The shift from Managed to Market Determined Exchange Rate Regime

Under a flexible exchange rate, an increase in foreign exchange reserves strengthens the domestic currency, leading to an appreciation of the exchange rate, while

reserve depletion weakens the currency, leading to its depreciation. Under a managed regime, this relationship does not hold. Regardless of its reserve levels, the government aims to target a specific exchange rate value. However, this policy becomes unsustainable in practice when reserves fall too rapidly. We calculated the correlation coefficient between exchange rate and foreign exchange reserves during the two periods for which a shift in the exchange rate regime was observed. Between 2013 and 2018, the coefficient had a counterintuitive value of 0.69, indicating a managed exchange rate. From 2019 to 2023, the coefficient was -0.22, which—although a weaker relationship—suggests that changes in reserve levels were being reflected in the exchange rate. Figure 1 shows the trends in the two series over the period.

For the most part of 2013 and 2018, the government was able to maintain a stable exchange rate, while the REER showed an appreciating trend (see Figure 2). Over the entire duration, the exchange rate depreciated by 25.9 percent, whereas the REER appreciated by 2.1 percent. This indicates that the value of the PKR compared to its trading partners was higher than in 2010 (base year)—despite the depreciation—necessitating further depreciation of the PKR. It also indicates an overvalued currency. Given an expensive PKR, demand for Pakistan's exports is expected to be low, and foreign goods are likely to be relatively cheaper, creating demand for imports.

Under the market-determined exchange rate, the PKR depreciated by 114.5 percent against the Dollar. Unlike in the managed exchange rate regime, the REER index mirrored the direction of exchange rate change, depreciating by 17.4 percent. The figure implies that the value of PKR compared to its trading partners has lowered than in 2010. This raises an important question: will the adoption of market-determined exchange rate improve Pakistan's competitiveness, increasing exports and lowering imports?

Impact of the Shift on Pakistan's Trade Competitiveness

Figure 3 shows that as expected, exports remained stagnant during the managed exchange rate regime but increased marginally on average by 4.36 percent annually. During this market-determined exchange rate regime, import trends continued to increase, contrary to expectations of a decline due to the Dollar being expensive relative to the Rupee. Two exceptions to this trend occurred: One—between 2019 and 2020, a decrease in global demand and supply disruptions caused by the pandemic, coupled with weakening consumer and business sentiments led to a 15.9 percent decline in imports, as compared to 2018-19. Two—in August 2022, the government imposed import restrictions to curb the outflow of Dollars, resulting in a 33.9 percent decline until February 2023.

To probe further into the reasons for the trend, we estimate export and import elasticities using a simple linear regression model. We estimate the following:

Export Elasticity Equation:

$$X = \alpha + \beta_1 REER + \beta_2 Y_W + \varepsilon_1$$

Import Elasticity Equation:

$$M = \alpha + \beta_1 REER + \beta_2 Y_P + \varepsilon_2$$

Where X is the total value of exports, M is the total value of imports, REER is the real effective exchange rate index value, Y_W is World Income and Y_P is the domestic income. Variables are used in log form to show changes.

Data on exports, imports and REER was taken from the State Bank of Pakistan. Following Brun et al. (2020), *World Income* was estimated as the sum of the GDP of the United States, European Union, China and Japan in billion current USD. Domestic income is Pakistan's GDP in billion current USD terms. All GDP data is obtained from the World Development Indicators database. The results are given in the table 1.

Table 1: Pakistan's Export and Import Elasticities (using value in USD)

Export Elasticity	
REER	-0.189
World Income	0.454
R-Squared = 0.358	
constant values have not been reported	
Import Elasticity	
REER	-0.592
Domestic Income	0.857***
R-Squared = 0.772	
***significant at 1% level constant values have not been reported	

Results indicate that a 10 percent decrease in REER (depreciation) is associated with 1.9 percent increase in exports. The direction of the relationship is consistent with the expectation and what we observed in the data above. World income also appears to have a positive relationship with exports, with a 10 percent growth in *World Income* is positively associated with 4.5 percent increase in exports. However, both variables are statistically insignificant.

In terms of imports, a 10 percent decrease in REER (depreciation) is associated with 5.9 percent increase in imports, even though imports are

expensive as the PKR compares lower in value than its trading partners. This finding is also in line with the partner observed in the data above, however, his variable is statistically insignificant. Growth in domestic income by 10 percent is positively associated with an 8.6 percent increase in imports. This variable is statistically significant at 1 percent level.

We also estimated an alternative model using the same specification with the total volume of exports and imports rather than their value. The data was obtained from the Pakistan Bureau of Statistics, and the Quantum of Exports and Quantum of Imports indices were used in log form. The results presented in Table 2 show that the magnitude of the response appears to differ, although the findings in terms of the direction of the variables in response to a decrease in REER remains unchanged. There appears to be a significant positive relationship between *World Income* and our exports.

Table 2: Pakistan's Export and Import Elasticities (using volume)

Export Elasticity	
REER	-0.494
World Income	0.577**
R-Squared = 0.811	
***significant at 5% level constant values have not been reported	
Import Elasticity	
REER	-0.125
Domestic Income	1.365***
R-Squared = 0.950	
***significant at 1% level constant values have not been reported	

Overall, our estimates suggest that Pakistan's exports and imports are inelastic, meaning they are less responsive to changes in the value of the PKR compared to its trading partners. This raises the question of what drives the demand for our exports and imports. While our empirical assessment remains inconclusive for exports, we can conclude that the demand for imports is driven by domestic growth.

To further understand why exports did not increase in response to REER depreciation—even though the Rupee was valued lower compared to its trading partners' currencies— we compared changes in the value of REER index with the Nominal Effective Exchange Rate (NEER) Index2. This analysis highlighted that

2 The NEER index is a measure of the nominal exchange rate of a currency against the weighted average of its trading partners' currencies. The REER index is a product of NEER and the Relative

relative price levels between Pakistan and its trading partners have been increasing. Therefore, regardless of the apparent lowering of our currency's value, our tradable commodities are expensive in the international market compared to our partners', depressing their demand. Our findings are in line with Brun et al.'s (2020) analysis of disaggregated export product-level data from 2003 to 2017, which sought to explain Pakistan's low export response to REER depreciation. They found that Dollar prices of Pakistani exports tend to fall after nominal devaluation, but not to the full extent of the devaluation, thus dampening the impact of devaluation on total export earnings.

Key Macroeconomic Variables and Exchange Rate

We revisit the question explored in the literature on how key macroeconomic variables affect Pakistan's exchange rate, and additionally attempt to assess the relative magnitude of the impact of these variables on the exchange rate. The objective was to contextualize the relative importance of macroeconomic variables in creating exchange rate pressures from a policy perspective, which the government aims to resist by pursuing a managed exchange rate regime.

For this purpose, a simple linear regression model, using monthly data is estimated with the following specification:

$$ER = \alpha + \beta_1 SBPR + \beta_2 TD + \beta_3 ERP + \beta_4 GB + \beta_5 FI$$

Where ER is the average nominal exchange rate (PKR/USD), SBPR is the SBP reserves, TD is the trade deficit, ERP is a dummy variable of exchange rate policy, with 0 for managed regime and 1 for market determined. GB is government borrowing and FI is foreign investment. All variables are in billion PKR.

The results are presented in table 3.

Table 3: Impact of Key Macroeconomic Variables on Nominal Exchange Rate

	Beta Coefficient	**Standardised Beta Coefficient**
SBP Reserves	-0.012***	-0.175***
Trade Deficit	0.011	0.045
ER Policy	-4.132	-0.053
Government Borrowing	6.580***	1.132***
Foreign Investment	-0.0140	-0.028
Constant	34.249***	-

***significant at 1% level
# of observation: 104

Price Index (RPI). RPI is an estimate of the relative price levels between the country and its trading partners.

R-Squared = 0.967

As expected, SBP reserves have a significant impact on the nominal exchange rate, emphasizing the need to maintain a stable level of reserves to ensure long-term exchange rate stability. Running down reserves to manage the exchange rate has led to recurring currency and balance-of-payment crises in Pakistan, every three to four years.

Persistently high imports relative to exports have created a foreign exchange demand-supply imbalance, increasing depreciation pressures on the exchange rate. Under a managed regime, this equates to a greater reserve losses . Foreign investment, by increasing foreign exchange reserves, can mitigate unexpected external shocks and contribute to exchange rate stability. However, our results suggest that the exchange rate regime, whether market-determined or managed, has no significant impact on nominal exchange rate. Both variables are insignificant.

Government borrowing, a proxy for fiscal deficit, significantly affects the nominal exchange rate. Standardized beta coefficients indicate that it has the highest impact on the exchange rate. Increasing borrowing by one billion from the average level depreciates the exchange rate by PRK 1.13 from the average rate. Expansionary fiscal, while intended to stimulate economic growth, has led to high demand, primarily consumption-led, which is import-oriented. This has widened the trade deficit, reduced foreign reserves, and increased depreciation pressures. Amjad & Shahzad (2017) found evidence that fiscal deficits feed into the current account deficit in Pakistan.

Policy Measures: How Best to Manage Market-Driven Exchange Rate Regime

Our analysis suggests that the expected benefits of the shift to a market-driven exchange rate have not been fully realized in Pakistan. Despite a substantial depreciation of the PKR, both nominally and in real terms, the currency has not stabilized at a level that restore competitiveness. The reasons are threefold. First, the forex market is imperfect; second, exports are inelastic; and third, wider inflation has kept tradeable goods expensive relative to competitors.

Pakistan's trade competitiveness hinges on the relative prices of our tradeable goods compared to those of our trading partners, rather than on the value of our exchange rates. Both exports and imports are relatively inelastic to exchange rate fluctuations. A market-driven exchange rate can serve as a regulator, influencing investment, production, and consumption decisions. It has the potential to improve macroeconomic discipline, but a crucial pre-requisite is the government's credible commitment to allowing the exchange rate to be

market-driven. While the State Bank can play a role, it should focus on "managing market sentiments and not going against the market" (Khalid, 2015). This requires safeguards, such as (i) strict measures against smuggling, hoarding and other illegal transfers, as recent measures3 have successfully narrowed the gap between the exchange rates in open market and the interbank market (ii) stricter controls on operating accounts and foreign exchange transfers by resident Pakistanis (iii) a build-up of foreign exchange reserves to stabilize large, sudden changes in the exchange rate and provide more room for the State Bank to intervene, unlike the current IMF program's quarterly net zero restriction; (iv) an industrial policy to promote exports; and (v) more effective demand management to reduce economy-wide inflationary pressures.

3 Introduced by the interim government in September 2023

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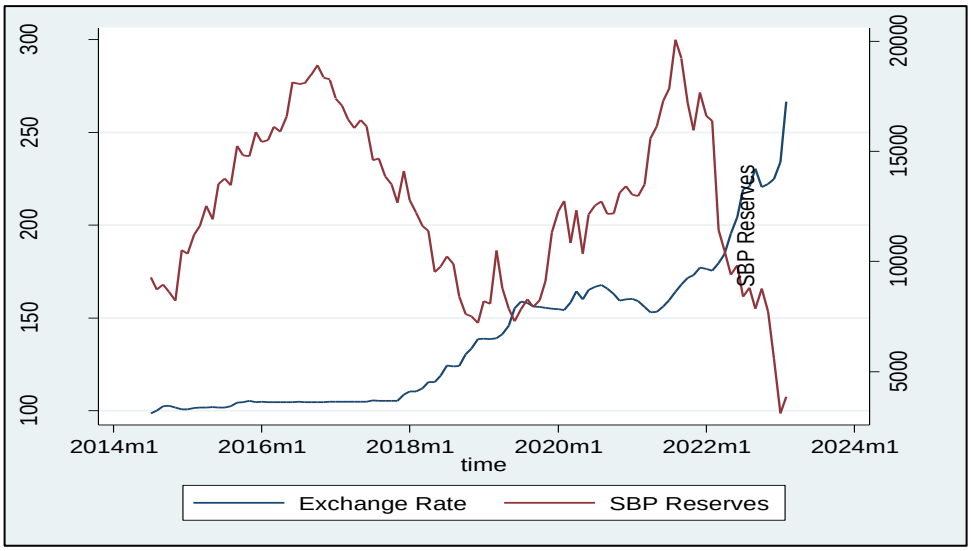
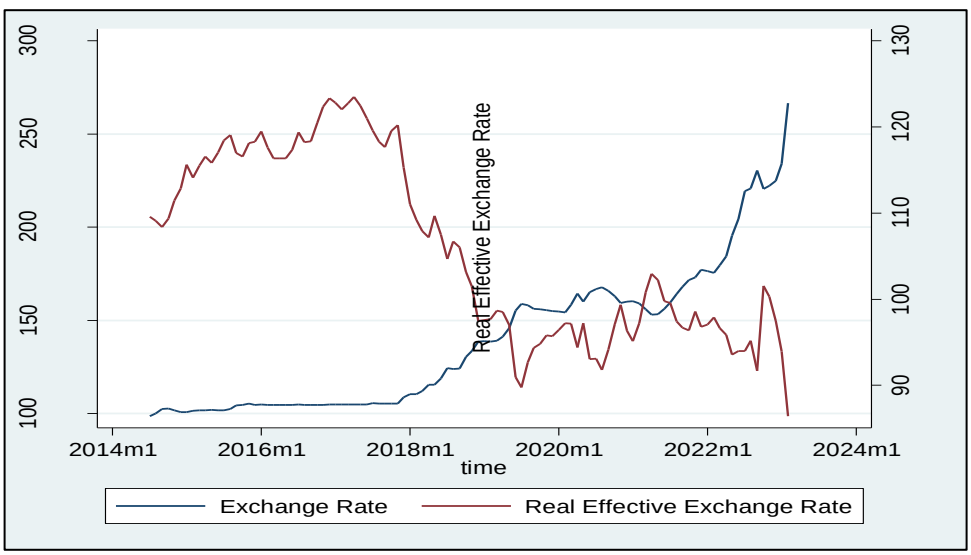
Appendix

Figure 1: Nominal Exchange Rate and SBP Foreign Exchange Reserves



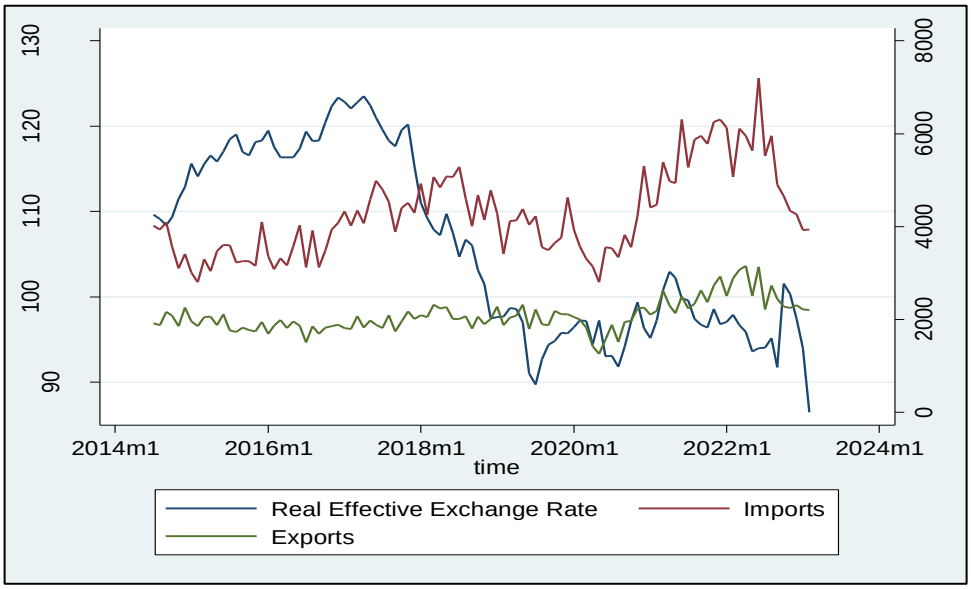
Source: State Bank of Pakistan, Economic Data

Figure 2: Nominal Exchange Rate and Real Effective Exchange Rate



Source: State Bank of Pakistan, Economic Data

Figure 3: Real Effective Exchange Rate, Imports and Exports



Source: State Bank of Pakistan, Economic Data

3

A Roadmap to Diversifying Pakistan's Exports: Operationalizing the Product Space

Azam Chaudhry*, and Gul Andaman**

Abstract

Pakistan has not been able to significantly increase exports or diversify its export base towards higher value-added products which has both contributed to its perpetual balance of payments problems and impeded growth. To address this, it is crucial to identify potential new exports that are not only relatively closer to the current export basket but also those products that have the potential to lead to higher value-added exports. This paper explores new categories of merchandise exports by incorporating the methodology developed by Hausmann and Klinger (2007), Hausmann et al. (2007), and Hidalgo et al. (2007). It operationalizes the concept of product space and identifies new products for Pakistan which are closer to prevailing production capabilities as well as new products that are of higher sophistication. Using the same methodology, this paper also analyzes the change in export basket of Pakistan from 2017 to 2021 and evaluates whether and to what extent the new categories recommended in 2017 have become part of 2021 export basket.

Introduction

Much has been written over the past decade concerning Pakistan's recurring balance-of-payments crisis. This discussion has covered a wide range of topics, from the cost of oil imports to boosting exports, from stabilization packages provided by the International Monetary Fund (IMF) to the China-Pakistan Economic Corridor (CPEC). While a comprehensive discussion of how to address the balance of payments problem must take into account most of these issues, this

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paper focuses on identifying potential export areas to revitalize the chronically underperforming export sector.

This paper highlights three important features that characterize the Pakistani export sector, as a starting point. First, the Pakistani export sector has been heavily reliant on textile exports, particularly low value-added textile exports. As a first step, this makes sense since most developing countries start by exporting low value-added goods to leverage their comparative advantage. However, unlike many other countries Pakistan has consistently failed to diversify beyond a narrow range of low value-added exports.

Second, while there is much optimism about the impact of the recent round of devaluation on exports, economic theory suggests a more nuanced relationship in predicting the effect of devaluations on the balance-of-payments (exports and imports in particular). More specifically, although devaluations increase exports at the macroeconomic level, the actual impact depends on the price elasticity of exports. A decrease in price for Pakistan exports low value-added textile products may not lead to a proportional increase in exports, as much as policymakers would like, especially if demand is relatively inelastic. This underscores the need for Pakistan to move towards a comprehensive export strategy that focuses on producing and exporting higher value-added goods rather than relying solely on short-term macroeconomic policies like devaluations.

Finally, despite policy makers' frequents discussions of growth strategies, there has been a dearth of serious work done on developing a comprehensive industrial strategy to promote exports and economic growth. This neglect is partly due to a departure of international consensus from industrial strategies, yet cross-country evidence clearly shows that almost all industrially developed countries have relied on well-defined strategies. Additionally, Pakistani policymakers have previously lacked the capacity to formulate a detailed industrial strategy at the micro level.

This paper aims to address this gap by using well-developed techniques to analyze the product space and identify potential export products for Pakistan. The idea behind this is simple:, researchers have developed tools to measure the proximity of new products to a country's current production basket, despite the challenges of mapping a country's entire productive capabilities. This is done using the following method: For example, if five countries are producing and exporting the same bundle of goods as Pakistan, and all five are also producing and exporting another good that Pakistan is not, we can say that there is a relatively small 'distance' between this new good and the goods Pakistan exports—since these other countries possess similar capabilities to Pakistan. However, if a group of countries is exporting only a limited subset of Pakistan's exports while exporting other goods that Pakistan does not, then the distance to these new goods is relatively high—since these countries have different capabilities than Pakistan. This methodology allows us to

determine goods that Pakistan could potentially produce and export based on the exports of other countries.

While we are able to identify potential export products for Pakistan this way, there is a risk of identifying relatively low value-added goods that other similar countries produce. While this may not be a problem at a macroeconomic level (since exports of a different set of low value-added goods still leads to higher and more diversified exports), it fails to address the issue of moving Pakistan toward higher value-added exports. In order to remedy this issue, we also consider established measures of product sophistication.

The notion is that product sophistication can be inferred from the countries that produce a product. High-income countries tend to produce more technologically advanced products while lower-income countries tend to produce less technologically advanced products. By examining the aggregate incomes of the countries that produce a good, one can rank that good according to its level of product sophistication. We apply this methodology to rank the products identified through distance analysis in terms of product sophistication.

Finally, we combine these factors and calculate the distance and product sophistication of potential exports. The policy implications are clear: If Pakistan aims to develop an export strategy focused on higher value-added goods that it can potentially produce, it should prioritize those goods that have lower 'distance' and exhibit a higher level of sophistication compared to the average sophistication level of goods in Pakistan's current export basket.

One question is whether Pakistan can actually produce the goods identified by the methodologies discussed above. If not, is the entire exercise merely academic? While we believe that our analysis above does provide important lessons, we extend our analysis by also calculating the distance and product sophistication of goods that Pakistan already exports, albeit in relatively small amounts (less than US$1 million or less than US$10 million). This provides us with a recommended list of products characterized by higher product sophistication that we know that Pakistan can produce (as it is already exporting them).

We begin by discussing some relevant literature, followed by a discussion of our methodology. Next, we present our results and simulations based on these results. Finally, we conclude with some preliminary findings.

Literature Review

Economic development necessitates undergoing structural transformation and accumulating productive capabilities that enable production and export of high-value-added and complex products. Therefore, export diversification has

remained a central policy concern in developing economies. In this regard, the development path of a country as explained by Hausmann & Klinger (2007), Hidalgo et al. (2007), and Hidalgo & Hausmann (2009) is particularly relevant. They emphasize that need for firms must continuously upgrade their skills and knowledge to employ more sophisticated product-specific factors required to produce and export high-value-added goods.

Hidalgo et al. (2007) introduced the concept of product space to explain this, which represents all products exported globally. Within this space, a country is likely to develop the capability to produce products which relate to its existing productive capabilities. For instance, a country that effectively exports silk cloth would possess the necessary human, physical and institutional capabilities to produce a related high-value-added product, such as silk shirts, rather than those needed for producing printed circuits. Therefore, the country would initially specialize in silk shirts, gradually accumulating the capabilities required to produce more complex products.

Several studies in the existing economic literature have employed the concept of product space and structural transformation to explain export diversification and its impact on economic development in various economies. Vitola & Davidsons (2008) used the product space model to identify potential exports that could replace Latvia's existing export basket, concluding that the economy could specialize in pharmaceuticals, medical, precision and optical instruments, as well as chemicals and chemical products. Similarly, Jankowska, Nagengast & Perea (2012) employed the product space methodology as proposed by Hidalgo et al. (2007) to analyze the structural transformation of the newly industrialized countries (NICs) in Asia, finding a gradual shift towards high-value-added industries such as iron, steel and electronics. Bojetic, Pejovic & Osorio-Roddarte (2013) also utilized the product space methodology to identify the potential exports for the export basket of Montenegro, including goods in the sectors of tourism, wine, food, and energy.

Likewise, Fortunato et al. (2015) demonstrated the potential export basket and the resulting sophistication gain in the exports of Ethiopia's less developed economy , finding that exporting more iron and steel products would lead to a more sophisticated export structure. Bayudan-Dacuycuay & Lim (2017) employed the product space methodology to compare export sophistication and export-led growth among selected ASEAN and developed Asian economies. They concluded that the ASEAN countries have a limited product scope and require a more substantial structural transformation to transition towards high-value-added exports within their current export baskets. Singh, Gupta, Sudan & Singh (2018) analyzed the product space model for India, revealing that industrial policy should prioritize textiles and clothing, selected agricultural products, food processing, electronics, and chemicals to increase and diversify Indian export structure.

UNCTAD (2018) examined the structural transformation dynamics of five Southern African economies: Mauritius, Mozambique, South Africa, the United Republic of Tanzania and Zambia. The report explained that except for Mauritius and South Africa, the economies have a dominant primary sector and a limited production sector. The report recommended altering this by implementing efficient export diversification strategies based on the product space literature proposed by Hausmann & Klinger (2007). Bezerra & Pinheiro (2019) identified strategies for efficient economic diversification using the concept of product space for Paraguay. They measured the revealed comparative advantage (RCA) and extent of similarity of 738 Standard International Trade Classification (SITC) categories in Paraguay's production structure and recommended that policymakers specialize in the agricultural and chemicals sectors to attain a higher, more inclusive economic growth rate. Shah et al. (2021), investigated the potential in export diversification and opportunities for LNG exporting Asian countries, using the product space model to explore the connection between LNG and petrochemicals. The results indicated that Malaysia and Indonesia have untapped petrochemical production potential, while the UAE, Oman, and Myanmar have lower exploration potential. Moreover, Gloria et al. (2020) adapted the Hausmann-Hidalgo et al. (2009) product space approach to analyze the case of Italian provinces, examining the correlation between a province's export performance and the network connectedness and centrality of its exports. They created a new Product Space Position (PSP) index that shares many characteristics with Hausmann-Hidalgo et al. (2009) but is significantly more effective for managing provincial and regional data. The PSP index was found to outperform other indices, highlighting key concepts within the network-cognitive-distance-trade paradigm. A stronger presence in the export-network product area is associated with more favorable local economic outcomes.

Methodology

Calculating Product Distance

Any developing country aiming to upgrade its exports at a certain point in time must carefully select a particular set of products that are not only feasible to produce but also lead to a more sophisticated and high-value-added export structure. To explore such production and export possibilities for a particular country, this paper adopts a measure of productive capabilities proposed by Hausman & Klinger (2007), that operationalizes the concept of product space.

Product space represents the interconnectedness of products. Any two products are highly related if they require similar conventional factors of production (land, labor, capital) or similar levels of technology or institutions. According to Fortunato et al. (2015), such products are more likely to be produced together within the product space. Conversely, dissimilar products that require

better technology or a different range of other factors of production are less likely to be produced together. For example, a country that produces and exports low-value-added textiles, such as trousers, might find it more feasible to export formal suits or sportswear as sophisticated goods. These new products have higher proximity to the existing export basket and certainly require similar factors of production, human capital, technology and institutions. However, products such as machinery, printed circuits or electrical components require a completely different set of productive capabilities within the product space and are highly dissimilar products with respect to the current export basket. Hence, these products are less likely to be produced and exported.

Following Hausman & Klinger (2007), to generate this proximity-based measure, the methodology first identifies those products in an export basket for which revealed comparative advantage (RCA) is greater than one—or those products for which a particular country is an effective exporter. RCA (Balassa, 1986) states that a country *j* is an effective exporter of a product *k* if the export share of that product in that country is higher than the export share in the global market. RCA is calculated as:

$$RCA = \frac{\frac{X_{jk}}{\sum jk\, X_{jk}}}{\frac{\sum j\, X_{jk}}{\sum j \sum k\, X_{jk}}}$$

whereby X_{jk} is the export value in country *j* of product *k*. If RCA > 1, it is said that country *j* is an effective exporter of product *k* and if RCA < 1, then country *j* is not an effective exporter of product *k*. Proximity between product *k* and another product of interest, *h*, can be defined as:

$$\varphi_{kh} = min\{P(RCA_k > 1|RCA_h > 1), P(RCA_h > 1|RCA_k > 1)\},$$

where $P(RCA_k > 1|RCA_h > 1)$ is a conditional probability stating that a country exports product *k* with RCA > 1, given that it also exports product *h* with RCA > 1. For example, if 20 countries export product *k* with RCA > 1 and only 5 of them export product *h* with RCA > 1, then the proximity or probability of exporting *k* in relation to *h* is minimum of {20/5, 5/20} or 0.25.

It is important to take the minimum of the two conditional probabilities because the measure of φ_{kh} is not symmetric. Fortunato et al. (2015) explain that as the number of countries exporting product *k* decreases and approaches one, the probability that another country exports *h,* given that it also exports *k,* becomes a dummy variable, equal to 1 for every other good exported by that particular country and 0 otherwise. This shows the individuality of the country rather than the outcome of a proximity-based measure. Therefore, taking the minimum of the conditional

probabilities is necessary to eliminate this problem, as the proximity value would be high only if a higher number of countries exporting product *k* also export product *h*.

The primary objective of using this methodology is to estimate the probability of transitioning to a new export product, *h*, from the current export basket. For this purpose, we adopt the aggregate measure proposed by Hausman & Klinger (2007) known as *distance*. Fortunato et al. (2015) define distance as the conditional probability of exporting a particular product of interest, *h*, given the current export basket, *b*. A country is more likely to produce and export product *h* if the required capabilities are closer to the current export basket, *b,* or the distance of *h* from *b* is low.

A country's possessed capabilities are reflected by the proximity between products it exports, *b*, and a product of interest, *h,* whereas lacking capabilities are inferred from the proximity between products that a country does not export and product *h*. Hence, distance is the sum of proximities between all products that a country *j* is not exporting, normalized by the sum of proximities between all products and product *h*. Distance would be low if a country exports majority of products closely related to product *h,* and high if it exports only a small proportion of products closely related to product *h*.

Distance is formally given by:

$$distance_{bh} = \frac{\sum_{k=1}^{N}(1 - M_{kh})\varphi_{kh}}{\sum_{k=1}^{N}\varphi_{kh}}$$

whereby {1, N} is the product space, $M_{kh} = 1$ if the country exports *k* with RCA > 1 and 0 otherwise. Distance would be equal to zero if country *j* exports all the products in the product space. Similarly, if country *j* instead produces none of the products in the product space, distance of moving towards *h* from current export basket, *b*, would be maximum and equal to one.

In this paper, *b* is defined as the current export basket of Pakistan for the year 2017. The product space represents all the product categories at the four-digit level in the SITC revision 4 for the same year. After estimating distance of all the products of interest, *h*, the potential products are categorized into 10 distance groups, whereby group 10 represents the one farthest from the current export basket, *b,* and has a high value of distance (closer to one).

Calculating Product Sophistication

In choosing the products of interest, *h*, it is beneficial to have a measure that reflects the export sophistication of the goods in the product space so that such products can be targeted in the new export basket. For this, we adopt the export sophistication index proposed by Hausmann et al. (2007). This index infers that a

country with higher Gross Domestic Product (GDP) would have a more sophisticated export basket compared to a country with a lower GDP, likely due to higher technological content, availability of natural resources, or higher human capital use in the exports of richer countries which make them more sophisticated, assuming no trade interventions. This product-level measure of sophistication of exported goods is known as PRODY and is calculated as the RCA-weighted GNI per capita of country *j* exporting product *k*.

$$PRODY_k = \sum j \frac{\frac{X_{kj}}{X_j}}{\sum j \left(\frac{X_{kj}}{X_j}\right)} Y_j$$

whereby X_{kj} is the value of exports of country *j* for product *k*, X_j is the aggregate value of exports of country *j* and Y_j is the GNI per capita of country *j*. If X constitutes a higher proportion of poor countries' exports compared to rich countries' exports, then PRODY would have a low value. Similarly, if X constitutes for a higher proportion of rich countries' exports compared to poor countries' exports, PRODY would have a high value. In other words, a rich country's export would lead to a higher PRODY value whereas a poor country's export would lead to a lower PRODY value.

This paper also estimates the average sophistication of the current export basket, *b* of country *j* at time *t*, following Fortunato et al. (2015). This distinguishes among those potential products, or that proportion of *h* in country *j*, for which PRODY is higher than the average sophistication. Formally, it is stated as:

$$AverageSophistication^b_{jt} = \frac{\sum k \left(PRODY_{kt} * ExpValue_{kjt}\right)}{\sum k \left(ExpValue_{kjt}\right)}$$

whereby $ExpValue_{kjt}$ is the export value at time *t* of product *k* in export basket *b* for country *j*. The products that are not yet exported from the product space would be eliminated and the measure would reflect average sophistication of the current export basket for a particular country.

Following Fotunato et al. (2015), we also take the product-level measure of $PRODY_{kt}$ and measure the country level export sophistication, EXPY of country j during year t. It is the export weighted sum of product-level sophistication of each exported good k and defined as follows:

$$EXPY_{jt} = \sum_k \frac{X_{kjt}}{X_{jt}} PRODY_k$$

We expect a higher EXPY for "high-income" countries and a low EXPY for "low-income" countries. The reason is that PRODY is measured using GNI per capita of a particular country, and if a country is richer with higher production capabilities, then their export shares are multiplied by corresponding higher PRODY values, resulting in a higher EXPY. However, as pointed out by Fortunato et al. (2015), there is significant variation in this relationship. There could be low-income countries who manage to export a relatively more sophisticated export basket, or a high-income country with low export shares per category of all exports being multiplied by higher PRODY, diminishing the value of EXPY. Hence, a positive correlation may not occur, although it is theoretically anticipated. Lall et al. (2006) further suggested that there could be high-technology products with low sophistication and low-technology products with high sophistication. So, a country with low production capability or lower technological intensity may have a high EXPY, and vice-versa.

Identifying Products as Potential Exports

This paper analyzes 140 countries and product space represents 4-digit HS codes with 1223 product categories. Since Pakistan is the primary focus, distance groups were calculated exclusively for this country. Three categories were considered : (1) all unexported items in the product space, categorized into 10 distance groups with the 10th group representing products farthest from the current export basket; (2) all products with an export value less than US$1 million, categorized into 10 distance groups with the 10th group representing products farthest from the current export basket; and (3) all products in the product space with an export value less than US$10 million, categorized into 10 distance groups with the 10th group representing products farthest from the current export basket.

Potential exportable products or products whose exports can be further increased in the current export basket are identified by a PRODY higher than the average sophistication of the existing export basket, indicating that they are relatively high-value added, and are also feasible, meaning they are in closer distance groups.

A graphical representation of the product selection process is shown in Figure 1 (see Appendix).

The gray and white spaces represent product space while the white space shows the current export basket of a hypothetical country. The potential products, *h*, for this country that can increase export value would be those that are already being exported and have a PRODY higher than the average sophistication, such as epoxide resins. In the short term, natural abrasives could be an additional product in the current export basket as they possess a higher PRODY and similar distance to fungicides. Hence, natural abrasives are both feasible and more sophisticated than fungicides. Within products with higher distance groups—according to this country's productive capacity—pumps would be preferred over rail locomotives,

as the latter may not be feasible due to higher productive capability requirements. However, rail locomotives could become a potential export product in the future once the average sophistication and PRODY levels improve over time.

Before discussing our results, it is important to acknowledge that while there has been much discussion about countries moving up the export sophistication ladder, much of this has focused on the balance-of-payments implications of exporting more sophisticated, higher value-added goods. However, there is also a fundamental relationship between producing (and exporting) more sophisticated goods, and an economy's level of development. As a country develops its human and physical capital (along with other factors that influence growth, such as institutions and technology), it naturally tends to start producing more sophisticated goods, which in turn contributes to further development. Therefore, the relationship between development and product sophistication is far more nuanced than a one-sided argument simply suggesting that producing and exporting more sophisticated goods leads to higher growth.

In the next section, we present our results.

Results

As discussed above, the analysis was conducted for three categories: (i) First, we analyzed the categories of potential exports based on the list of all goods which Pakistan currently does not export. (ii) Second, we analyzed the categories of potential exports based on the list of all goods which Pakistan does not export and those goods whose exports are less than US$1 million. (iii) Finally, we analyzed the categories of potential exports based on the list of goods which Pakistan does not export and those goods whose exports are less than US$10 million.

The purpose of examining these different categories was to identify new product categories for potential Pakistani exports and to pinpoint existing product categories in which Pakistan could potentially increase exports, both concentrating on products with higher-than-average sophistication level.

Results for New Pakistani Export Categories

In our initial analysis, we calculated the distance and sophistication of goods which Pakistan could potentially export, based on the exports of countries with similar export profiles.

In this case, we calculated the distance and sophistication of goods which Pakistan does not export but are exported by countries with similar export baskets as Pakistan. Figure 2 (see Appendix) illustrates the results.

In Figure 2, the red line represents the average sophistication level of Pakistan's exports in 2021. For comparison purposes, we have also plotted the average sophistication level of exports of other Asian countries including Malaysia, India and Vietnam, in Figure 3.

In Figure 2, products above red line represent goods whose sophistication level is higher than the average sophistication of Pakistan's 2021 export basket. From a policy perspective, based on this analysis, Pakistan should select products above the red line to potentially export. However, the product should not be too far above the red line, to be realistically produced and exported.

Figure 2 (see Appendix) also illustrates the distance of each product category from Pakistan's 2021 export basket of goods. Products that are closer to the origin represent goods which are potentially 'easier' for Pakistan to produce and export (in terms of production capabilities) while goods further away from the origin are 'more difficult' for Pakistan to produce and export (in terms of production capabilities). Turning again to a policy perspective, Pakistan should potentially focus on new products which lie closer to the origin since these goods have a greater chance of falling within its current production and export capabilities.

Table 1 in the Appendix details the list of goods sorted first by distance and then by level of sophistication. The argument here is that by first matching potential export goods with Pakistan's current capabilities (lower versus higher distance) and then sorting them by sophistication, one can identify potential export goods which can lead to higher-value-added exports.1

Results including Goods with Pakistani exports of US $1 million or less

We extend the first analysis to include products that not only lie outside Pakistan's 2021 export basket but also products that generate low export revenues or are characterized by low levels in the 2021 export basket. The rationale for this extension is that there may be products with high sophistication and relatively low distance (similar to what Pakistan can and is exporting) which are not exported in significant quantities. Since the country already produces and exports these goods, exporting these more sophisticated products could yield significant gains.

In this instance, we calculated the distance and sophistication of goods which Pakistan does not export but which are exported by countries with similar export baskets as Pakistan, and goods that Pakistan exports but are valued under US$1 million in Pakistan's 2021 export basket. Figure 4 (see Appendix) illustrates the results.

1 We have also included the Leamer names and Lall product sophistication classifications for all of the products.

The orange line shows the average sophistication level of Pakistan's 2021 export basket—the products illustrated in blue are products valued at under US$1 million of exports in 2021, while the products illustrated in red are products which Pakistan did not export in that year.

The first notable observation is that a substantial number of 'blue' products (or products that Pakistan exported in 2021) are closer to the origin. This aligns with our expectations as these goods are already produced and exported by Pakistan and are more closely aligned with the country's current production capabilities. However, we argue that all these products are not homogenous. Some goods closer to the current capabilities of the county exhibit a sophistication level higher than the average sophistication level of Pakistan's 2021 export basket, while a few others fall below the average sophistication level. In terms of potential, it would be prudent to prioritize expanding the exports of goods which a closer to the origin in terms of distance and also lie above the average sophistication level of Pakistan's overall export basket (above the orange line).

Next, for new exports, the same argument holds as in the previous section: it would be advantageous to prioritize those new potential exports which demonstrate higher-than-average sophistication levels (above the orange line) and are situated closer to the origin, in terms of distance.

Table 2 in the Appendix presents products exported by Pakistan in 2021 (in quantities less than US$1 million), sorted first by distance and then by product sophistication.2

Results including Goods with Pakistani exports of US$10 million or less

Finally, we extended our analysis to include potential exports and products exported by Pakistan in 2021 and exports valued at under US$10 million. The argument remains consistent: Any policy aimed at expanding Pakistan's exports should not only prioritize new exports but also more sophisticated goods that Pakistan exports in relatively small quantities.

In this case, we calculated the distance and sophistication of goods which Pakistan does not export but are exported by countries with similar export baskets as Pakistan, and goods which are exported but are valued under US$10 million in 2021. Figure 5 (see Appendix) illustrates the results.

2 Again, we have also included the Leamer product names and Lall product classifications for all of the goods.

In Figure 5, the orange line shows the average sophistication of Pakistan's 2021 export basket. Products in blue are those exported in quantities valued at under US$10 million while the products in red are those not exported in 2021.

From a policy perspective, 'blue' products with a higher-than-average sophistication level (lying above the orange line), and are closer to the origin in terms of distance, should be prioritized. The second priority should be the 'red' products, which also exceed the average sophistication level and are relatively closer to the origin.

Comparison of Categories by Product Sophistication (PRODY) of Pakistani Goods Exported in 2017 and 2021

In 2019, we implemented a similar operationalization of product space analysis for Pakistan, using 2017 export data and recommended (i) Category 1: New product categories which could potentially be exported by Pakistan, (ii) Category 2: Products from the 2017 export basket with total export values of less than US$1 million, with a higher-than-average product sophistication (PRODY) and relatively lower distance, and (iii) Category 3: Products from the 2017 export basket with export values of less than US$10 million with higher-than-average product sophistication (PRODY) and relatively lower distance.

Below, we compare the export baskets of 2017 and 2021 to analyze whether Pakistan exporters began exporting goods in the categories (1-3) that we previously identified. If so, we also examine the increase in total export values under all three categories. Table 1 below, illustrates the results for each of the three categories. The data reveals that the 2021 export basket incorporated many of the recommended products.

Category 1 shows that by adding new products with a sophistication level above the average PRODY, Pakistan's export revenue increased from US$0 in 2017 to US$103 million in 2021.

In category 2, the export revenues of goods with smaller export values (less than US$1 million) increased from US$96 million in 2017 to US$427 million in 2021. Of this, approximately US$25 million of the US $96 million in 2017, were more sophisticated products while US$194 million of the US$427 million in 2021 were more sophisticated products. Focusing on those export categories where Pakistan was exporting smaller quantities (less than US $1 million), the country increased its exports of more sophisticated goods to over US$194 million. By combining the exports of new higher sophistication products from categories 1 and 2, we see that Pakistan exported approximately US$298 million worth of more sophisticated products in 2021 in those smaller categories (where it was exporting less than US$1 million) compared to only US$25 million in 2017.

Similarly, in category 3, the exports of goods with small to medium export values (of less than US$10 million) increased from US $818 million in 2017 to US$1,932 million in 2021. Of this, approximately US$233 million of the US$818 million in 2017 were more sophisticated products while in 2021, US$803 million of the US$1,932 million were more sophisticated products. Focusing on those export categories where Pakistan was exporting small to medium quantities (less than US$10 million), the country increased its exports of more sophisticated goods to over US$803 million. By combining the exports of new higher sophistication products from categories 1 and 3, we see that Pakistan exported more than US$906 million worth of more sophisticated products in 2021 in those small to medium categories (where it was exporting less than US$10 million) compared to only US$233 million in 2017.

These results suggest that Pakistan has the capacity to produce and export higher-sophistication goods. Policymakers, especially those involved in trade agreements should consider this when formulating export, industrial and trade policies.

Table 1: Export Revenue Comparison by Product Sophistication (PRODY) between 2017 and 2021

	Export Value (US$1000)					
	Category 1 (actuals): New Products		Category 2 (actuals): All Products exported at value < US$1M		Category 3 (actuals): All Products exported at value < US$10 M	
	All Products	Products above Average PRODY	All Products	Products above Average PRODY	All Products	Products above Average PRODY
Export Revenue in 2017	$0.00	$0.00	$96,508.15	$25,444.28	$818,709.53	$233,733.12
Export Revenue in 2021	$109,931.70	$103,291.40	$427,130.12	$194,967.92	$1,932,795.14	$803,055.46
Adding Category 1 products in 2021 Export Basket	$109,931.70	$103,291.40	$537,061.82	$298,259.32	$2,042,726.84	$906,346.86

Source: Authors' calculations based on UN Comtrade 2017 and 2021 export data of Pakistan.

Figures 6, 7 and 8 provide a more detailed breakdown of the changes in exports of Pakistan under each category. Figure 6 (see Appendix) shows recommended new products from 2017 which were exported in 2021. These mainly included exports of the following product categories:

- **Live animals,** whereby exports increased from US$0 to more than US$2.8 million;

- **Food and cereals,** for example cocoa exports increased by US$30.1 thousand, palm oil and its fractions, maize oil and its fractions recorded increases of US$0.42 million;
- **Precious metal ores,** particularly lead and lead alloys, unwrought, saw an increase in exports of US$22.7 million;
- **Chemicals** such as epoxide resins, fungicides, disinfectants, particularly styrene polymers, recorded increases of US$1.075 million;
- **Manufactured and machinery items** such as bars and rods, tubes and pipe fittings, electronic valves, vehicles specially designed for traveling in snow, and baby carriages;
- **Other items** such as gold witnessed an increase in exports by US$0.38 million.

Similarly, Figures 7 and 8 illustrate the expanded product space for new products and low-value exports (valued under US$1 million and US$10 million respectively), in 2017, that Pakistan's 2021 export basket was able to successfully capture.

Apart from the new products in Category 1, the products whose exports increased in Categories 2 and 3 were mostly concentrated in the following sectors and sub-sectors:

- **Food** including meat and edible meat (exports increased from US$50 thousand to US$2.6 million), sausages, fish, mollusks and aquatic invertebrates (exports increased from US$0.15 million to US$85.12 million), birds' eggs, in shell, fresh, preserved/cooked which recorded an increase in exports from US$8 million to US$14 million, macaroni, spaghetti & similar products (pasta) where exports increased from US$9.9 million to US$20.2 million, cereals, fruits (fresh and processed) such as tomatoes which reported increase from US$0.7 million to US$9.03 million, soya beans, seeds, maize oil, fat and oil and its fractions;
- **Tobacco** exports increased from US$0.4 million to US$11.5 million;
- **Textiles** including synthetic fibers (reported an increase from US$0.78 million to US$9.4 million), leather exports increased from US$0.027 million to US$17 million, wool, carpets, knitted garments, yarn reported an increase in exports from US$0.98 million to US$18.1 million, woven fabrics exports increased from US$0.6 million to US$10 million;

- **Metals & ores** such as copper ore reported an increase in exports from US$0.3 million to US$11.5 million, copper bars whose exports increased from US$1.2 million to US$28.8 million, iron ore agglomerates where exports increased from US$0.021 million to US$15.5 million, flat-rolled products of iron or non-alloy steel where exports increased from US$0.6 million to US$13.3 million), aluminum, copper ores;
- **Chemicals** such as other acyclic alcohols reported increase in exports from US$0.00017 million to US$6.6 million, polyvinyl chloride whereby exports increased from US$0.78 million to US$27 million, catalysts and catalytic preparations, n.e.s. where exports increased from US$0.6 million to US$11.7 million. Others include hydrocarbons, polycarboxylic acids, carbonates, paints, soaps, polycarbonates;
- **Manufactured and machinery items** such as manufactures of woods (particularly densified wood and particle board reported increase from US$0.074 million to US$2.2 million), paper, tyres, manufactures of mineral materials, glass such as float glass and surface ground or polished glass showed an increase in exports from US$5.8 million to US$15.2 million, household articles, sewing machines, machine tools, other electric power machinery where exports increased from US$0.38 million to US$1.4 million, gas generators, wheeled tractors such as road tractors for semi-trailers where exports increased from US$1.7 million to US$6 million, airplanes & other aircraft mechanically-propelled (other than helicopters) of an unladen weight exceeding 15,000 kg, where exports increased from US$1.1 million to US$39.7 million), surgical goods, basketware, wickerwork and other articles of plaiting materials, n.e.s where exports increased from US$0.9 million to US$3.9 million, compasses, measuring, controlling and scientific instruments, n.e.s. which recorded an increase in exports from US$0.4 million to US$1.105 million) sports goods, and other items such as **gold**.

Simulations

In the previous sections, we discussed how to identify goods which align with the productive capabilities of the country and exhibit a higher-than-average sophistication level. Our aim was to present a template which policymakers can use to identify new export categories and pinpoint currently exported goods with the greatest potential for growth.

A crucial question regarding the real-world impact of the aforementioned analysis is the potential impact of expanding exports, as discussed. What would be the effect on overall exports if Pakistan began exporting a subset of the new goods identified based on the 'distance' measure (or, in other words, started exporting goods closest to its current productive capabilities)? Additionally, what would be the impact on exports if Pakistan focused on expanding those exports

which currently constitute only a small portion of the current export basket and are also close in terms of 'distance'?

Table 2 below shows some of these projects. Simulation 1 projects the impact on merchandise exports if Pakistan began exporting the new products closest to its current export basket (or those goods in distance categories 1-6). In this simulation, we assumed that the potential value of exports for each new product is equal to the average value of exports for each product Pakistan currently exports. We see that expanding into these new categories could increase Pakistan's merchandise exports by more than 13.8 percent (from US $28.7 billion to US $32.8 billion).

Simulation 2 projects the impact on merchandise exports if Pakistan began exporting the new products closest to its current export basket (or those goods in distance categories 1-6) and also doubled the exports of products closest to its current export basket and are valued at under US$1 million (or, in other words, doubled the exports of goods in distance groups 1-6 with a value of less than US$1 million). As before, we assumed that the potential value of exports for each new product is equal to the average value of exports for each product Pakistan currently exports. We see that expanding into these new categories and increasing the export of goods—which the country has the capability of producing could increase Pakistan's merchandise exports by almost 14.2 percent (from US$28.7 billion to US$32.9 billion).

Finally, Simulation 3 replicates the scenario of Simulation 2 but doubles the exports of all goods with export values under US $10 million. In this case, Pakistan's merchandise exports would increase by approximately 17.3 percent (from US$28.7 billion to US$33.8 billion).

Although these simulations are simplified approximations, they show the potential impact of expanding the country's export base towards more sophisticated products.

Table 2: Potential Growth in Pakistan's Merchandise Exports based on Simulations

Pakistan's Merchandise Exports in 2021 (USD Billion)	28.795
Simulation 1: Potential Merchandise Exports after Adding Not Yet Exported Products in Distance groups 1 – 6 ($ Billion)	32.770
Simulation 2: Potential Merchandise Exports after Adding Not Yet Exported Products and Doubling all Products with Export Value of Less than USD 1 M in Distance groups 1 to 6 ($ Billion)	32.885
Simulation 3: Potential Merchandise Exports after Adding Not Yet Exported	33.788

Products in Distance groups 1 to 6 and Doubling all Products with Export Value of Less than US$10 M in Distance groups 1 to 6 (US$ Billion)

Source: Authors' Calculations

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Appendix

Figure 1: An Example of the Product Space

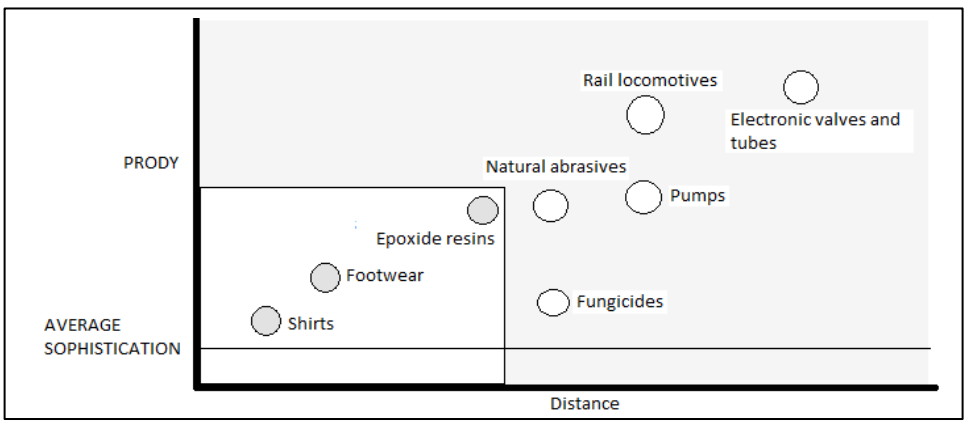
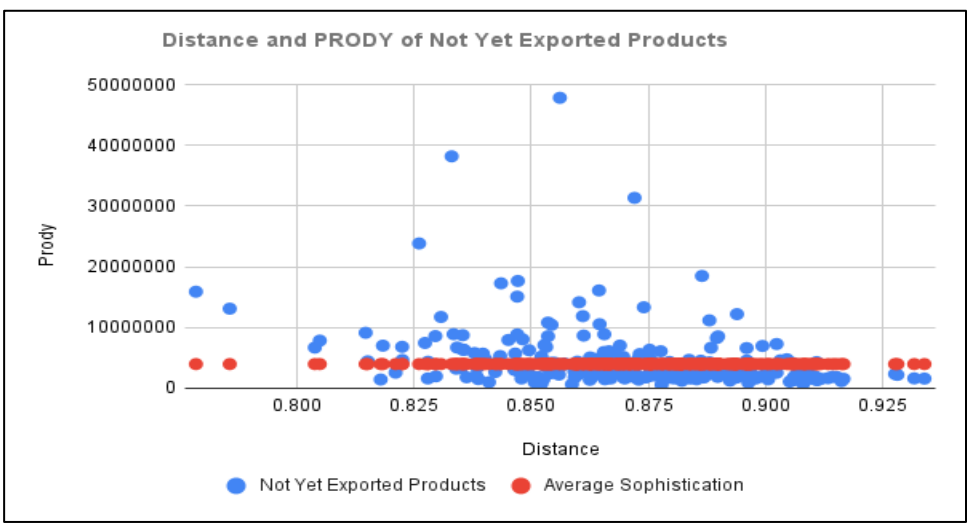


Figure 2: Potential New Export Categories



Source: Authors' Calculations

Figure 3: Average Sophistication Level of Exports

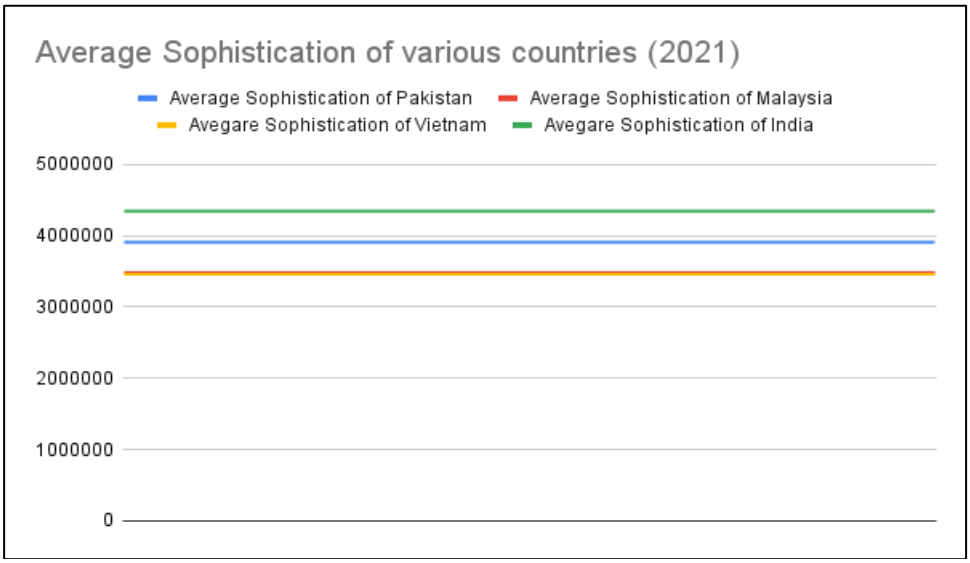
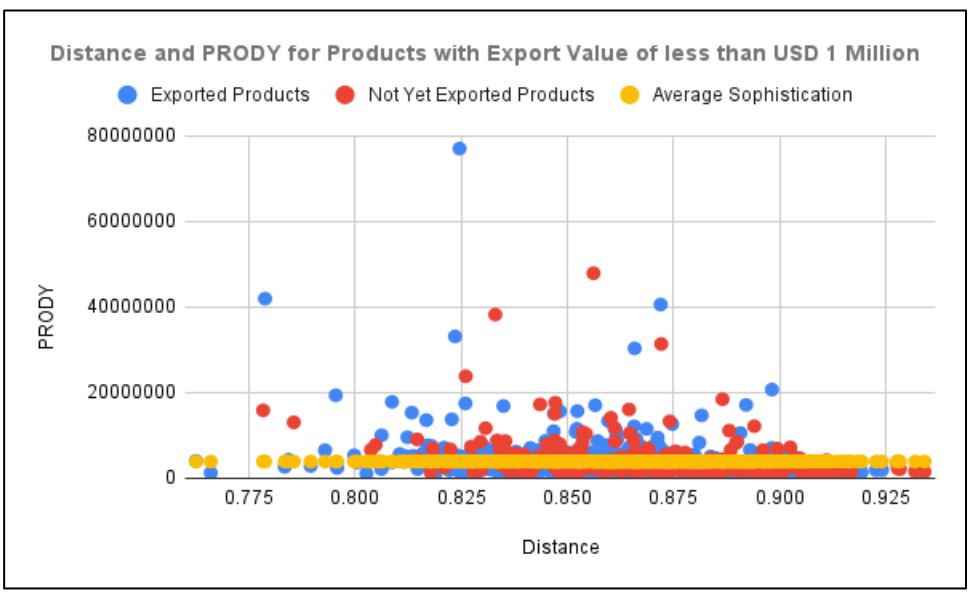
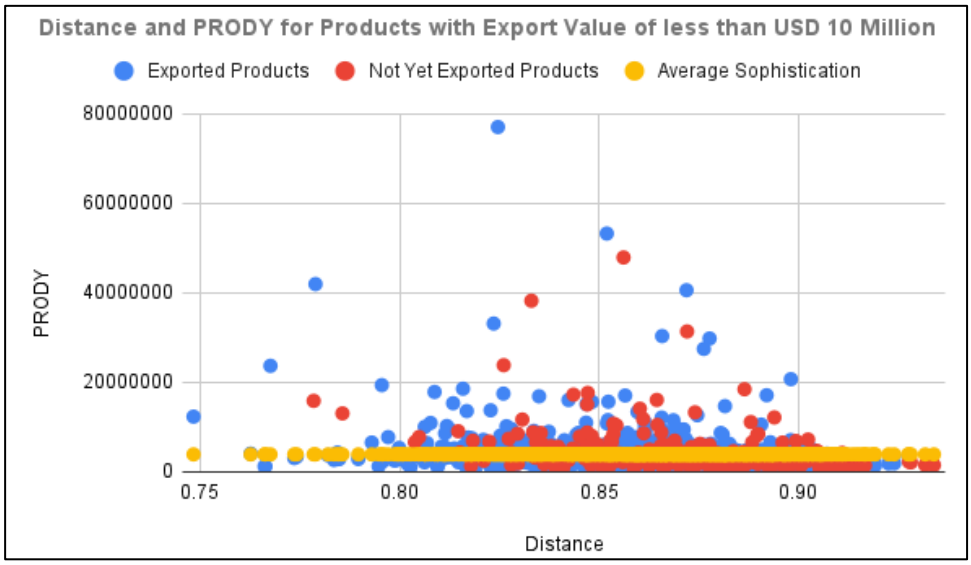


Figure 4: Product Space for New Products and Low Export Value Goods



Source: Authors' Calculations

Figure 5: Expanded Product Space for New Products and Low Export Value Goods



Source: Authors' Calculations

Figure 6: Expanded Product Space for New Products

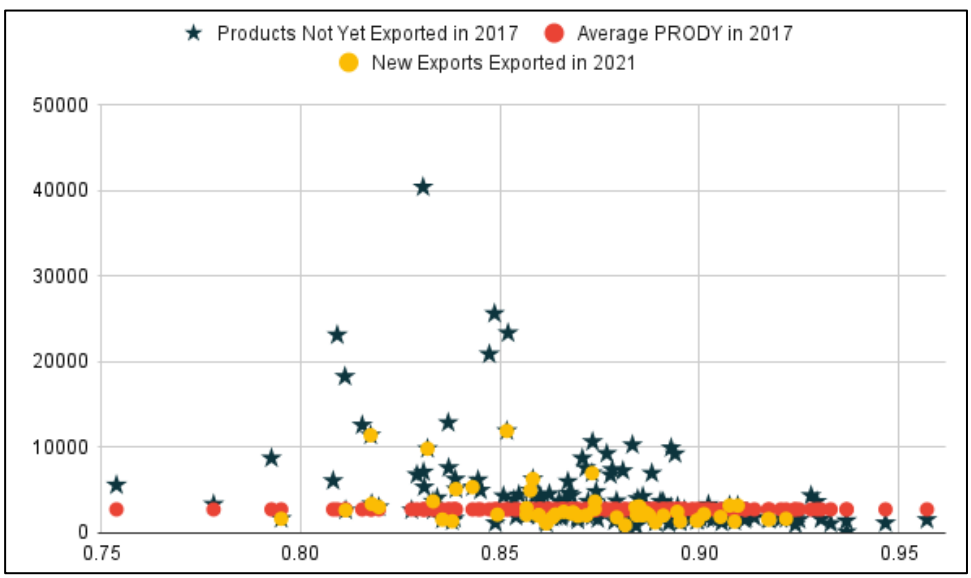


Figure 7: Expanded Product Space for New Products and Existing Products with Export Values less than USD 1 million

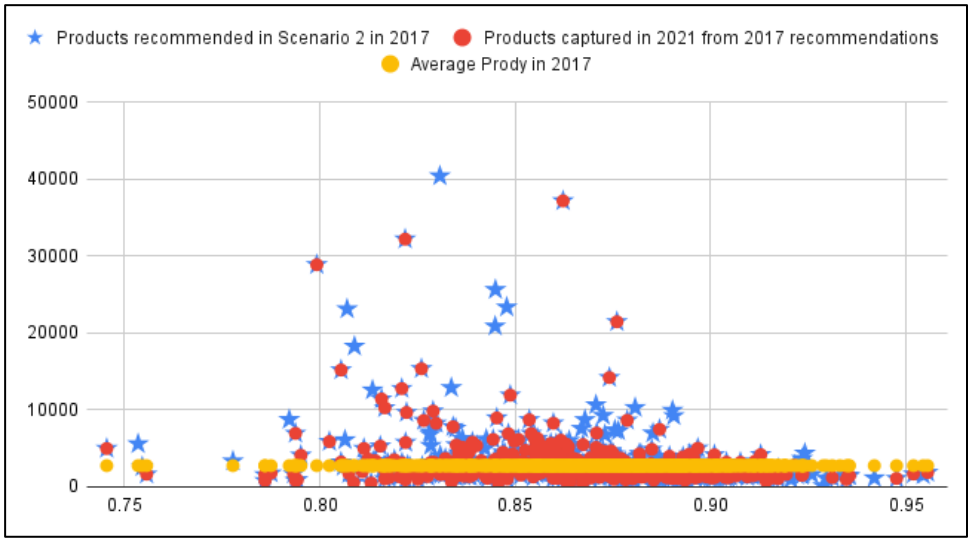
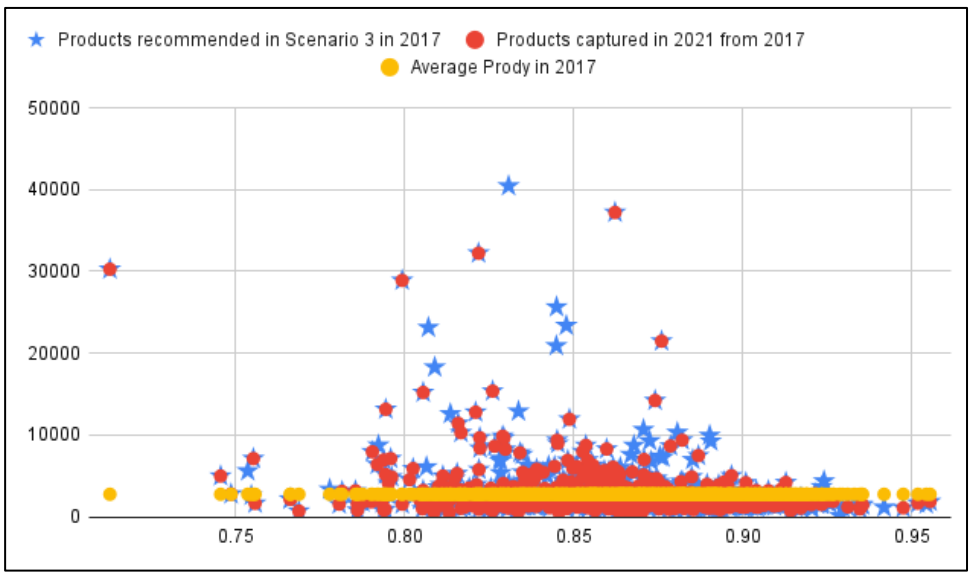


Figure 8: Expanded Product Space for New Products and Existing Products with Export Values less than USD 10 million



4

The Global Gig Economy: Pakistan's Opportunity to Become a Leader in Service Exports?

Theresa Thompson Chaudhry* and Hamna Ahmad**

Abstract

Freelancers in Pakistan earned around $400 million in both FY21 and FY22, accounting for about 15% of the $2.6 billion ICT exports. Pakistan's IT exports have been rising in absolute terms and as a share of service exports over the past few years, but it still stands far behind countries like the Philippines and India. Further, it has a long way to go before it rivals the importance of remittances to Pakistan from abroad, which stood at $31.2 billion in FY22. To learn more about the landscape of freelancing in Pakistan, we scraped the data on Pakistan-based freelancers from two popular sites. Most of the 9,495 Pakistani freelancers advertising their services on Freelancer.com are based in Punjab and Sindh. The most advertised skills are programming, web and app development, followed by design, research/writing, photography, and marketing. Nearly three-quarters of the workers listed have earned money through the site. Firms charge the highest hourly rate on average and have completed the greatest number of jobs. Men charge around $2.40 more per hour than women and have higher total earnings despite completing fewer transactions. Women have the highest repeat hire rate compared to both men and firms. Earnings and hourly rates are increasing (at a decreasing rate) in terms of freelancers' experience and percentage of jobs completed on time. Average ratings, however, have no statistically significant impact on either total earnings hourly rates of freelancing work. In contrast, only 1,100 out of 85,314 freelancers (1.3 percent) advertising their services on the site Guru.com, had ever completed a transaction. Men earn more per transaction, but earnings in the last year were roughly equal for men and women.

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Introduction

Sustainable growth and balance-of-payment stabilization require targeted policies to improve Pakistan's export performance. For decades, Pakistan has grappled with a narrow base of low-value-added exports. Freelance employment presents a promising solution to address low export revenue. In FY 2022, IT exports reached US$2.6 billion, with freelancing export remittances contributing US$400 million (Hanif, 2022). According to a 2019 Forbes article, Pakistan's freelancing sector grew by 47 percent, ranking as the fourth highest growth rate globally and exceeding regional export leaders India and Bangladesh[1]. Popular platforms facilitating this growth include Guru, Upwork, and Freelancer.com (see Figure 1a). Notably, Pakistan boasts one of the largest online labor supplies globally within the broader category of digital work (see Figure 1b)[2].

In 2023, Pakistan's Prime Minister set a target to increase IT exports to US$15 billion by 2026 (Radio Pakistan, 2023). The government and other entities are actively promoting this growth by offering training programs and co-working spaces. For example, the government-funded DigiSkills.pk Training Program offered free online training in freelancing and other relevant skills (SBP, 2022). Additionally, the Pakistan Skills Development Fund (PSDF) partnered with Zong to train 10,000 young people in "How to E-lance" (Zong, 2021). Furthermore, the Pakistan Information Technology Board (PITB) has established e-Earn workspaces, offering internet and other facilities in various cities across the country, including Gujranwala, Faisalabad, Sargodha, Multan, Sialkot, Rawalpindi, Gujrat, DG Khan, Sahiwal, and Okara (ProPakistani, 2023).

To foster sustainable growth, enhancing economic participation and productivity among Pakistan's human capital is crucial. Notably, 68 percent of Pakistan's working-age population falls within the youth demographic, aged 10 to 24 years. To fully capitalize on this demographic dividend, the country must effectively utilize its most abundant resource: labor. This necessitates increasing labor force participation rates (LFP), particularly among women. According to the most recent Labor Force Survey (2021), female labor force participation (FLFP) stands at a mere 21.5 percent, which is significantly lower compared to other South Asian countries. Freelance employment can alleviate several constraints, such as mobility, safety, cultural barriers, and social norms, thereby facilitating greater female participation in the labor market. The recent economic downturn is likely

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[1] https://www.forbes.com/sites/elainepofeldt/2019/08/18/the-top-10-fastest-growing-freelance-markets-in-the-world/?sh=53f424b0733b. Payoneer's Global Gig Economy Index had provided the data on which these rankings were based.

[2] *World Employment and Social Outlook 2021: The role of digital labour platforms in transforming the world of work* International Labour Office – Geneva: ILO, 2021. Labour supply is captured from four platforms (Fiverr, Freelancer, Guru and PeoplePerHour).
Source: Online Labour Observatory (iLabour Project, Oxford Internet Institute and ILO).

to accelerate demand for non-traditional work opportunities, which serve as a crucial safety net for workers facing lay-offs and hiring freezes in the traditional labor market.

While the target for FY22 was US$3.5 billion, Pakistan's ICT exports and the number of ICT services firms have experienced substantial growth in the past five years, falling short of this target by only US$0.9 billion (Figure 3a). Encouragingly, the share of higher value-added computer-related services within these exports (as opposed to telecom and call centers) is rising (Figure 3b). Freelancers in Pakistan earned approximately US$400 million in FY21 and FY22, representing around 15 percent of the US$2.6 billion in total ICT exports. Between FY21 and FY22, IT services[3] declined, but a significant rise in non-IT services offset this shortfall. A survey of approximately 5,000 software developers revealed that Pakistani freelancers earned an average of US$43 per hour (Nawaz et al., 2020, citing Codementor, 2017).

Regional Trends

Regionally, Pakistan's ICT service exports demonstrate a promising trend, surpassing both Bangladesh and Sri Lanka in volume and growth rate. Additionally, IT exports are steadily increasing as a share of overall service exports, indicating their growing significance (Figure 4).

In contrast, the Philippines boasts ICT exports of more than double those of Pakistan despite having a population only half the size. India's ICT exports, at US$119.5 billion, far exceed those of other countries under consideration, both in absolute terms and per capita. India's services exports are nearly 50 times larger than Pakistan's, and its per capita ICT exports are eight times those of Pakistan (Figure 5).

For countries like Pakistan and Bangladesh, trade in services remains a relatively small component of GDP, accounting for approximately 5 percent (Figure 6). This contrasts sharply with India and the Philippines, where trade in services constitutes nearly three times that figure, reaching around 15 percent of GDP.

Despite a $2 billion surplus in telecommunications and IT, the contribution of services to Pakistan's current account remains negative. This is primarily due to a substantial deficit in the transport category, with sea freight alone accounting for $5.283 billion of the debt (Table 1). While the US$2 billion net in ICT service exports

[3] IT services: web development, logo design, graphic designing, developers of mobile apps and java; Non-IT services: Content writing, translation, virtual assistantship, sales, marketing, accounting, finance and customer service.

is a significant contribution, it falls far short of the US$31 billion received in remittances (Table 2).

Table 1: Services Accounts, Pakistan's Balance of Payments (millions of USD$)

I T E M S	FY20			FY21 R			FY22 P		
	Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net
b. Services	5,437	8,753	(3,316)	5,945	8,461	(2,516)	6,950	11,969	(5,019)
1. Manuf. services	-	-	-	-	-	-	-	-	-
2 Maintenance/repair	7	65	(58)	3	48	(45)	3	38	(35)
3 Transport	741	3,036	(2,295)	544	3,279	(2,735)	821	6,787	(5,966)
4 Travel	490	1,229	(739)	501	752	(251)	541	1,356	(815)
5 Construction	166	77	89	116	2	114	94	40	54
6 Insurance and pension	42	276	(234)	47	247	(200)	40	290	(250)
7 Financial services	135	468	(333)	138	472	(334)	92	194	(102)
8 Intellectual property	4	181	(177)	13	254	(241)	13	209	(196)
9 Telecoms, computer, and information services	1,440	385	1,055	2,108	530	1,578	2,618	612	2,006
10 Other business services	1,328	2,560	(1,232)	1,448	2,408	(960)	1,644	1,912	(268)
11 Personal, cultural, and recreational	8	1	7	11	-	11	13	1	12
12 Government goods and services n.i.e.	1,076	475	601	1,016	469	547	1,071	530	541

Note: Figures in parentheses represent a net debit.
Source: Table 9.4 Pakistan's Balance of Payments (BPM-6), SBP Annual Report-Statistical Supplement FY 22

Table 2: Workers' Remittances to Pakistan

	Amount (in millions of USD)				
	FY18	FY19	FY20*	FY21	FY22
Cash Remittances	19,913.60	21,739.40	23,132.30	29,449.90	31,278.80

Source: Table 9.7 Workers' Remittances, SBP Annual Report-Statistical Supplement FY 22

Literature:

Existing research on the gig economy primarily focuses on developed countries (Oyer, 2020). While most of these studies are descriptive, a few randomized controlled trial (RCT-type experimental analyses have explored issues related to motivation (extrinsic/intrinsic) versus risk aversion, disintermediation incentives (to avoid platform fees), and the value of reputation to freelancers (Butsheh et al., 2022; Gu & Zhu, 2021; Holtz et al., 2022).

Key takeaways from the descriptive body of work include the following:

1) First, the growth of the gig economy and the share of independent workers is primarily concentrated among lower-skilled individuals.
2) Secondly, workers often cite flexibility as the primary reason for choosing the gig economy over traditional jobs (van der Zwan et al., 2020).
3) Third, freelancers may not necessarily replace traditional jobs but can complement traditional employment under certain conditions (Burke & Cowling, 2020).

Lastly, during economic downturns, the gig economy has played a crucial role in safeguarding workers against fluctuating economic conditions (Pulignano et al., 2021). Some critical policy issues that have been identified in this area include but are not limited to (i) accurately quantifying the size of the gig economy, (ii) ensuring a relatively equal tax burden between traditional and independent workers through effective taxation policies to prevent tax evasion among independent workers and revenue loss for the government; (iii) developing effective worker protection policies for independent workers to safeguard them against the heightened risks, uncertainty and income volatility they face compared to traditional workers; and (iv) understanding why women, despite enjoying greater flexibility, constitute a smaller proportion of the gig economy compared to male workers.

A handful of studies have focused explicitly on freelancing in Pakistan. Rehman et al. (2021) found that programming freelancers were more satisfied with their jobs and earned comparable wages to traditionally employed programmers, although uncertainty and income insecurity were concerns. Ahsan et al. (2022) similarly reported high levels of freelancer satisfaction. Other studies have explored factors that contribute to higher client satisfaction in web development freelancing gigs (Haq et al., 2018), as well as the opportunities that freelancing offers to women (Rawoof et al., 2021). Additionally, some research has highlighted the occupational hazards faced by freelancers who spend extended periods sitting in front of a computer (Tasmeer et al., 2022).

Despite its immense potential, research on growth of the gig economy for independent freelance workers in developing countries, including Pakistan, remains limited. This study aims to bridge this gap in the existing literature. Our primary objectives are as follows:

1) Assess the size of the gig economy in Punjab.
2) Develop a demographic profile of gig-economy workers in Pakistan based on their age, gender, education, experience, location, and the services they provide.

3) Explore the skill categories offered by freelancers and their corresponding pay rates;

4) Quantify any gender pay gap between male and female gig economy workers.

Analysis:

We collected data from the freelancing websites Guru.com, Fiverr, and Freelancer.com. Beyond investigating whether the proportion of active freelancers is similar across platforms, these websites provide access to a variety of information, including price per hour, price per specific task, freelancer education, freelance work history, part-time/full-time status, job ratings, on-time completion rates, and repeat hire rates. This data enables us to explore other questions related to returns to skills, returns to experience, and gender differences in wage demands. Data scraping from Upwork was unsuccessful due to the website's security measures. Our analysis focuses on Guru and Freelancer, which provided the most informative variables for our investigation.

Freelancer.com

Our analysis begins with the data from Freelancer.com. Figure 7 visually depicts the distribution of offered skills across geographic regions. Most of the 9,495 freelancers advertising their services on the platform are based in Punjab and Sindh, the most populous provinces in Pakistan. Workers from Islamabad and Khyber Pakhtunkhwa (KPK) can also be found, while representation from the northern areas of Gilgit-Baltistan and Kashmir is minimal. The top five skills offered on Freelancer.com fall within the programming/web/app development categories, followed by design, research/writing, photography, and marketing (see Figure 7).

The majority of workers on Freelancer.com are active, as evidenced by non-zero income on the site (Figure 8). Unfortunately, we lack data on the total number of jobs each freelancer completes. The closest available measure is the total number of reviews each freelancer on the site has received.

The photography, programming/web/app development, design, marketing, and accounting/legal services workers boast the highest median earnings on Freelancer.com (Figure 9a). Unfortunately, data on the duration of each freelancer's activity on the platform is unavailable, limiting our analysis to total earnings on the site rather than annual earnings. Interestingly, Figure 9b reveals that firms have the highest median earnings, while the median total earnings for men and women appear comparable.

Although income per transaction or per annum is unavailable, we have data on the freelancers' hourly rates (Figure 10). Freelancers specializing in high-skill

areas like architecture and programming/app development command the highest median hourly rates. Surprisingly, hourly customer services/Amazon assistance charges were also relatively high. Accounting/legal and data analysis fell into the mid-range.

Firms command the highest average hourly rates and have completed the most jobs, as indicated by the number of reviews (Table 3). Men charge approximately US$2.40 more per hour than women and have higher total earnings despite completing fewer transactions (proxied by the number of reviews). Interestingly, women have the highest repeat hire rate compared to men and firms. The average rating for all freelancer identities is nearly identical (around 4.88), and performance outcomes, such as the percentage of jobs completed, jobs completed on time, and jobs completed on budget, are virtually indistinguishable.

Table 3: Outcomes for Freelancers by Identity/Gender

Gender	Price per hour (US$)	N	Total earnings (US$)	N	Number of reviews	N	% Repeat hire	N
Male	16.86	6,352	6540.63	4,473	34.15	4,479	28.17	2,657
Female	14.48	843	5469.76	615	36.16	615	31.86	348
Firm	19.67	730	19576.49	616	90.19	616	23.96	454
Undetermined	19.25	1,570	14270.35	1,269	87.89	1,271	25.16	872
Male	4.89	2,317	94.70	4,412	95.13	4,406	97.24	4,512
Female	4.88	361	95.36	605	94.94	602	97.58	619
Firm	4.87	348	94.68	609	95.36	612	97.27	618
Undetermined	4.89	660	94.81	1,257	95.97	1,256	97.47	1,271

Source: Authors' calculations based on 2023 Freelancer.com data

Differences in earnings and hourly rates among freelancers may be influenced by their work fields. Table 4 presents regression analyses exploring this relationship with *ln(total earnings)* or *ln(rate per hour)* as dependent variables and identity/gender categories as independent variables. These analyses control non-linearly for experience (their total number of reviews) and performance indicators (jobs completed on time and average ratings). In the odd-numbered columns, when skill category controls are excluded, the gaps in income and hourly rates between identity/gender categories are substantial. Columns 1 and 5 reveal that men and women earn less and charge less per hour than firms. Columns 3 and 7 show that women charge less than men. When skill category fixed effects are included in the even-numbered columns, the estimated earnings and hourly rate gaps by freelancer identity/gender decrease, suggesting that some of the gap can be attributed to the different types of work done by men, women, and firms. After controlling for the performance and skill category, men charge 9.7 percent, and women charge 16.2 percent less than firms' hourly rates. Additionally, women charge 6.7 percent less per hour than men. Earnings and hourly rates exhibit an

increasing but diminishing relationship with the experience of freelancers (measured by total reviews) and the percentage of jobs completed on time. However, average ratings do not have a statistically significant impact.

Table 4: Earnings and Hourly Rates by Gender/Freelancer Identity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Earnings Men/ Women /Firms	Earnings Men/ Women /Firms	Earnings Men/ Women	Earnings Men/ Women	Hourly Rate Men/ Women /Firms	Hourly Rate Men/ Women /Firms	Hourly Rate Men/ Women	Hourly Rate Men/ Women
Male	-0.411**	-0.358**			-0.120**	-0.097*		
	(0.111)	(0.109)			(0.040)	(0.040)		
Female	-0.608***	-0.455**	-0.193+	-0.116	-0.244***	-0.162**	-0.123**	-0.067+
	(0.144)	(0.143)	(0.107)	(0.107)	(0.053)	(0.052)	(0.039)	(0.039)
Average Rating	-0.170	-0.208	0.060	-0.044	0.061	0.164	0.164	0.243
	(0.525)	(0.517)	(0.572)	(0.563)	(0.192)	(0.187)	(0.211)	(0.207)
Average Rating Squared	0.021	0.024	-0.006	0.006	-0.004	-0.019	-0.017	-0.030
	(0.072)	(0.070)	(0.077)	(0.076)	(0.026)	(0.026)	(0.028)	(0.028)
Total Reviews	0.019***	0.019***	0.020***	0.020***	0.002***	0.002***	0.003***	0.002***
	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Total Reviews Squared	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Jobs Completed on time	0.172***	0.172***	0.169***	0.170***	0.024**	0.020**	0.025**	0.021**
	(0.019)	(0.019)	(0.020)	(0.019)	(0.007)	(0.007)	(0.007)	(0.007)
Jobs Completed on time Squared	-0.001***	-0.001***	-0.001***	-0.001***	-0.000***	-0.000**	-0.000***	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Skill Group Fixed Effects	N	Y	N	Y	N	Y	N	Y
R^2	0.467	0.489	0.445	0.468	0.099	0.148	0.091	0.137
Observations	2992	2992	2647	2647	2992	2992	2647	2647

Notes: In even numbered columns, we include fixed effects for the skill categories. In col 1-2 & 5-6 the excluded category is Firms; in the columns 3-4 & 7-8, the excluded category is Male; Standard errors in parentheses, $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.0001$

Guru.com

Next, we examine the data from Guru.com. The platform boasts over 85,000 individuals and firms listing their services. The majority of freelancers were from Punjab, Sindh, and Islamabad (Figure 11a). Interestingly, the distribution of skilled versus unskilled freelancers remains consistent across all territories, hovering around 85% skilled and 15% unskilled (Figure 11b).

By far, the most commonly offered skills on Guru.com by Pakistan-based freelancers are graphic design and photography, followed by data entry, writing/research, web development, and data processing. Business services like

sales/marketing, finance/accounting, virtual assistance, and customer assistance are also prominent (Figure 12a). After removing outliers, the highest earning skills for Pakistan-based freelancers on Guru.com are search engine optimization, e-commerce, and customer service (Figure 12b).

Surprisingly, only a small fraction—1.3% or approximately 1,100 out of the 85,000 freelancers listed on Guru.com—had ever earned income through the platform. Unfortunately, the site did not provide information on the gender of the freelancer, so we employed software programs to interpolate gender based on names for almost three-fourths of the observations. Our analysis based on interpolated data suggests a roughly equal distribution of active freelancers: 10 percent men, 10 percent women, and 50 percent firms (Table 5). The lack of recorded transactions appeared consistent across the various skills offered (Figure 13).

Table 5: Active vs Listed Freelancers on Guru.com (2023)

Gender	Number of Freelancers on Guru.com	Percent	Number of Freelancers with Earnings >0	Percent
Female	12,978	15.2%	104	9.5%
Male	59,550	69.8	110	10
Firm	1,728	20	571	51.9
Unknown	11,052	12.95	315	28.6

Source: Authors' calculations based on data from Guru.com

The geographic distribution of skills for freelancers with recorded transactions appears similar across the three provinces, with the majority concentrated in Punjab, Sindh, and Islamabad (Figure 14). Interestingly, Figure 15 suggests a positive relationship between the number of years on Guru.com and the growth in transactions for freelancers based in Islamabad and Sindh.

Although most freelancers with significant transaction volumes are concentrated in Punjab, Sindh, and Islamabad, there is a notable presence of highly active freelancers in the Northern Areas and Kashmir (Figures 16a and 16b).

The number of transactions for the initial categories, such as transcription, legal services, and architecture, is relatively small, albeit these skills are lucrative compared to other skills (Figure 17b).

Women appear present in most offered skills, although their representation varies. They are more likely to be found in writing and less likely in digital assistance and web development (Figures 18a and 18b).

Similar to Freelancer.com, firms on Guru.com appear to have the highest median annual earnings and earnings per transaction in 2022 (Figures 19a and

19b). While the median annual earnings for men and women appear comparable, men's earnings per transaction show a slightly higher average and greater variability.

Conclusion

Pakistan's freelance economy contributed approximately US$400 million in both FY21 and FY22, accounting for about 15% of the country's US$2.6 billion in ICT exports. We scraped data on Pakistan-based freelancers from Guru.com and Freelancer.com to delve deeper into this landscape.

Programming and web and app development emerged as the most advertised skills on freelancing platforms. Design, research/writing, photography, and marketing followed closely behind. Notably, nearly three-quarters of the listed workers have successfully generated income through these platforms. Men charged approximately US$2.40 more per hour than women and earned higher total incomes despite completing fewer transactions. However, women demonstrated a higher repeat hire rate than men and firms. Performance outcomes were remarkably similar across all freelancer identities, with minimal differences in average rating, percentage of jobs completed, jobs completed on time, and jobs completed on budget.

Our analysis reveals that only a tiny fraction—1.3 percent or only 1,100 freelancers out of the listed 85,314 freelancers—had ever completed a transaction on the platform. Most freelancers remain concentrated in Punjab, Sindh, and Islamabad, although there was also a notable presence in the Northern Areas and AJK. Our analysis, which involved estimating gender for a significant portion of the data, suggests that more than 68 percent of profiles on the site belong to men, and women make up another 15 percent. The remaining category likely includes firms or individuals with unidentified genders. While photography and graphic design dominate the offered services, the highest annual earnings appear in search engine optimization, e-commerce, and customer services. Although men earn more per transaction, median annual earnings for men and women appear roughly equal in the past year.

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Appendix

Figure 1a: Freelancing platforms: Guru, Upwork, and Freelancer

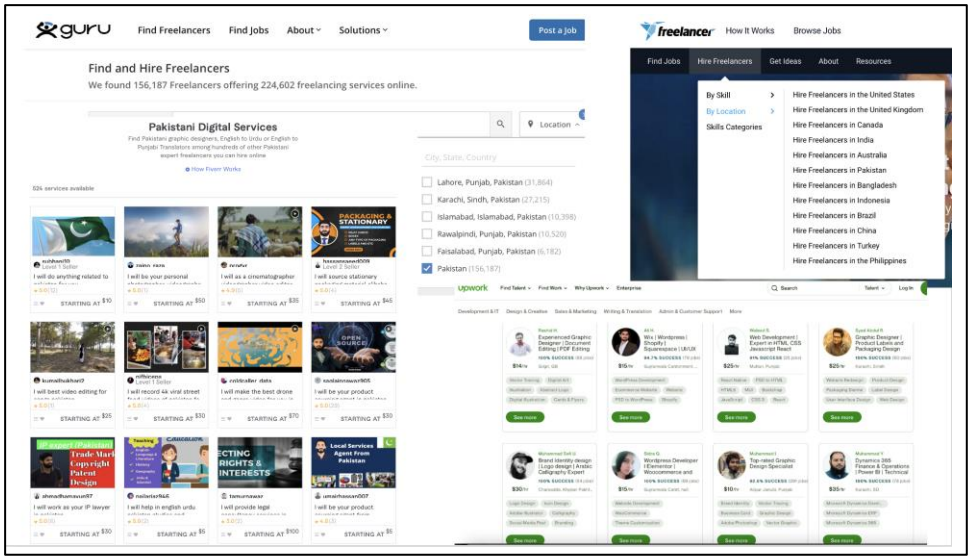


Figure 1b: Online Labor Supply, from ILO's World Employment and Social Outlook 2021

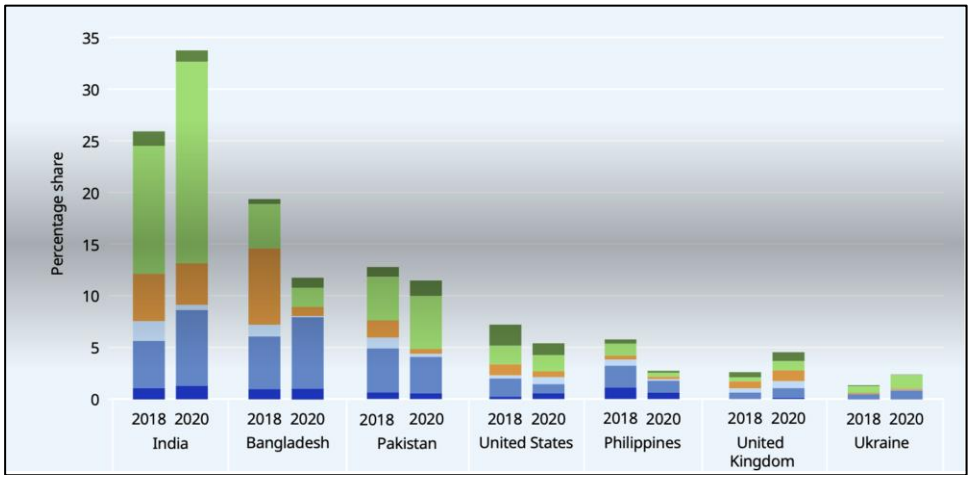


Figure 2a: DigiSkills.pk Training Programs

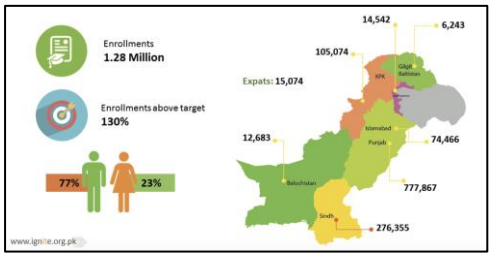


Figure 2b: PSDF/Zong E-lancing Partnership

Figure 3a: Growth of ICT Services Firms and Exports

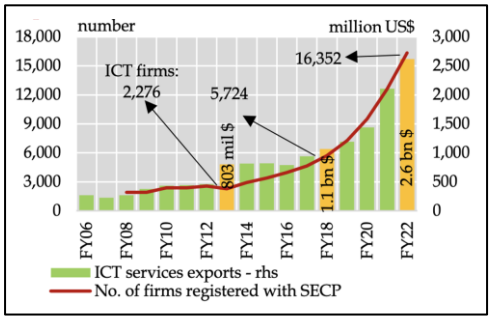
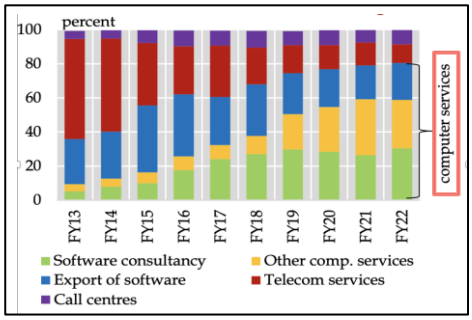
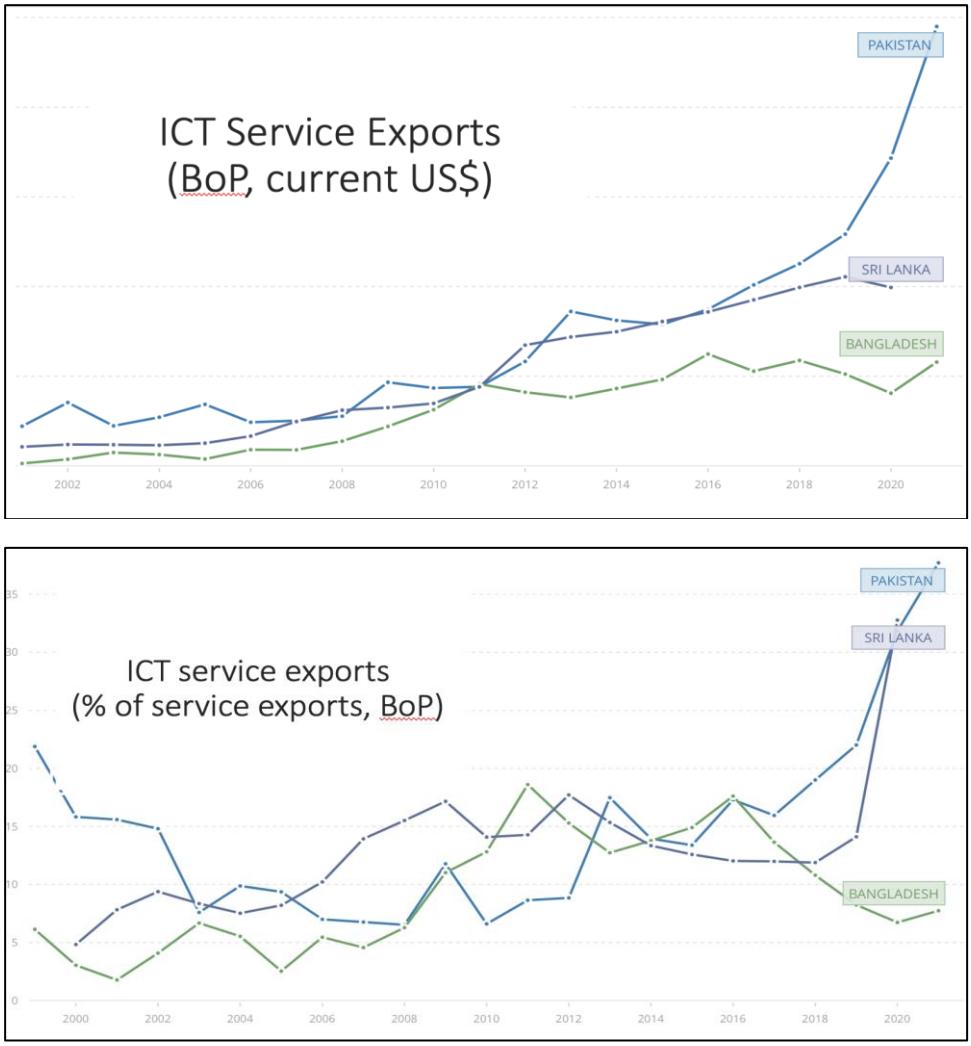


Figure 3b: Breakdown of ICT Services Exports



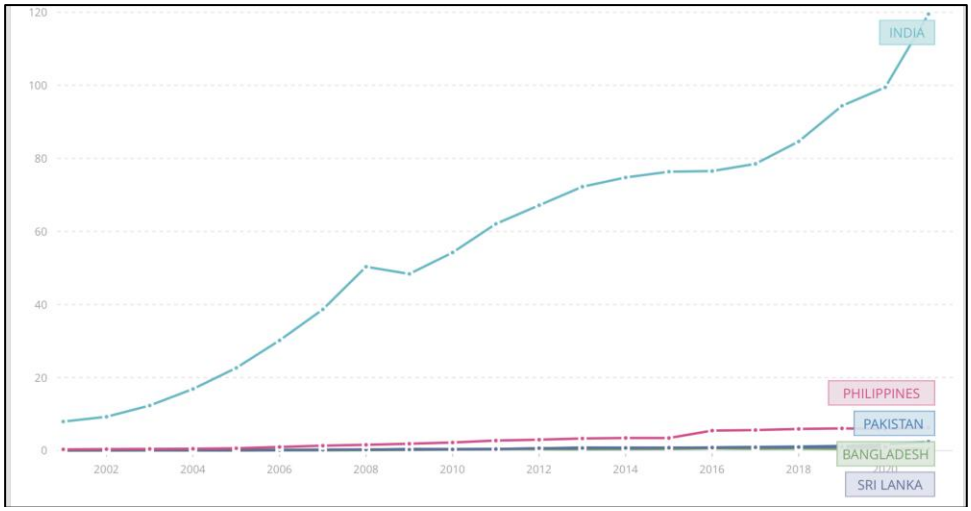
Source: SBP FY22 Annual Report, Chapter 6 (both figures)

Figure 4: Regional ICT Service Exports in Current US $ and as Share of Service Exports in Pakistan, Sri Lanka, and Bangladesh



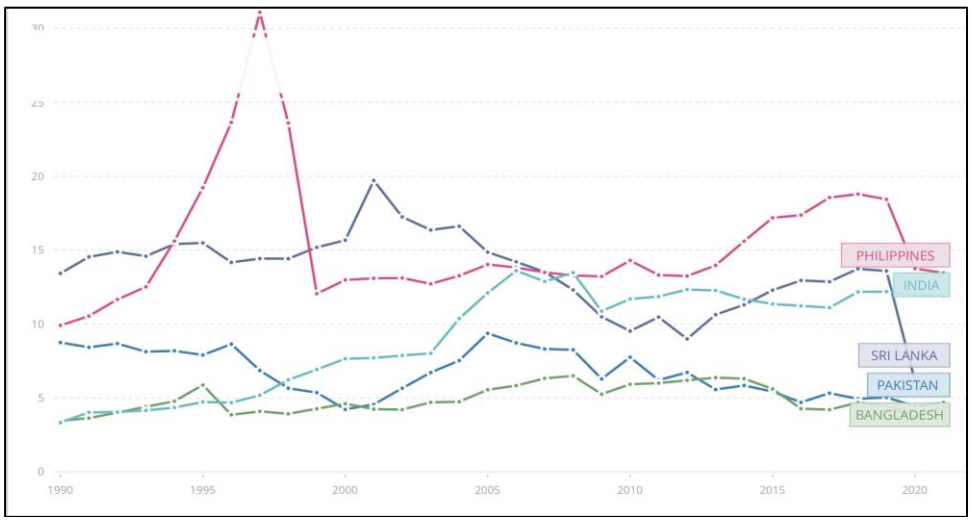
Sources: Panel A: https://data.worldbank.org/indicator/BX.GSR.CCIS.CD?end=2021&locations=PK-BD-LK&start=1990&view=chart
Panel B: https://data.worldbank.org/indicator/BX.GSR.CCIS.ZS?end=2021&locations=PK-BD-LK-PH-IN&start=2000&view=chart

Figure 5: ICT Service exports (BoP, current US$)



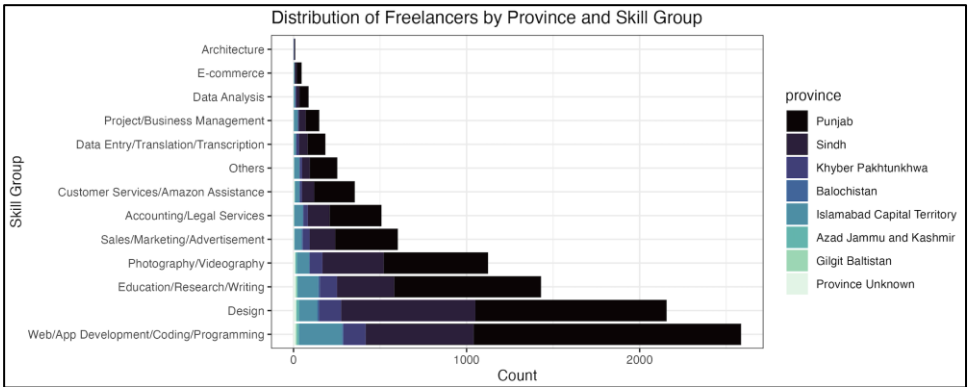
Source: https://data.worldbank.org/indicator/BX.GSR.CCIS.CD?end=2021&locations=PK-BD-LK-PH-IN&start=1990&view=chart

Figure 6: Trade in services (% of GDP)



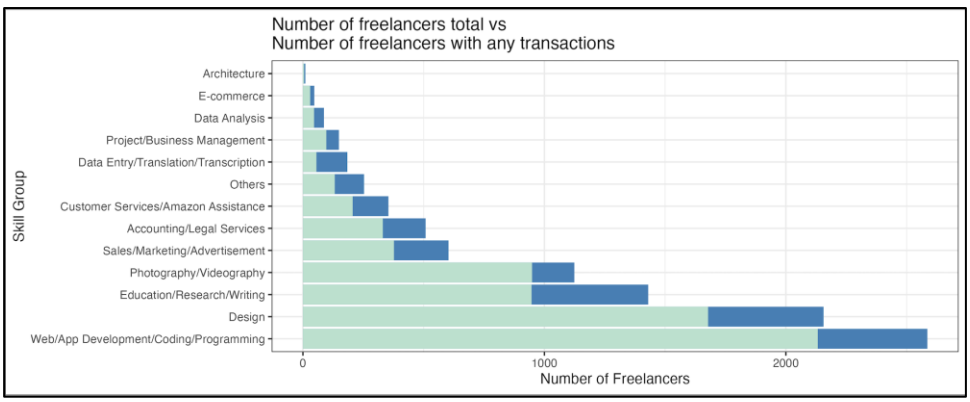
Source: https://data.worldbank.org/indicator/BG.GSR.NFSV.GD.ZS?end=2021&locations=PK-BD-LK-PH-IN&start=1990&view=chart

Figure 7: The Geographic Distribution of Workers on Freelancer.com by Skill in Pakistan



Source: Authors' calculations based on data from Freelancer.com

Figure 8: Listed (light green+blue) vs Active Freelancers (light green) on Freelancer.com by Skill



Source: Authors' calculations based on data from Freelancer.com

Figure 9a: Total Earnings by Skill on Freelancer.com

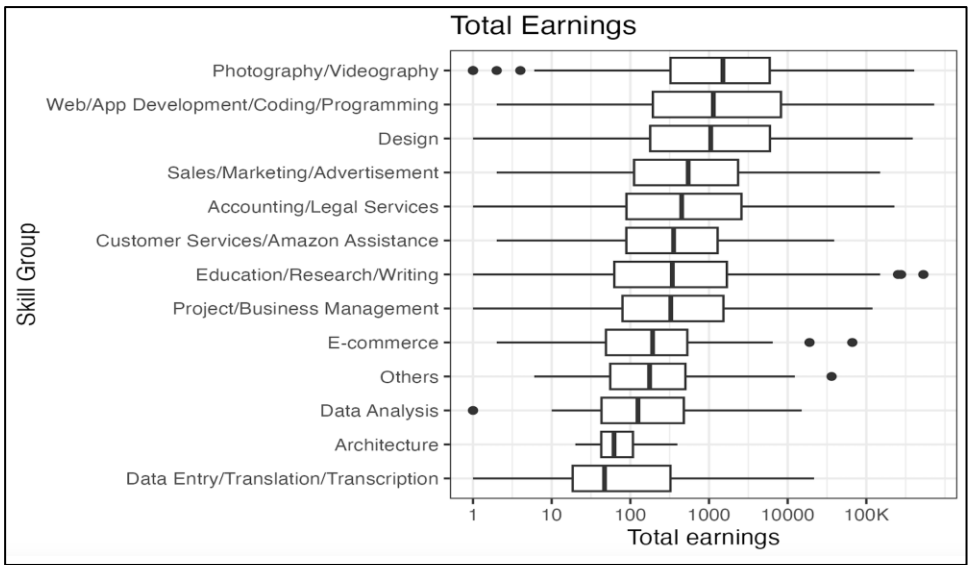
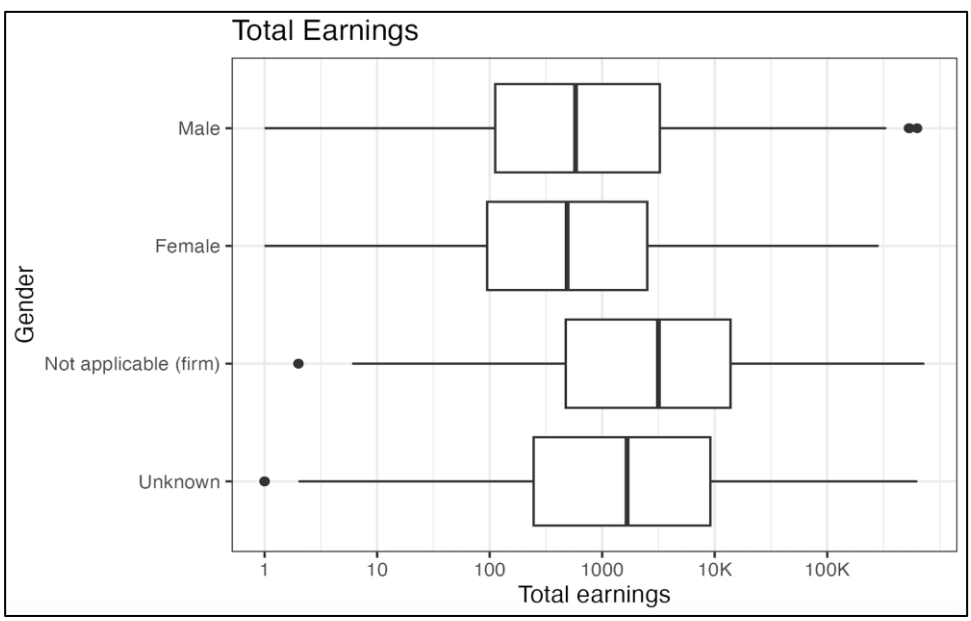
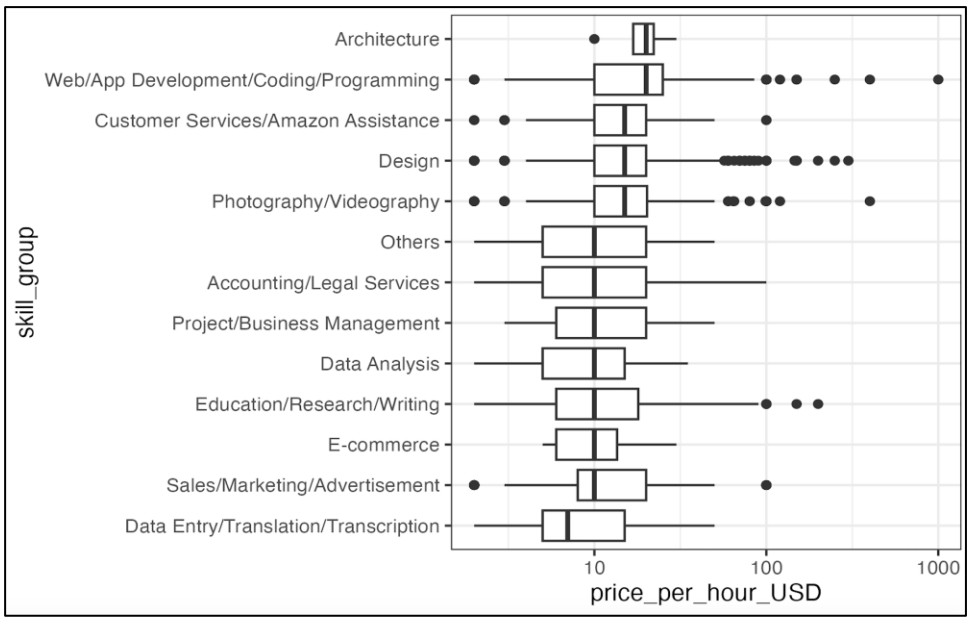


Figure 9b: Total Earnings by Freelancer Identity/Gender on Freelancer.com



Source: Authors' calculations based on data from Freelancer.com

Figure 10: Hourly Rates of Workers on Freelancer.com



Source: Authors' calculations based on data from Freelancer.com

Figure 11a: The Geographic Distribution of Freelance Workers on Guru.com in Pakistan

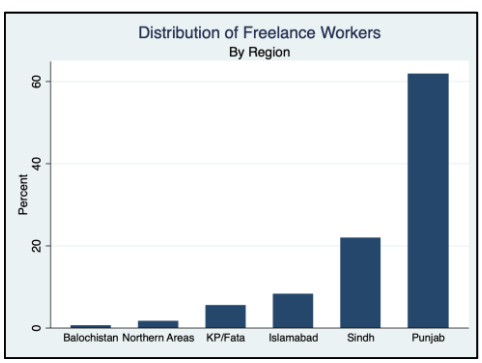
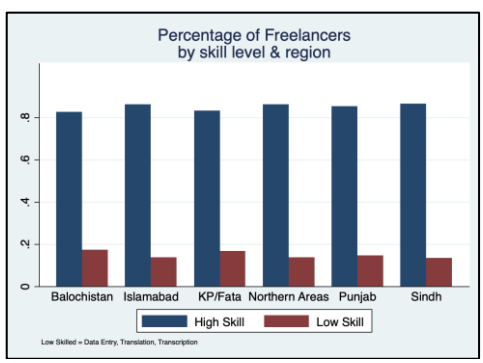


Figure 11b: Geographic Distribution of Skill Level of Pakistan-based Workers on Guru.com



Source: Authors' calculations based on data from Guru.com

Figure 12a: The Distribution of Skills Offered by Pakistan-based Freelance Workers on Guru.com

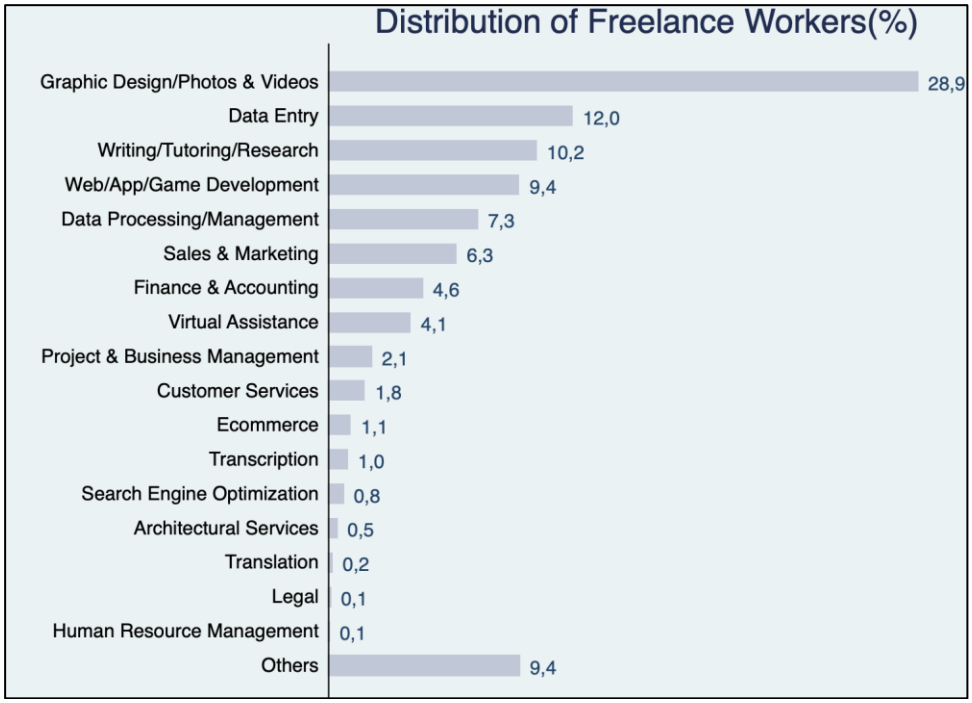
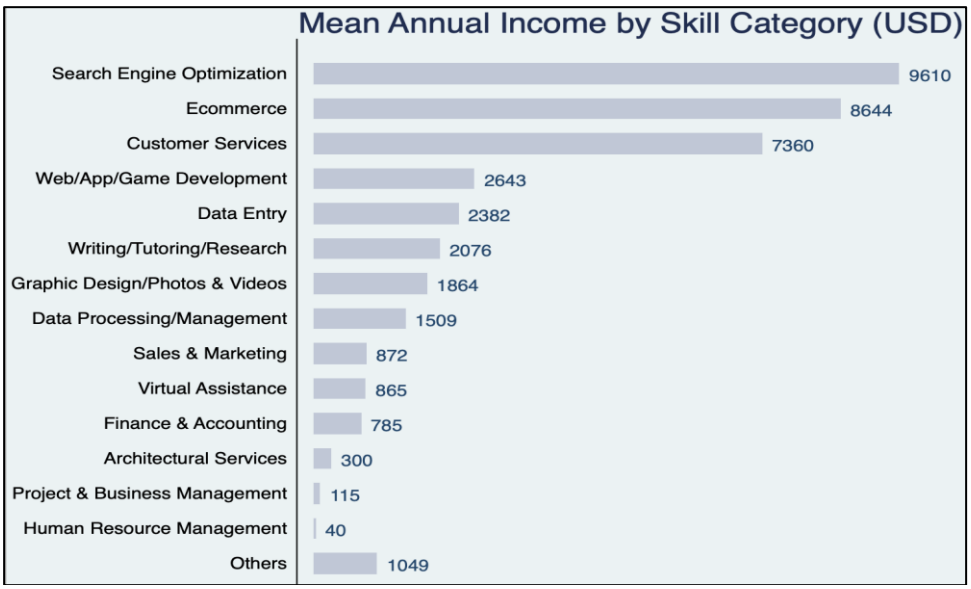
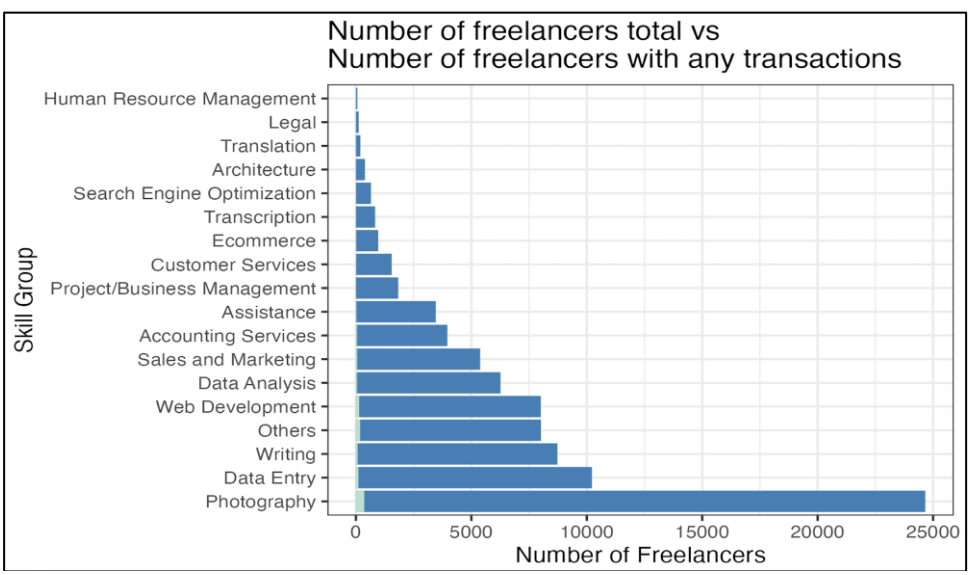


Figure 12b: Average Annual Earnings on Guru.com by Pakistan-based Freelance Workers by Skill Category



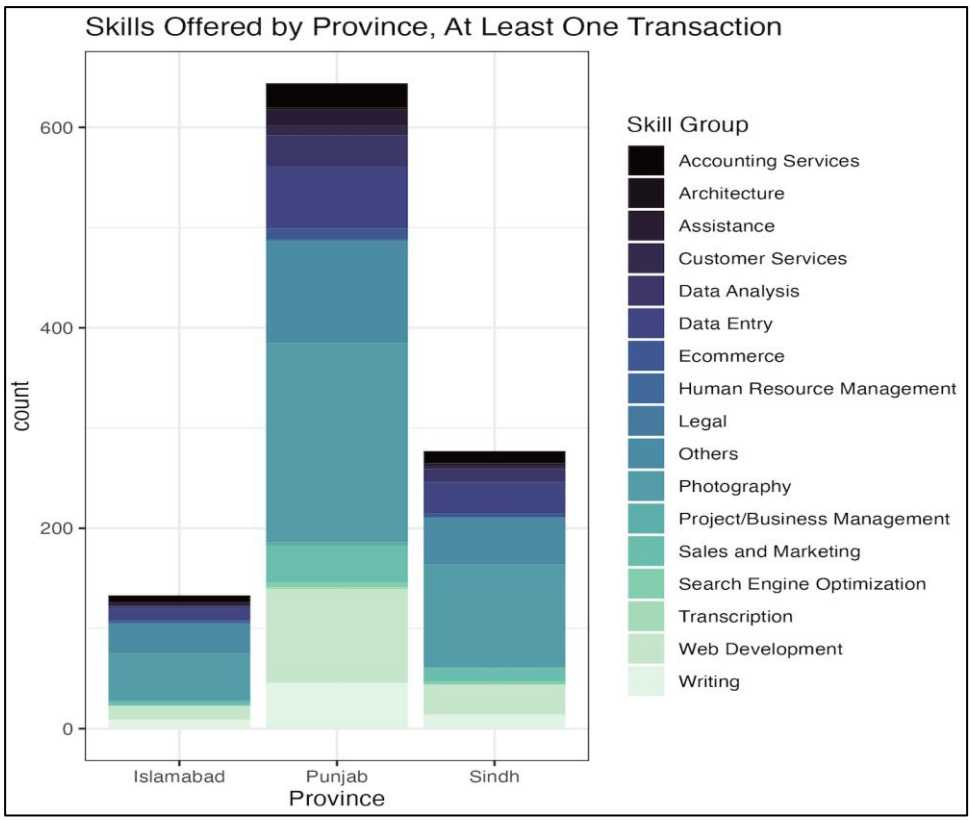
Source: Authors' calculations based on data from Guru.com

Figure 13: Listed (green+blue) vs Active Freelancers (light green) on on Guru.com by Skill



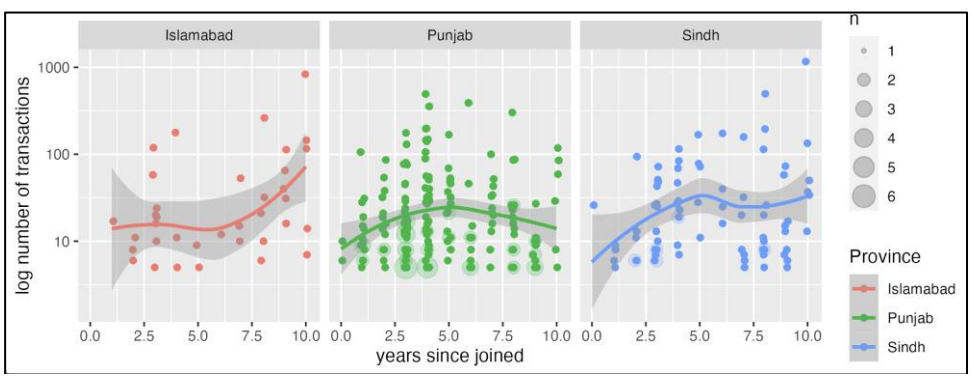
Source: Authors' calculations based on data from Guru.com

Figure 14: Geographic Distribution of Skills on Guru.com



Source: Authors' calculations based on data from Guru.com

Figure 15: Transactions by Tenure on Guru.com for Pakistan-based Freelance Workers



Source: Authors' calculations based on data from Guru.com

Figure 16a: Distribution by Province of Number of Transactions, 5 or more

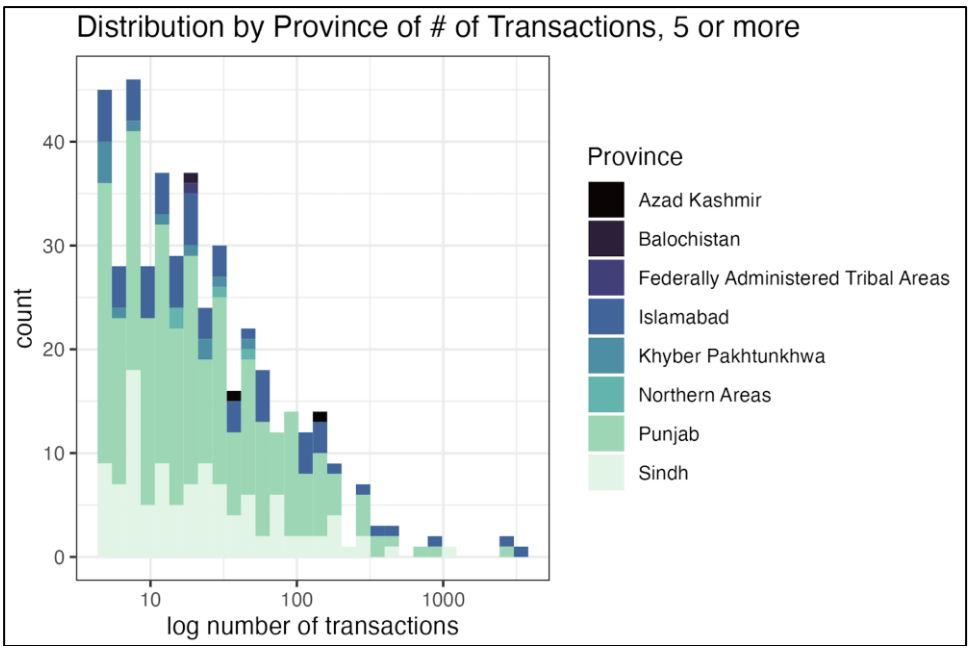
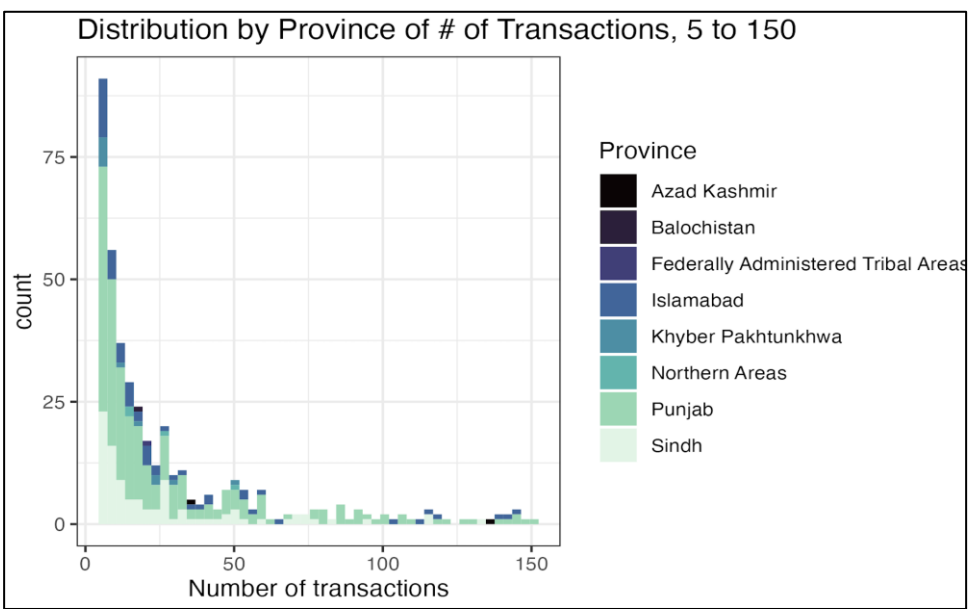


Figure 16b: Distribution by Province of Number of Transactions, 5 to 150



Source: Authors' calculations based on data from Guru.com

Figure 17a: Earnings in the Previous Year (2023), log scale

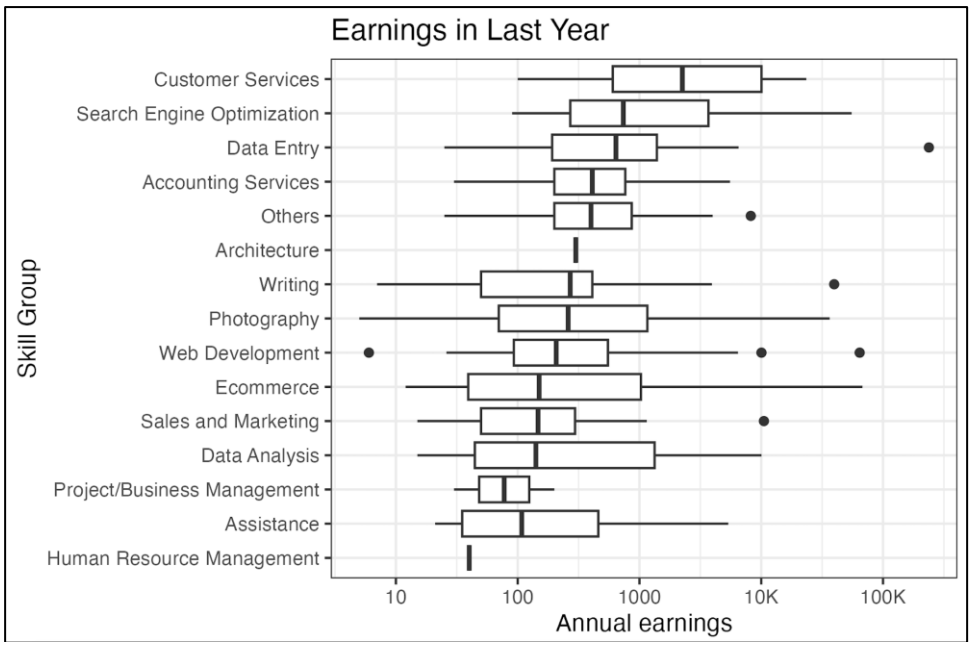
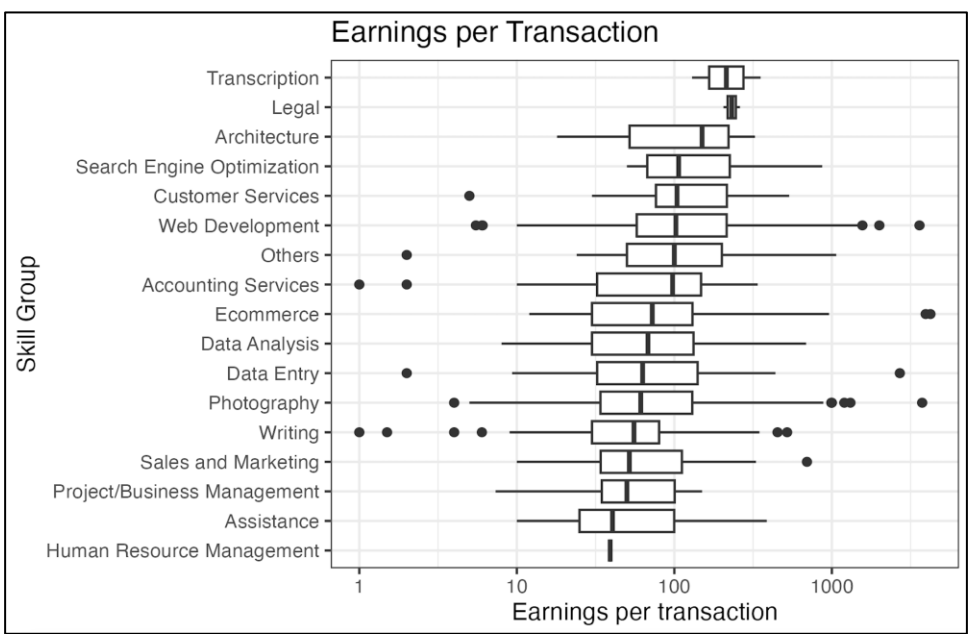


Figure 17b: Earnings per Transaction, log scale



Source: Authors' calculations based on data from Guru.com

Figure 18a: Gender and Skills of Freelancers on Guru.com

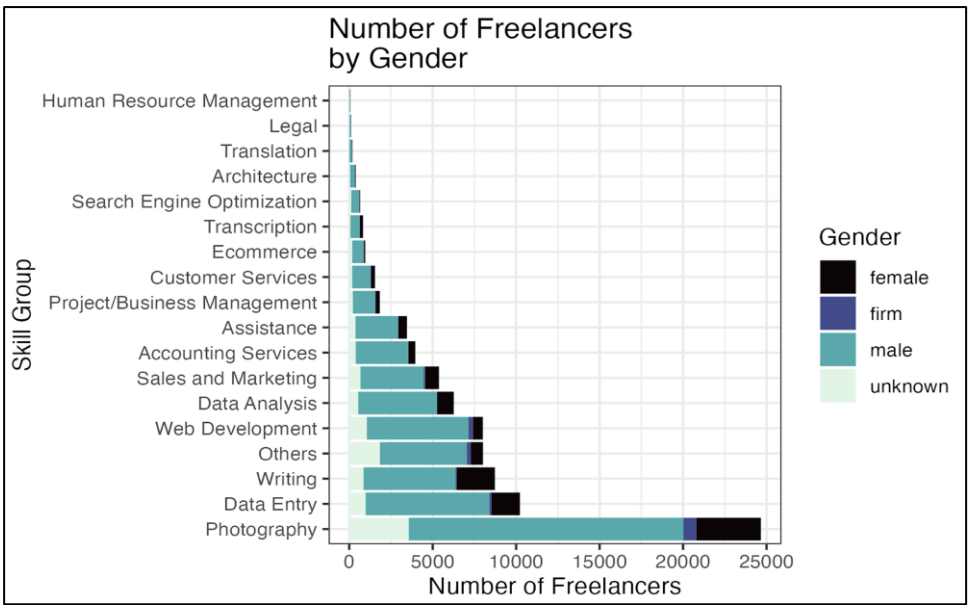
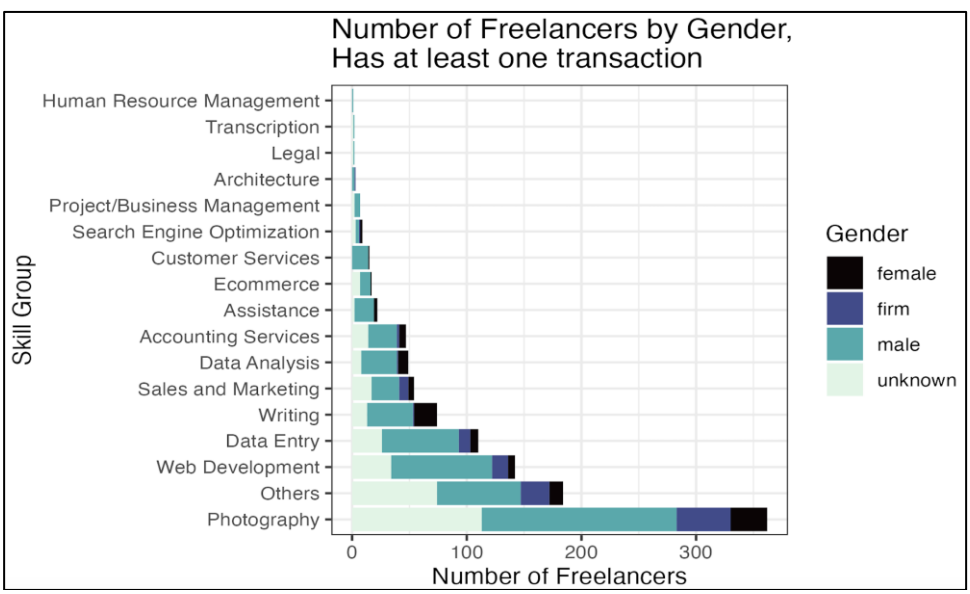


Figure 18b: Gender and Skills of Freelancers with Any Transactions on Guru.com



Source: Authors' calculations based on data from Guru.com

Figure 19a: Annual Earnings (2022) by Gender on Guru.com

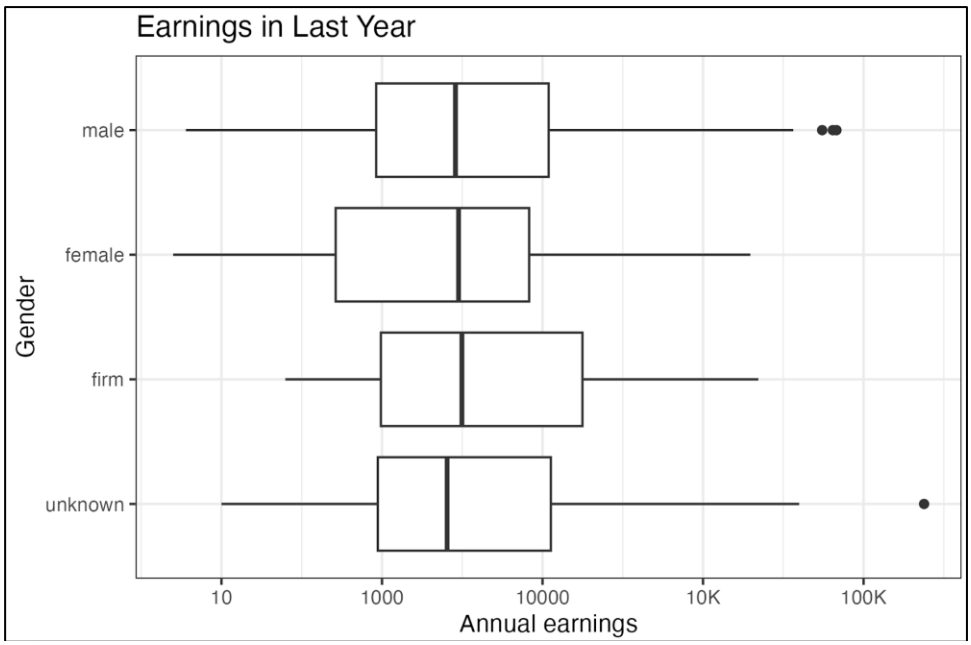
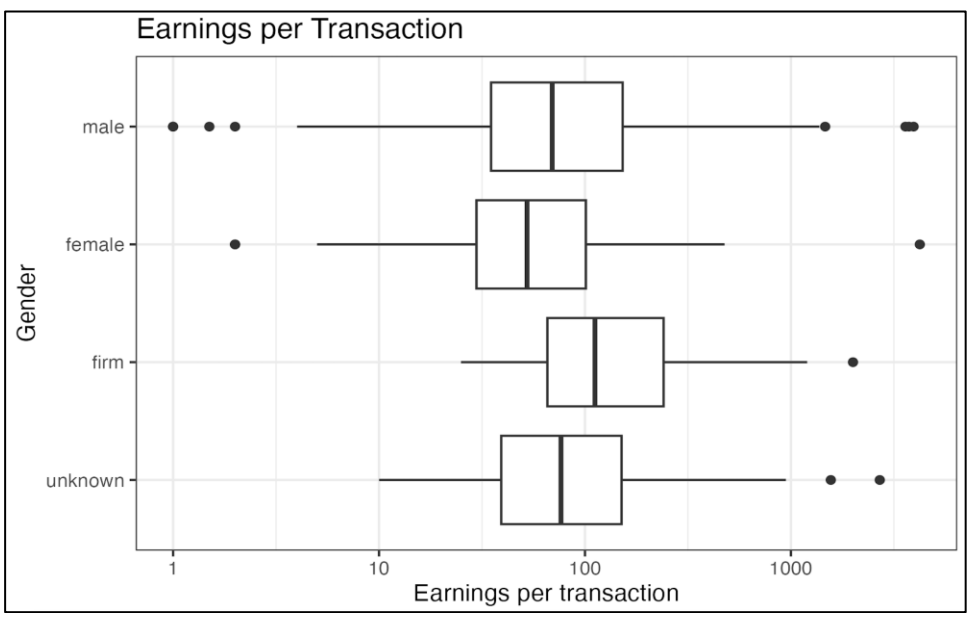


Figure 19b: Earnings per Transaction by Gender on Guru.com



Source: Authors' calculations based on data from Guru.com

5

Access to Foreign Markets: An Analysis of the Pak-China FTA

Nida Jamil*, Theresa Chaudhry & Azam Chaudhry*****

Abstract:

This study analyzes the impact of the Pakistan-China Free Trade Agreement (FTA) on Pakistan's textile industry, summarizing the work of Jamil, Chaudhry, & Chaudhry (2021,2023). Using firm-level data from the Census of Manufacturing Industries in Punjab, Pakistan from 2000, 2005, and 2010, we examine changes in productivity, quality, input usage, product mix, prices, and markups for textile firms before and after the FTA implementation. While the FTA led to small productivity and quality gains for exporting firms (6-8% and 1-2%, respectively), these gains were limited primarily to the spinning segment, which received the largest tariff reductions. Exporting firms increased labor and material inputs but did not significantly increase capital investment. They also reduced their product scope and lowered prices more than marginal costs fell, resulting in decreased markups. We estimate demand elasticities for different textile segments, finding that interior and clothing segments are the most elastic, suggesting potential for increased market share if given greater access. Finally, we find evidence of positive productivity and quality spillovers from exporting to nearby non-exporting firms, particularly for upstream producers. Overall, our results indicate that while the FTA increased trade flows, it did not substantially improve productivity or competitiveness for Pakistani textile firms in the short term.

Introduction

Pakistan's economy has been struggling in recent years with high inflation, energy shortages, and consumption-led growth. Notably, for the real economy, Pakistan has missed the industrial targets for the current year, and the global pandemic has

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further exacerbated these challenges. Conversely, the economy's Current Account recorded a surplus for the first time in 17 years. Remittances from overseas diaspora workers experienced a record-high growth rate of 29% from July to April 2021. Moreover, the Pakistan Stock Exchange market earned the title of the best Asian stock market and the fourth best globally performing market in 2020 (Pakistan Economic Survey, 2020-21). While Pakistan has missed its growth targets in the past, these recent developments suggest a potential path toward economic stabilization (see Figure 1).

In this still tenuous situation, one needs to carefully analyze what is happening with the drivers of economic growth, particularly productivity. A vast body of literature focuses on economic policies and their impact on firm productivity, with one critical relationship that is often studied being that between trade and productivity. Our study seeks to contribute to that body of literature undertaking trade-productivity analysis at the firm level. We specifically focus on the Free Trade Agreement (FTA) between Pakistan and China and its impact on textile manufacturers in the Punjab province, Pakistan. Tables 1a-1b below show that while Pakistan exports 9.7% of its total exports to China, it receives 27.1% of its total imports from China, resulting in China being the top importing partnering country for Pakistan (as of 2020-21). Given the large volumes of trade, the Pakistan-China FTA is of great importance for the future of the Pakistani economy.

Table 1a: Major Export Markets of Pakistan (Rs Billion & Percentage Share)

Country	2017-18		2018-19		2019-20		July-March			
							2019-20		2020-201P	
	Rs	% Share	Rs	% Share	Rs	% Share	Rs	% Share	Rs	% Share
USA	400.4	15.7	532.8	17.0	585.4	17.4	471	17.3	593.6	19.7
CHINA	185.7	7.3	259.6	8.3	349.7	10.4	219	8.0	292.9	9.7
AFGHANISTAN	165.2	6.5	176.4	5.6	134.3	4.0	115.6	4.2	126.9	4.2
UNITED KINGDOM	186.7	7.3	226.8	7.3	239.6	7.1	194.7	7.1	245.3	8.1
GERMANY	146.7	5.7	173.4	5.5	199.0	5.9	162.1	5.9	187.7	6.2
U.A.E	104	4.1	125.8	4.0	178.9	5.3	141.6	5.2	118.8	3.9
BANGLADESH	81	3.2	101.8	3.3	102.6	3.0	91.8	3.4	126.9	4.2
ITALY	84.5	3.3	107.4	3.4	115.0	3.4	92.4	3.4	92.6	3.1
SPAIN	104.5	4.1	126.5	4.0	130.3	3.9	109.2	4.0	108.1	3.6
FRANCE	45.5	1.B	53.9	1.7	57.7	1.7	44.8	1.6	49.8	1.6
All Other	1,050.8	41.1	1,243.8	39.8	1,277.3	37.9	1,083.0	39.7	1,077.7	35.7
Total	2,555.0	100.0	3,128.2	100.0	3,369.8	100.0	2,725.2	100.0	3,020.3	100.0

Table 1b: Major Import Markets of Pakistan (Rs Billion & Percentage Share)

Country	2017-18		2018-19		2019-20		July-March			
							2019-20		2020-21 P	
	Rs	% Share	Rs	% Share	Rs	% Share	Rs	% Share	Rs	% Share
CHINA	1,731.8	25.9	1,734.3	23.3	2328	33.1	1,267.2	23.6	1,725.8	27.1
UAE	893.3	13.3	1020.1	13.7	812.7	11.6	759.7	14.1	602.2	9.4
SAUDI ARABIA	356.4	5.3	401.3	5.4	273.6	3.9	286.2	5.3	301.9	4.7
KUWAIT	159.7	2.4	185.8	2.5	178.7	2.5	133.8	2.5	167	2.6
INDONESIA	278.5	4.2	327.3	4.4	339.6	4.8	245.5	4.6	360.6	5.7
INDIA	207.5	3.1	204.8	2.8	59.9	0.9	154.8	2.9	38.3	0.6
U.S.A	316.4	4.7	368.9	5.0	396.7	5.6	259.5	4.8	351.1	5.5
JAPAN	266.5	4.0	246.1	3.3	174.7	2.5	188.0	3.5	173.8	2.7
GERMANY	146.4	2.2	142.6	1.9	124.2	1.8	105.4	2.0	122.2	1.9
MALAYSIA	132	2.0	145.5	2.0	148.3	2.1	103.0	1.9	134.3	2.1
All Other	**2,206.5**	33.0	**2,666.5**	35.8	**2,193.4**	31.2	**1,867.9**	34.8	**2,400**	37.6
Total	**6,695**	100.0	**7443.3**	100.0	**7,029.8**	100.0	**5,371.1**	100.0	**6,377.2**	100.0

Source: Pakistan Economic Survey 2020-21

Background of the Free Trade Agreement (FTA) between Pakistan and China

China and Pakistan initiated a tariff reduction process on bilateral exports in the early 2000s, culminating in the signing of the Pakistan-China Free Trade Agreement (FTA) in 2006. This led to further tariff reductions over a five-year period. As a result of this decade-long process, total trade between the two countries increased by more than threefold, solidifying China's position as Pakistan's second-largest import partner (Xin et al., 2014). Negotiations for the second phase of the FTA commenced in 2013, with both countries proposing to reduce tariffs on approximately 90 percent of products. Figure 1a illustrates a gradual decline in tariff rates for all five segments of the textile sector. Concurrently, Figure 1b demonstrates a similar decrease in Chinese tariffs on textile imports from ASEAN countries, which posed significant competition to Pakistani textile exports to China. The most substantial reduction in Chinese tariffs on Pakistani textile exports occurred during the 2001-2005 period, followed by more modest changes from 2005 to 2010. While tariffs decreased across all categories, China's concessions to Pakistan were more substantial in the lower-value-added sectors, such as spinning, and less generous in the higher-valued-added clothing and garment sector. Figure 1b reveals a similar trend in China's tariffs on textiles from ASEAN countries, with a steep decline from 2001 to 2005 and a near-zero level by 2010. Despite the FTA, Pakistani exports faced a relative disadvantage in the Chinese market, particularly in the higher value-added sectors, by the end of the study period.

While lower tariffs facilitated trade between Pakistan and China, Pakistan's imports from China grew significantly faster than its exports despite concessions

granted to the textile sector. This resulted in a deteriorating trade balance (see Figure 2). As illustrated in Figure 3, only the spinning segment experienced a notable increase in exports. Chaudhry et al. (2017) conducted a preliminary analysis of the Pakistan-China FTA's impact on firms. Their findings revealed that even in sectors where Pakistan gained greater market access due to China's reduced tariffs, value-added decreased despite increases in Pakistan's exports and employment.

Table 2: China's Segment Wise import partner rank

Segment	China's #1 Import Partner	Share in China's segment import: China's #1 Import Partner	Pakistan's rank as China's Import Partner	Share in China's segment import: Pakistan
Spinning	Vietnam	36.62	3rd	15.87
Finishing	Japan	29.99	9th	1.7
Interior	European Union	16.52	8th	6.17
Clothing	European Union	21.87	13th	1.14
Technical	European Union	23.93	37th	0.01

Source: United Nations Comtrade Trade Data

Table 2 presents China's top import partners and their respective shares in the five textile segments. The table reveals that Pakistan is not China's preferred import destination in any of these segments. While Pakistan ranks among the top five import countries for spinning—the least protected segment for China, with approximately 16% of China's total imports—this share is considerably lower than that of its top exporting partner, Vietnam (36.62%). Pakistan fails to rank among China's top import destinations in the remaining import segments. The technical segment appears to be Pakistan's worst-performing segment, as it ranks as China's 37th import destination choice, accounting for merely 0.01% of China's total technical segment imports.

During the study period, Pakistan faced several challenges in the post-FTA environment, including a deteriorating law and order situation, which began with the assassination of former Prime Minister Benazir Bhutto in December 2007, followed by a series of terrorist attacks on major targets, including the Lahore High Court, and the visiting Sri Lankan national cricket team, in 2009. In 2010, floods devastated parts of Pakistan, including Southern Punjab, a major cotton-growing region. The floods and other significant weather events contributed to a surge in cotton prices in 2010, substantially increasing the principal raw material costs for the textile sector. Furthermore, firms faced widespread electricity outages, with 75 percent citing energy supply as a major constraint to growth, as documented in the World Bank Enterprise Survey (Bacon, 2019). Given the seemingly limited export expansion in the post-FTA period and other serious challenges faced by

firms, our research examines the potential impacts of the Pakistan-China FTA on the Pakistani textile sector.

Data Sources

Census of Manufacturing Industries (CMI) Punjab, Pakistan

The primary source of our firm-level data is the Census of Manufacturing Industries (CMI), a federal census of Pakistani manufacturers administered every five years by the provincial statistical bureaus. This comprehensive survey collects detailed information on a firm's revenues, input quantities and prices, employment and labor costs, capital stock measures, material inputs, and costs (including energy and administrative costs). Using data from three waves of the CMI conducted in 2000, 2005, and 2010, we constructed an unbalanced panel dataset for firms located in the province of Punjab.

We have narrowed our analysis to the textile sector, Pakistan's largest manufacturing and export industry. Following De Loecker's (2011) classification, we divided the textile sector into five segments: (i) Finishing (ii) Spinning, (iii) Interior, (iv) Clothing, and (v) Technical. Within each of these segments, there are product groups (sub-segments); within those product groups, there are individual products, which can have multiple varieties.

The products available in the CMI data were initially coded using the Pakistan Standard Industrial Classification (PSIC) codes based on International Standard Industrial Classifications (ISIC) codes. To align with international databases, we first converted these PSIC codes into relatable ISIC codes. Then we linked them to convertible Harmonized System (HS) codes using the conversion codes provided by the United Nations International Trade Statistics. This conversion process ensured comparability with international data, primarily relying on HS product coding.

A key advantage of our dataset compared to much of the existing literature is its inclusion of both price and physical output data at the product level. This enables us to address the omitted price bias that can occur when relying on sectoral deflators. Moreover, we also observe the product mix for each firm in each of the study years.

As shown in Table 3, firms have evolved significantly from 2000 to 2010. Initially, they tended to produce multiple varieties of a single product within a single segment. By 2005, they had diversified into multiple products while remaining primarily single-segment. However, by 2010, firms had adopted a multi-product, multi-segment strategy.

Concurrently, the average number of different product varieties per firm has decreased. In 2000, firms produced an average of eight different varieties (with a maximum of 22 varieties), while this number had fallen to three by 2010.

Table 3: Characteristics of Sample Firms from the CMI 2000-01, 2005-06, and 2010-11

	Pre FTA		Post FTA
	2000	**2005**	**2010**
Multi-Segment firms	1.7%	5.70%	17.80%
Multi-Product firms	3%	22%	17%
Average number of varieties (differentiated products)	8	4	3
Total Number of firms	433	366	378

Source: Authors' calculations based on CMI Punjab 2000-01, 2005-06, 2010-11.

Table 4 illustrates the evolving distribution of firms across different textile segments from 2000 to 2010. Over this decade, a significant shift is evident. For instance, the proportion of firms operating in the Interior segment increased from a mere 3% in 2000 to over 20% in 2010. Similarly, the share of firms in the Finishing segment rose from less than 10% to more than 25%. These findings challenge the assumption that firms maintain a static product portfolio and segment focus over time. Our sample suggests a more dynamic reality.

Table 4: Segment-wise composition of firms (%)

	Pre-FTA		Post-FTA
	2000	**2005**	**2010**
Spinning	59.53	48.99	36.47
Clothing	25.3	30.39	25.91
Interior	3.00	9.76	21.21
Technical	10.63	7.37	4.00
Finishing	5.40	9.21	26.50

Source: Authors' calculations based on CMI Punjab 2000-01, 2005-06, 2010-11.

World Trade Organization (WTO) Tariff Data

We utilize the World Trade Organization's (WTO) Tariff Analysis Online to extract product-level tariff data from the Integrated Database (IDB). This database provides detailed information on applied tariffs, country imports, and the Consolidated Tariff Schedules (CTS). The CTS includes member countries' commitments on maximum tariffs and annual country- and product-specific tariff rates.

For the tariffs, we create a composite variable of tariffs at the firm level by aggregating the product-level tariffs based on the products produced by firm i at time t,

$$tariff_{it} = \sum a_{jit}\, \tau_{jt}$$

where the tariff rate faced by firm *i* at time *t* ($tariff_{it}$) is an aggregation of the tariff rates imposed on product *j* at time *t* (τ_{jt}) produced by the firm. The tariff rates are added up after weighing the product-level tariff rates according to the revenue share of product *j* in the production mix of the firm *i* at time *t* (a_{jit}).

UN Comtrade Trade Data

We utilize the UN Comtrade database to construct total segment-specific output. This comprehensive international trade statistics database, maintained by the United Nations, contains over 3 billion data records for approximately 170 countries since 1962. It provides detailed trade statistics based on product categories and trading partners. We employ this data to estimate China's market size across the five textile segments.

Discussion and Policy Implications

We begin by presenting elasticity estimates for the five Chinese market segments. Subsequently, we analyze the impact of the Pak-China FTA on firm-level productivity, quality, input usage, and product mix. We then examine how firms adjust their markups and marginal costs in response to the FTA. Finally, we discuss the potential productivity and quality spillover effects from exporters to non-exporters, considering their level of supply chain integration.

Segment Wise Elasticity

We employ De Loecker's (2011) methodology to estimate the demand elasticity of Pakistani goods in the Chinese market. This approach underscores the importance of understanding both supply-side and demand-side factors for firm growth. By identifying the textile industry's elastic segments, policymakers can prioritize products for tariff negotiations, thereby enhancing market access and competitiveness.

Table 5: Elasticity of Demand of the Textile Industry (Segment Wise)

Industry	**-5.55**
Spinning	-2.50
Finishing	-1.25
Clothing	-4.00
Technical	-1.82
Interior	-7.14

Table 5 reveals an overall elasticity of -5.55 for the textile industry, indicating price sensitivity. Interestingly, the least protected segment, spinning, is not the

most elastic. Instead, Interior and Clothing segments exhibit the highest elasticities of -7.14 and -4.00, respectively. This suggests that the Pakistani government should prioritize tariff reduction negotiations for Interior and Finishing segments (and their respective products) to maximize market share gains in China.

Impact of the Pak-China FTA on firm-level productivity and quality

Table 6 presents the impact of the Pak-China FTA on firm-level productivity and quality, estimated using the methodologies of De Loecker et al. (2016) and Khandewal (2010), respectively (Jamil et al., 2022). The FTA led to a 6-8% increase in productivity, with the most significant gains observed in the least protected Spinning segment. However, the impact on quality was more modest, with a 1-2% increase, again primarily benefiting the Spinning segment. While the Pak-China FTA has positively influenced productivity and quality, the magnitude of these effects is relatively limited, aligning with findings from other countries' FTAs.

Table 6: Pakistan-China FTA's Tariff Changes on Firm-level Productivity and Quality in Pakistan's Textile Sector

Panel A: Impact of Firm Productivity				
	Industry	***Spinning***	***Finishing***	***Clothing***
Net Impact of FTA	0.0604	0.0868	Insignificant	Insignificant
Panel B: Impact on Product Quality				
	Industry	***Spinning***	***Finishing***	***Clothing***
Net Impact of FTA	0.0184	0.0232	Insignificant	0.0083

Note: Results adapted from Table 3a in Jamil et al. (2022).

Firm-level adjustments as a result of the Pak-China FTA

Table 7 below shows that the firms exporting to China respond to the Pak-China FTA by increasing the use of labor and materials, as reported by Jamil et al. (2022). However, they did not significantly increase capital accumulation, as evidenced by the insignificant coefficient of 0.1266. This contrasts with other studies that often associate exporting with upgrading. Our findings suggest that, at least for our sample, exporters to China did not engage in substantial investment. Wadho & Chaudhry (2018) further support this observation, noting that innovation activities in the Pakistani textile sector were primarily concentrated among exporters to Europe and the U.S. during a later period.

Table 7: Impact of Tariff reduction on inputs on Firms Exporting to China

	Capital	**Labor**	**Materials**
Exporter to China	0.1266	0.1095*	0.2509**
	(0.0960)	(0.0633)	(0.1128)

Note: Results adapted from Panel B of Table 5 in Jamil et al. (2022).

Table 8 (Jamil et al., 2022) reveals that firms exporting to China not only adjusted their input usage but also streamlined their product mix. These firms reduced their product offerings by approximately half, limiting their segment participation. This suggests that the Pak-China FTA significantly impacted firms' product strategies, leading to a narrower product scope.

Table 8: Impact of Tariff changes on number of products and segments on Firms Exporting to China

	Number of Products	Number of Segments
Exporter to China	-0.5602**	-0.0139
	(0.2662)	(0.0171)

Note: Results adapted from Panel B of Table 6 in Jamil et al. (2022).

Markup, Marginal Cost and Prices of Firms

In this subsection, we examine the impact of the free trade agreement on the pricing, marginal costs, and markups of exporting and non-exporting firms. We can gain insights into their strategic responses by analyzing how firms adjusted markups and utilized tariff reductions to capture a larger market share. Garcia-Marin & Voigtländer (2019) found that Chilean firms, in response to tariff reductions by export partners, primarily reduced prices and marginal costs while maintaining relatively stable markups, effectively passing on savings to consumers in export markets.

To investigate these dynamics, we analyze the evolution of marginal costs and markups in response to the FTA. Employing the system GMM and GNR techniques, we estimate output elasticities within the De Loecker & Warzynski (2012) framework to calculate firm-level markups and marginal costs (Jamil et al., 2023).

Table 9: Impact of Tariff reductions on Product Markup, Prices and Marginal Cost by Export Status

	Markup	Prices	Marginal Cost
Exporters to China	-0.0882***	-0.1658***	-0.0776***
	(0.0060)	(0.0103)	(0.0126)

Note: Results adapted from Panel B of Table 4 in Jamil et al. (2023).

Table 9 demonstrates that firms exporting to China exhibit lower marginal costs, consistent with productivity improvements. These firms also reduce prices to a greater extent than their marginal cost reduction, suggesting intense

competition in the Chinese market. Consequently, the overall markup for exporters to China declines post-FTA.

Spillover Effects from Exporters to Non-Exporters

We investigate the impact of the Pak-China FTA on non-exporting firms in Pakistan. By leveraging our data on firm locations, we examine whether the presence of higher-productivity exporters within a 5 km radius influences the productivity of non-exporting firms. We categorize exporters as upstream, downstream, or horizontal based on their product relationship with non-exporting firms (Figure 4). For instance, if a non-exporter specializes in finishing, spinning exporters within the 5 km radius are classified as *upstream*, while interior, clothing, or technical textile exporters are considered *downstream*. Exporters in the same segment (finishing) are categorized as *horizontal*.

Table 10 (Jamil et al., 2022) presents the results of the spillover analysis for productivity and quality. Panel A indicates that non-exporters experience increased productivity when located within 5 kilometers of more productive upstream exporters, with the effect being more pronounced for closer proximity. This finding contrasts with Linarello (2018), which suggests that non-exporters benefit from the presence of downstream exporters.

Panel B of Table 10 reveals that non-exporters' product quality improves when they are located within 5 kilometers of higher-quality upstream exporters. This suggests that quality gains among upstream exporters, who may supply inputs to non-exporters, positively impact the quality of non-exporters' output. This finding aligns with Bajgar & Javorcik's (2020) observation that the presence of upstream multinational firms is associated with higher-quality exports. However, the presence of higher-quality horizontal exporters (neither upstream nor downstream) within a 5-kilometer radius is negatively associated with non-exporters' quality, potentially due to increased competition for labor or materials.

Table 10: Productivity and Quality Spillovers of Exporters to Non-Exporters in Pakistan's Textile Sector

Panel A: Productivity of Non-Exporters Post FTA	
	Within 5 KM
Post-FTA Productivity of Exporters classified as:	
Upstream Firms	0.3239***
	(0.0527)
Downstream Firms	-0.0029
	(0.0197)
Horizontal Level Firms	-0.0432
	(0.0442)

Panel B: Quality of Non-Exporters Post FTA	
	Within 5 KM
Post-FTA Quality of Exporters classified as:	
Upstream Firms	0.0727***
	(0.0105)
Downstream Firms	-0.0331
	(0.0207)
Horizontal Level Firms	-0.0259**
	(0.0128)

Note: These results appeared in Table 7, Jamil et al. (2022).

Conclusion

This study investigates the impact of the Pak-China Free Trade Agreement (FTA) on the Pakistani textile industry. We find that while the FTA primarily focused on the least protected Spinning segment, the Interior and Finishing segments, with their higher elasticity and potential for quality differentiation, offer greater revenue generation opportunities. Despite the FTA, Pakistani textile manufacturers received limited benefits, particularly in terms of productivity and quality gains, due to factors such as constrained capital accumulation and competition from ASEAN exporters. These findings underscore the need for policymakers to adopt a more nuanced approach to future trade agreements, focusing on segments with higher growth potential and addressing the specific challenges Pakistani firms face.

We also find evidence of firms exporting to China reducing their product offerings by half, reducing their product scope. Moreover, our analysis shows that while marginal costs did fall for firms exporting to China, prices fell more due to Pakistani firms' competition within the Chinese market. As a result, the overall markups of the exporting firms fell. Finally, while the impact on Pakistani exporters was small, we find evidence of productivity and quality spillovers from exporting to non-exporting firms located nearby. Overall, we conclude that developing countries that enter into these agreements may experience increases in trade flows due to lower tariffs but may not necessarily see significant improvements in productivity and competitiveness in the short term.

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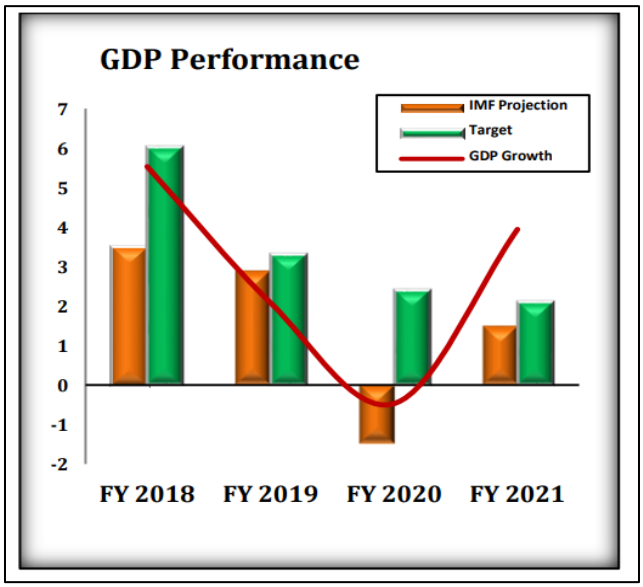
Appendix

Figure 1



Source: Pakistan Economic Survey 2020-21.

Figure 1a: China's Segment-wise Tariff Rates facing Pakistani Firms

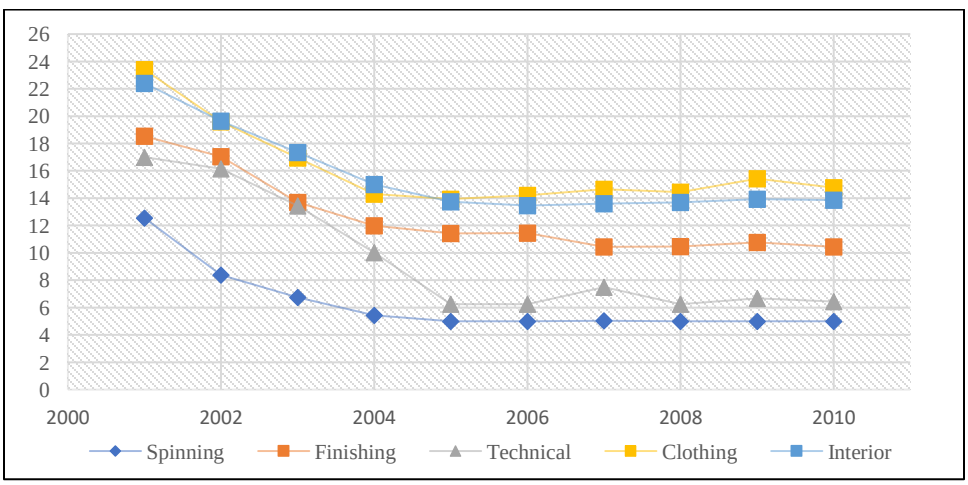
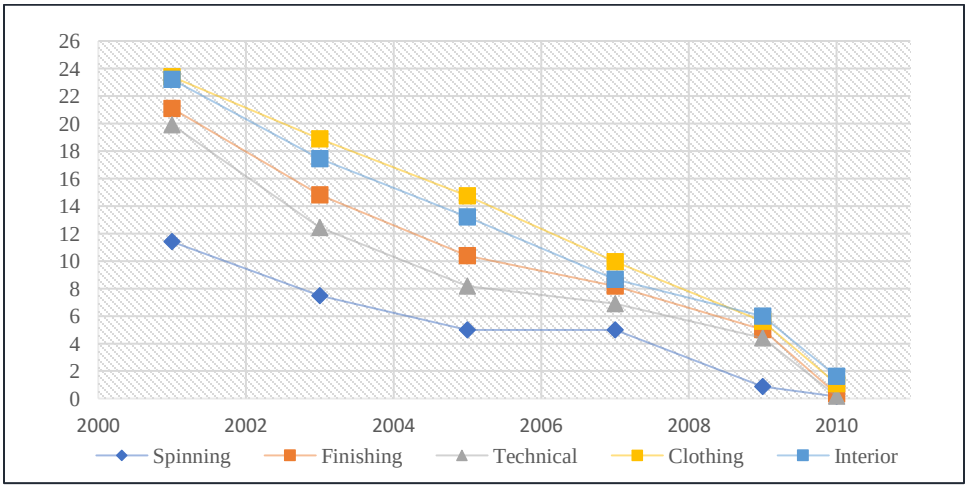


Figure 1b: China's Segment-wise Tariff Rates facing ASEAN Firms



Source: World Trade Organization (WTO) Tariff Analysis

Figure 2: Trade Flows between Pakistan and China ($US Billions)

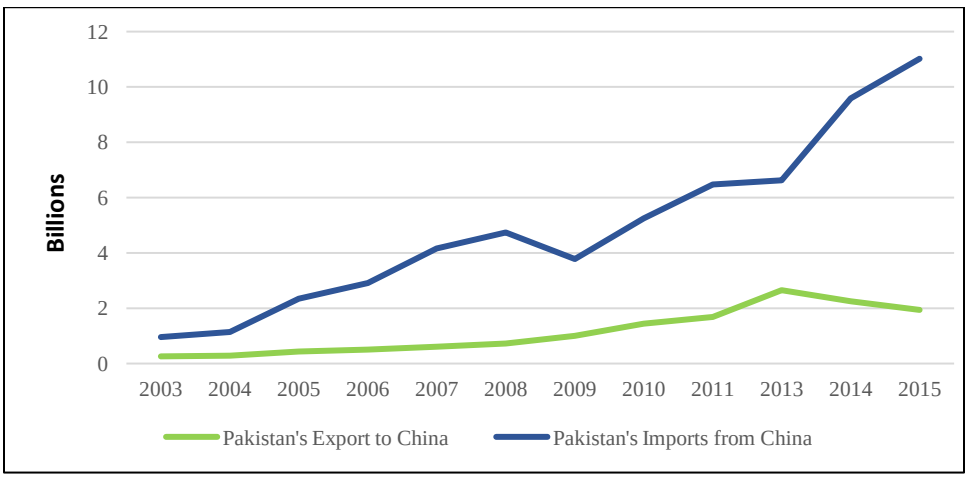


Figure 3: Pakistan's Segment Wise Exports to China ($US Millions)

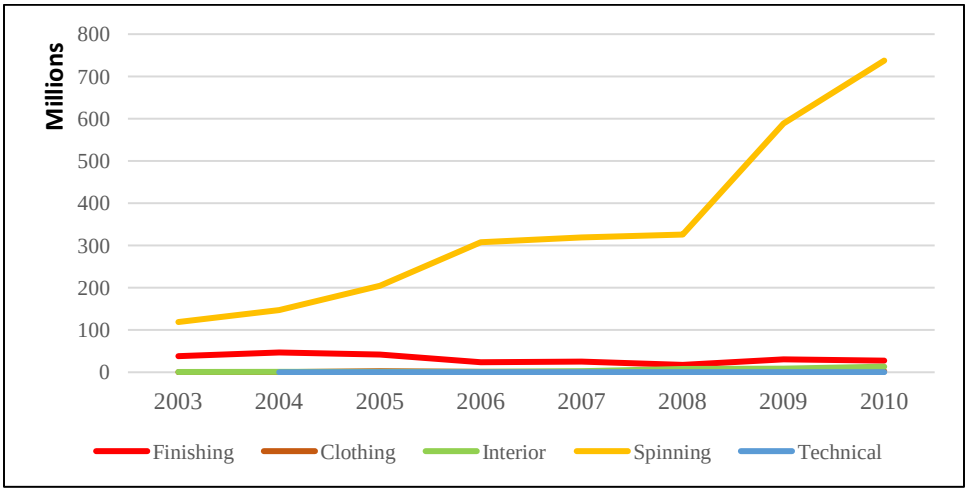
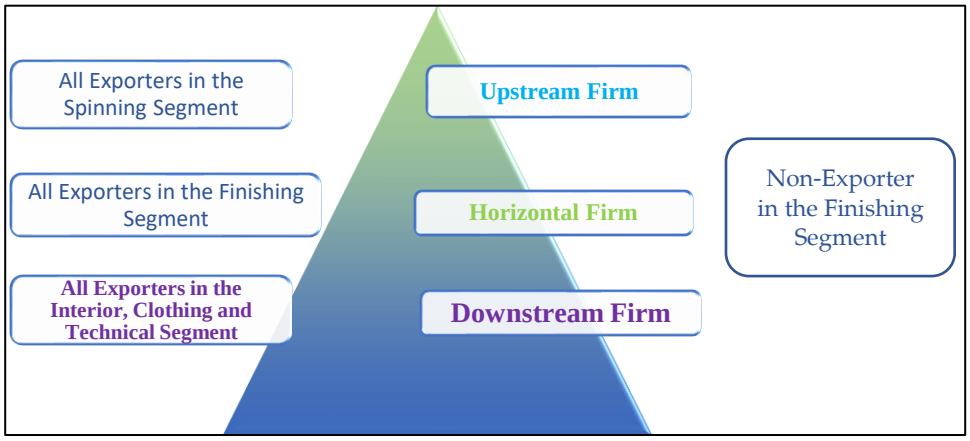


Figure 4: Upstream, horizontal and downstream firms for a non-exporter in the finishing segment



6

16th International Conference on Management of Pakistan's Economy Monetary Policy in the time of Corona: Lessons from Pakistan*

Murtaza Syed and Naved Hamid*****

Abstract

The paper examines the performance of Pakistan's monetary policy during the COVID-19 pandemic (2020-2022), a period that ended with a serious balance-of-payments crisis, precipitous decline in foreign exchange reserves and soaring inflation. The initial policy response to the COVID-19 pandemic, well-coordinated fiscal and monetary policy, proved relatively favorable for Pakistan's economic performance. However, by end-FY2022 the country was in deepening economic distress because monetary policy effectiveness was undermined by internal and external shocks, namely the Russia-Ukraine War and internal political turmoil, and the situation was exacerbated by unplanned fiscal expansion and unwarranted delays in IMF program. In this context, the paper discusses possible explanations for Pakistan's economic crisis, evaluates the role of monetary policy in this crisis, and offers recommendations for future policymakers. It concludes that even if monetary policy had been tightened earlier and more aggressively, and the unconventional stimulus injected into the economy had been smaller, it is doubtful that SBP could have single-handedly prevented the economic crisis. The main lessons that are derived for policy makers are that there is a need for significantly better real-time economic data to counter the increasing complexity of the challenges posed; SBP should maintain a healthy degree of skepticism and caution regarding fiscal projections by the Ministry of Finance, especially during times of political stress such as the national elections; SBP must recognize that the

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exchange rate can be extremely volatile when international reserves fall below a certain minimum level, which can impact domestic inflation significantly, and it should be extremely conservative in its assessment of expected capital inflows; and finally, it should be aware that supply shocks can evolve into more persistent issues, especially if they are recurrent and prolonged.

Introduction

This paper assesses the performance of Pakistan's monetary policy during the COVID-19 pandemic (2020-2022). Upon conclusion of the period under review, Pakistan was confronted with a severe balance-of-payments crisis, coupled with the highest inflation rate in 50 years, alongside the depletion of foreign reserves to near-zero levels, all indicating a period of economic failure. Therefore, it could be argued that the performance of the State Bank of Pakistan (SBP) deserves an "F".

However, the reality is more complex. Monetary policy faced unprecedented challenges: multiple waves of the COVID-19 pandemic, a commodity super-cycle triggered by the Russia-Ukraine war, and Pakistan's worst political turmoil since 1971. These external shocks, coupled with poor fiscal management, explain why Pakistan has ended up where it presently finds itself. In this context, monetary policy is just one part of a larger problem.

This paper offers a practitioner's perspective on the macroeconomic developments during the first three years of the COVID-19 pandemic. Arguing that Pakistan initially managed the COVID-19 pandemic well compared to other countries, with a supportive monetary policy contributing to declining inflation and a cautious fiscal policy due to high debt. However, within a year, a balance of payments crisis emerged. We therefore ask three main questions.

1) What went wrong and how did Pakistan end up in its current economic predicament?
2) How did monetary policy contribute to the current situation?
3) Finally, what lessons can be drawn from this experience for improved monetary policy decisions during economic shocks in the future?

A Brief Recap of the COVID-19 Shock and the Policy Response

Let us begin with an overview of the COVID-19 pandemic period. In response to the unprecedented COVID-19 shock, the macroeconomic policy response was well-coordinated in fiscal years (FY) 2020 and 2021. Monetary policy was aggressively eased as inflation and the current account deficit declined sharply, while fiscal policy focused on consolidation due to high public debt levels.

Figure 1a (see Appendix) illustrates a pronounced decline in the current account deficit following the onset of the COVID-19 pandemic in April 2020. Notably, a surplus was recorded in the third quarter (July to September 2020) due to a drop in commodity prices. A dramatic drop in inflation is also observed simultaneously, explained by the decline in growth and plummeting commodity prices. This allowed for a policy rate cut, which was brought down from 13.25% to 7%, in a short duration of three months, making it SBP's initial response to the COVID-19 shock.

Figure 1b (see Appendix) also illustrates a well-coordinated fiscal and monetary policy response. A declining primary deficit is observed during FY2020 and 2021, indicating fiscal consolidation. This fiscal consolidation, coupled with an easing monetary policy, depicted in the declining interest rates provided the economy the support it needed in the aftermath of COVID-19 shock.

SBP also eased several regulations and refinancing facilities to bolster faltering growth during the COVID-19 pandemic. These unconventional monetary policy measures, similar to those adopted by other central banks globally, post-COVID-19, aimed to support the economy. One of these notable SBP measures currently garnering significant attention, is the Temporary Economic Refinance Facility (TERF). This facility offered refinancing to investors committed to establishing factories in Pakistan, which resulted in injecting approximately 1% of GDP into the economy. TERF has been controversial due to concerns that short-term measures alone were insufficient to address the COVID-19 shock, since its complete impact would materialize in the medium to long term. Further controversy arose from the perception that TERF contributed to the recent surge in imports. We revisit this later in the paper, but what is imperative to note is that SBP's response involved more than just interest rate cuts (see Figure 2, Appendix). To counter the COVID-19 shock, SBP injected approximately 5% of GDP into the economy through various monetary stimulus measures.

This initial phase of the COVID-19 pandemic was characterized by a positive trajectory for Pakistan's economy. Commendable containment measures by the health authorities coupled with effective macroeconomic policies, resulted in a relatively modest contraction of approximately 1% of GDP in 2020 (see Figure 3a, Appendix), compared to other countries. Subsequently, Pakistan demonstrated remarkable resilience, showing a robust economic recovery in 2021, as depicted in Figure 3b (see Appendix).

Another positive development observed was the strengthening of Pakistan's international reserves, traditionally a point of vulnerability. As illustrated in Figure 4 (see Appendix), gross international reserves surged from approximately US$5 billion to US$15 billion between June 2019 and June 2021. This improvement is even more pronounced when considering the simultaneous decline in forward

liabilities. Consequently, net reserve buffers shifted from a negative position in June 2019 to a positive one in June 2021, signifying a dramatic improvement in the external position.

Pakistan also deserves commendation for reducing its government debt-to-GDP ratio by over 5% between 2019 and 2022 through fiscal consolidation. This stands in contrast to the debt accumulation experienced by most countries, both developed and developing, whose debt levels surged between 5% and 25% of GDP, post-COVID-19. (see Figure 5, Appendix).

The COVID-19 pandemic presented an unprecedented challenge with multiple waves. Consequently, SBP had to unwind its loose monetary policy stance, commencing this process in September 2021 (FY2022). Compared to other countries, SBP's policy tightening was relatively swift (see Figure 6, Appendix). While a few countries like Brazil initiated tightening earlier (March 2021), most followed suit later (for example, Egypt in March 2022 and India in May 2022). However, the emergence of unforeseen international and shocks, including the Ukraine War, new COVID-19 variants, and internal political instability, complicated the pace and timing of Pakistan's monetary tightening due to their complex implications for growth and inflation.

The preceding analysis provides a context for Pakistan's initial two years of the COVID-19 pandemic, a period marked by commendable performance. However, the current economic landscape presents a different picture. Like many other countries, Pakistan has overshot its inflation target significantly. Figure 7a (see Appendix) illustrates that all advanced economies and approximately 87% of emerging economies, including Pakistan (see Figure 7b, Appendix), exceeded their inflation targets in 2022. Specifically, Pakistan's inflation rate surpassed the midpoint of its 5%-7% target range by 6%.

To provide context, we briefly examine SBP's historical inflation forecasting performance. Figure 8 (see Appendix) shows that SBP's inflation forecasts have generally been accurate, with realized inflation (green line) aligning closely with the forecasted range (red dots and blue area) for most years, including the initial COVID-19 period (FY2021). However, a significant divergence emerged in FY2022, with realized inflation of 12% exceeding the forecasted range of 7%-9%. This trend persisted in FY2023.

While the past two years might be considered outliers, given SBP's strong inflation forecast record five years prior, it is essential to question whether structural changes occurred in FY2022 which directly impacted inflation. One potential explanation could be the discontinuity in the link between international reserves, the exchange rate and inflation. As Pirzada (2024) argued in his paper at this conference, during financial crises, a sharp increase in both current and

expected future default risk becomes a primary driver of inflation. This sudden increase in default risk can undermine the forecasting performance of existing models and weaken the channels through which monetary policy affects the economy.

We now return to our earlier question: Where does Pakistan stand today. Pakistan's current account deficit surged to 4.5% of GDP in FY2022 (see Figure 9a, Appendix). As this deficit widened, Pakistan's foreign exchange reserves plummeted from an all-time high of approximately US$20 billion, in September 2021 (see Figure 9b, Appendix). In summary, the high inflation, expanding current account deficit, and depleted foreign exchange reserves of FY2022 marked a disappointing end to a previously promising two-year period.

What Went Wrong?

In this section, we explore potential explanations for the economic challenges faced in FY2022 through the lens of five theories. It is important to note that these theories may not be mutually exclusive, and the actual situation likely resulted from a combination of factors. Nevertheless, examining each theory individually provides valuable insights into what transpired.

The first potential explanation hints at the possibility that we underestimated the strength of the global rebound from COVID-19 in FY2021 and FY2022, like the rest of the world. Figure 10a (see Appendix) illustrates the global growth forecast performance for 2020, 2021 and 2022 by International Monetary Fund (IMF). In both 2021 and 2022, IMF underpredicted growth, which proved to be significantly stronger, especially in 2021. A similar pattern is observed in international commodity prices including non-fuel commodities and crude oil prices (see Figure 10b, Appendix), where we see actual levels in 2021 and 2022 far exceeded IMF projections. Clearly, the global economic rebound and surge in commodity prices was surprising, leading to unexpected global inflationary pressures, which in turn exacerbated Pakistan's current account deficit. It is imperative to note here that Pakistan's current account deficit is highly sensitive to global commodity prices and GDP growth, particularly when growth surpasses the 4%-5% range.

The second potential explanation introduces some internal factors to complement the external factors discussed above. Both the government and SBP misjudged growth forecasts in Pakistan, as shown in Figure 11 (see Appendix). Figure 11 compares forecasted and actual growth rates for FY2021 and 2022, revealing underestimations in both years. Consequently, the output gap was significantly smaller than SBP predictions during the Monetary Policy Committee (MPC) meetings. While the unprecedented COVID-19 shock contributed to this miscalculation, fiscal policy decisions also played a pivotal role. In FY2022, the budget projected another year of a relatively low primary deficit. However, the

actual primary deficit was nearly four times larger than planned (see Figure 12, Appendix). Consequently, a significant reason for the inaccurate growth forecasts was that fiscal policy proved to be far more expansionary than the budget indicated.

The third potential explanation is that imported inflation significantly contributes to Pakistan's overall inflation, and the rupee's depreciation far exceeded SBP's projections based on exchange rate valuation models and inflation differentials with trading partners. Typically, in the absence of major misevaluations, the exchange rate should align with a country's inflation differential relative to its trading partners, maintaining a relatively stable real effective exchange rate. However, in FY2022, the rupee depreciated dramatically by approximately 29%—while inflation stood at 12% (see Figure 13, Appendix). This depreciation primarily stemmed from severe uncertainty caused by unforeseen delays in IMF program review and political instability in Pakistan (see Figure 14, Appendix).

Consequently, anticipated capital inflows failed to materialize, and speculative or precautionary capital outflows likely occurred through the gray market. This intensified pressure on Pakistan's international reserves as external payments for current account deficits and debt servicing continued despite dwindling inflows. The sharp decline in reserves further impacted the exchange rate, contrary to SBP expectations. Furthermore, in contrast to the assumption of MPC, policymakers were unable to complete the IMF review in time. As a result, the exchange rate and reserves faced unprecedented pressure, subsequently fueling unforeseen inflationary pressures.

The fourth potential explanation is that, in addition to the excessive exchange rate depreciation, monetary conditions were also relaxed due to substantial stimulus injections into the economy through refinance facilities. The share of private sector credit through these refinancing facilities, surged during FY2020-22 (see Figure 15a, Appendix), as the government sought to stimulate an economy still reeling from severe COVID-19 shocks and a stressed private sector. We hypothesize that this contributed to looser monetary conditions, as shown in Figure 15b. While this stimulus might have been justified during a period of fiscal consolidation and a persisting global COVID-19 impact, it could have contributed inadvertently to overheating pressures when fiscal policy unexpectedly expanded in FY2022 (as shown in Figure 12, Appendix).

Finally, the fifth potential explanation is that SBP may have overemphasized the median of inflation expectations, a crucial anchor for monetary policy, while underestimating the dispersion or standard deviation of the distribution. While this is common practice among central banks, recent research advocates also considering the skewness of inflation expectations in response to unusual supply

shocks. In Pakistan, the median indicated reasonably well-anchored inflation expectations throughout the COVID-19 period. However, a less observed dispersion surged in July 2022 and has persisted at a high level since (see Figure 16, Appendix). Retrospectively, greater attention to this dispersion might have signaled the need for swifter and more aggressive monetary tightening, as it suggested a potential transformation of the initial contained supply shock into a more complex issue.

What Role Did Monetary Policy Play?

In the previous section, we outlined some possible explanations for inflation overshooting the expected levels in the last two years.

This naturally leads to some questions regarding the culpability of monetary policy. First, could tightening monetary policy earlier and more aggressively have independently prevented this undesirable outcome. The decision was complicated by multiple waves of COVID-19, which posed risks to growth. What is clear, however, is that more front-loaded and aggressive monetary policy tightening would have lowered growth and increased unemployment. Overdoing it could have even precipitated a recession. Inflation would have been arguably lower, but the extent is uncertain, given the simultaneous fiscal expansion and unprecedented exchange rate depreciation due to political uncertainty and prolonged IMF review delays. The point is, while inflation might not have been as high, it is doubtful that SBP could have single-handedly prevented the economic crisis and achieved the inflation target solely through monetary policy tightening.

The second crucial question is: what if the unconventional stimulus of 5% of GDP injected into the economy by SBP had been smaller. The key point is that SBP was attempting to maintain a delicate balance amidst a highly uncertain shock and anticipated fiscal consolidation. Without that support, COVID-19 would have had a far more severe economic impact. However, it could also be argued that once it became apparent that COVID-19 was not affecting Pakistan's economy as severely as feared, perhaps the policy support should have been tapered off sooner.

In this context, the appropriate size, duration, and modalities of unconventional support in an economy like Pakistan deserve deeper exploration in future research. Should measures such as the TERF be repeated in the future? How should it be modified? What level of forward guidance about the future trajectory of monetary policy is suitable for a vulnerable emerging market like Pakistan? These are promising avenues for further discussion and research.

Conclusion: Potential Lessons for Future Monetary Policy Decision-Making

Where does this all lead us? We have argued that monetary and fiscal policies were well-coordinated in the two years following the unprecedented COVID-19 shock, combining monetary stimulus with fiscal consolidation. This helped mitigate the damage to growth and fiscal sustainability. However, the situation deteriorated in FY2022 as global commodity prices spiked following the Ukraine war and Pakistan's external accounts came under severe additional pressure due to unplanned fiscal expansion and unwarranted delays in IMF program. This unexpected impetus to inflation, resulting in economic overheating and significant exchange rate depreciation, caught SBP off guard. Nevertheless, it remains unclear whether tightening monetary policy earlier and more aggressively could have independently prevented this undesirable outcome. It is highly unlikely that the detrimental effects of fiscal imprudence, IMF program disruption, and political instability could have been reversed solely through monetary policy actions. Nonetheless, several technical and governance lessons can be derived from this episode to improve the effectiveness of monetary policy in Pakistan.

On the technical side, four main lessons can be derived for policy makers.

First, we require significantly better real-time economic data to counter the increasing complexity of the challenges posed. The miscalculation of the output gap by SBP can be explained by the absence of quarterly GDP estimates and inadequate demand indicators. Recent research initiatives by SBP such as "Measuring Economic Performance in Pakistan through Satellite and Big Data" provide findings and the required infrastructure to generate accurate and timely quarterly GDP estimates. Initiating and operationalizing such projects is imperative for improved and more informed monetary policy decision-making.

Second, SBP should consistently maintain a healthy degree of skepticism and caution regarding fiscal projections by the Ministry of Finance (MoF), distancing itself from the MoF, especially during times of political stress such as the national elections. SBP should create regular quarterly projections of likely fiscal outcomes, which could remain confidential but be utilized for discussions and decisions within the Monetary Policy Committee.

Third, Pakistan's recent experience has demonstrated that the exchange rate can be extremely volatile when international reserves fall below a certain minimum level, which, in turn can impact domestic inflation significantly. Therefore, monetary policy, primarily focused on inflation, must consider more than traditional demand management economic variables, and should incorporate exchange rate stability as a key intermediate objective. To achieve this, SBP must meticulously evaluate external forecasts, particularly anticipated capital inflows to Pakistan, the potential impact of delayed or unrealized inflows on international

reserves, and underlying current account pressures. SBP must exercise greater caution and be conservative in its monetary policy stance as the potential risks of overly optimistic projections are substantial.

Fourth, SBP should be aware that supply shocks can evolve into more persistent issues, especially if they are recurrent and prolonged. In such instances, it is crucial to consider the entire distribution of expectations measures, not just the median, particularly given Pakistan's history of persistent core inflation.

In conclusion, we propose a critical reassessment of the framework governing economic policy decision-making in Pakistan. Given the country's history of fiscal volatility and external vulnerability, a fundamental overhaul of the existing system is imperative.

First, enhanced coordination between fiscal and monetary policies is essential. However, this collaboration must respect the distinct mandates of each institution. The Monetary Policy Committee, SBP, and the Ministry of Finance have different mandates, yet they must coordinate policies while preserving each other's independence. This is especially crucial when balancing short-term growth with long-term macroeconomic stability and sustainable development.

Second, SBP must devise a method to inform the parliament and the public transparently and comprehensibly about external sector developments and the country's reserve position. This approach can foster a broader constituency beyond SBP that advocates against irresponsible decisions by politicians and the Ministry of Finance.

Third, it is crucial to fully realize the benefits of a market-based exchange rate regime and finally abandon the persistent pursuit of an overvalued rupee, which inevitably collapses. This requires deepening and improving the functioning of foreign exchange markets, whilst simultaneously granting MPC a role in defining the broad parameters of exchange rate management, including the timing and extent of intervention. Additionally, establishing clear and simple rules governing transactions within and outside the inter-bank foreign exchange market might be beneficial. These rules could even incorporate a quarterly current account deficit ceiling, based on expected financing and desired foreign exchange reserves. Essentially, such regulations would function as a domestically imposed IMF program to maintain macroeconomic stability and prevent crippling external crises.

Finally, in terms of financing the current account deficit, there should be a significant reduction in government borrowing to bolster foreign exchange reserves. To mitigate external instability and escalating public debt, government borrowing should no longer be the primary source of current account deficit financing, since it is an unsustainable strategy for a modern economy and leaves

Pakistan vulnerable to external crises. Instead, private sector including corporate and banking sectors must assume greater responsibility for funding current account deficits, whilst prioritizing non-debt creating inflows, such as equity investments.

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Appendix

Figure 1

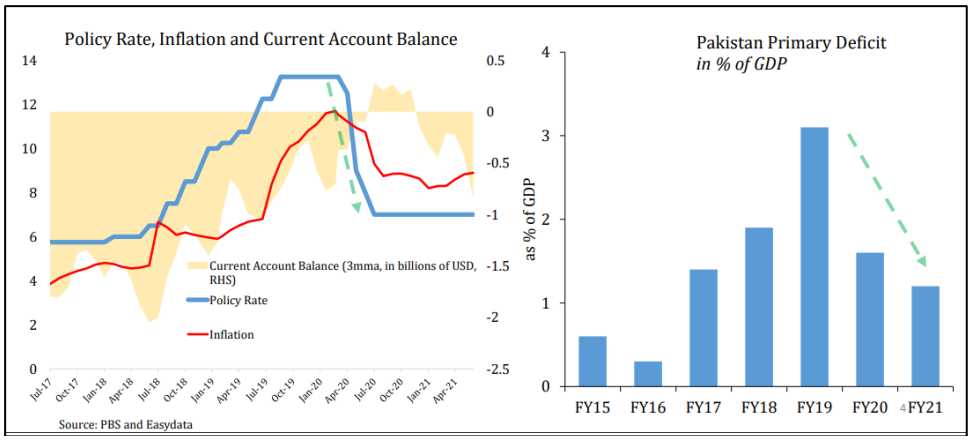


Figure 2

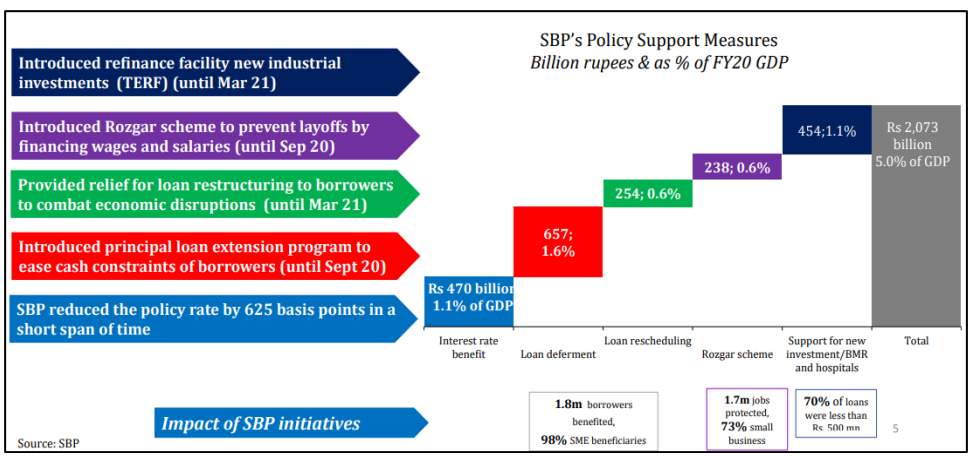


Figure 3(a)

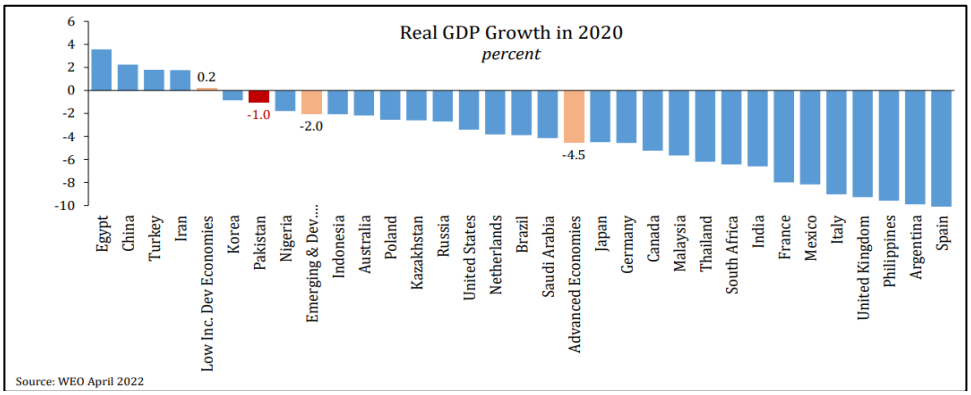


Figure 3(b)

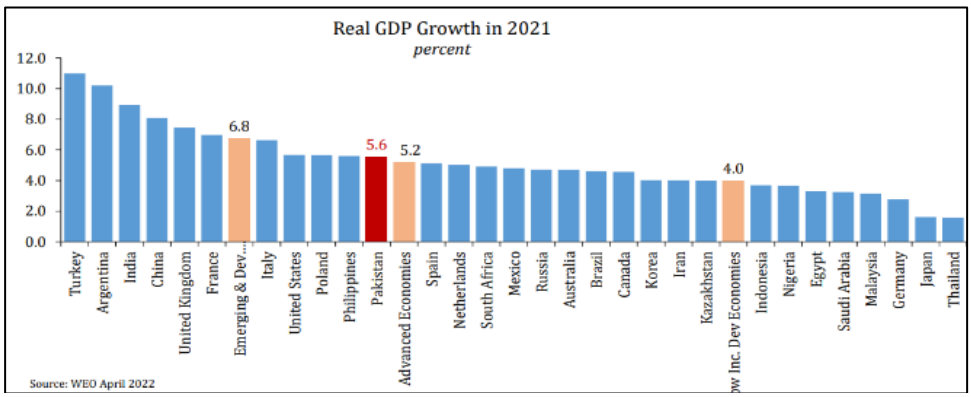


Figure 4

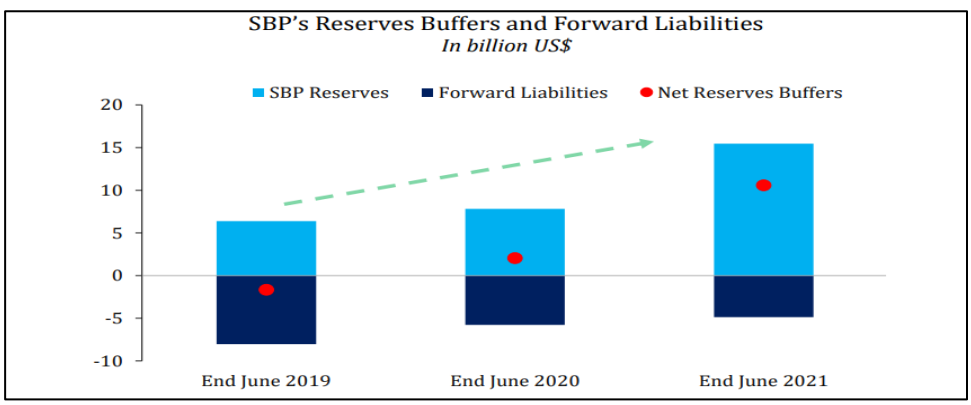


Figure 5

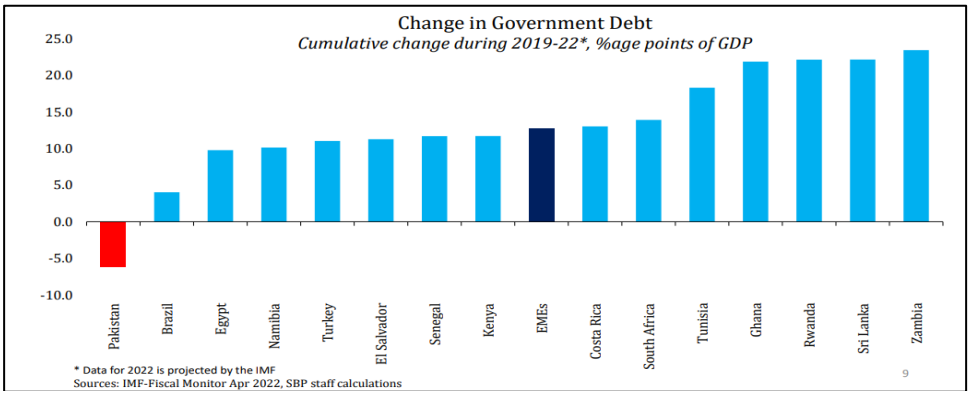


Figure 6

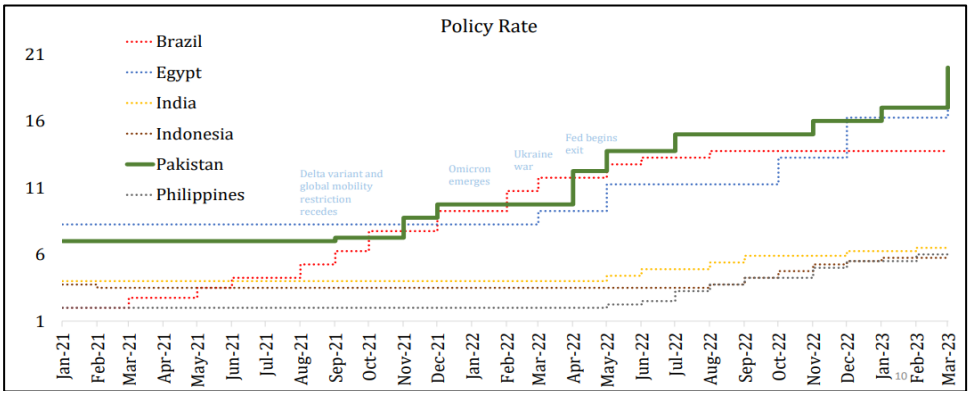


Figure 7

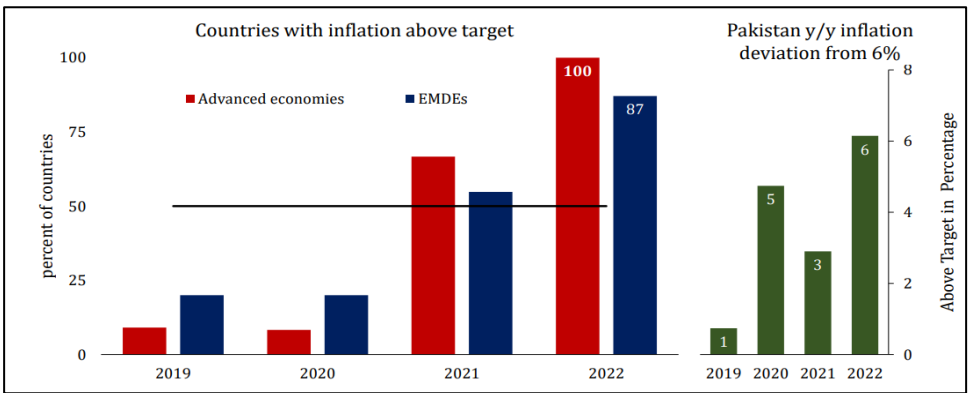


Figure 8

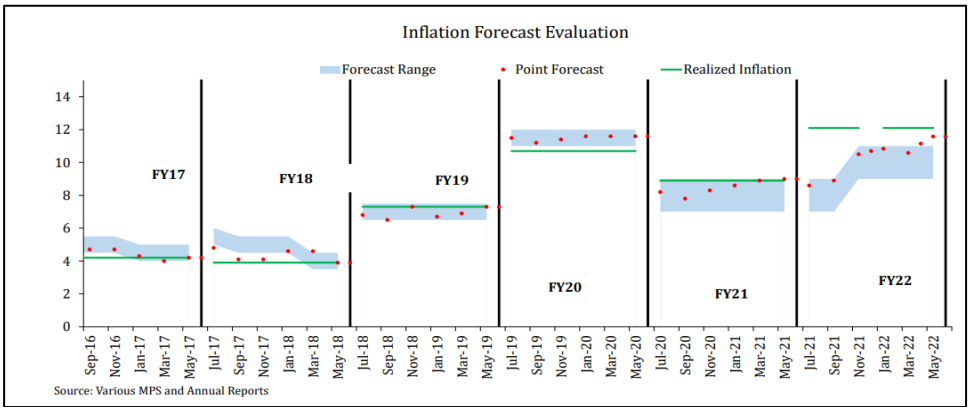
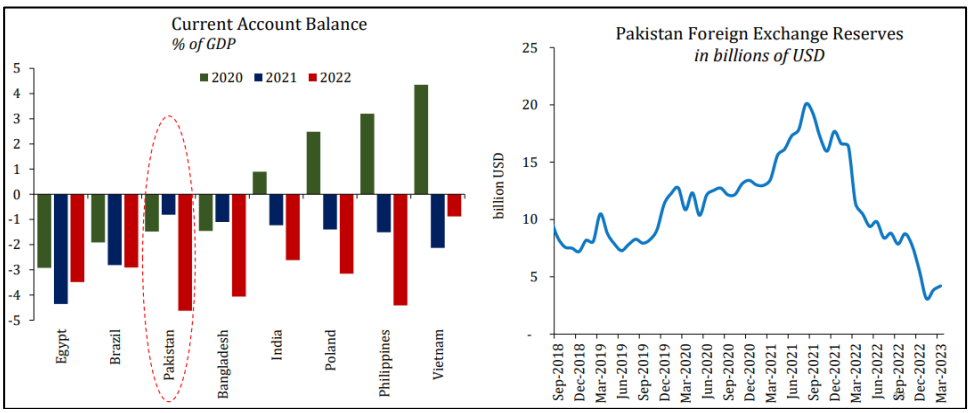


Figure 9



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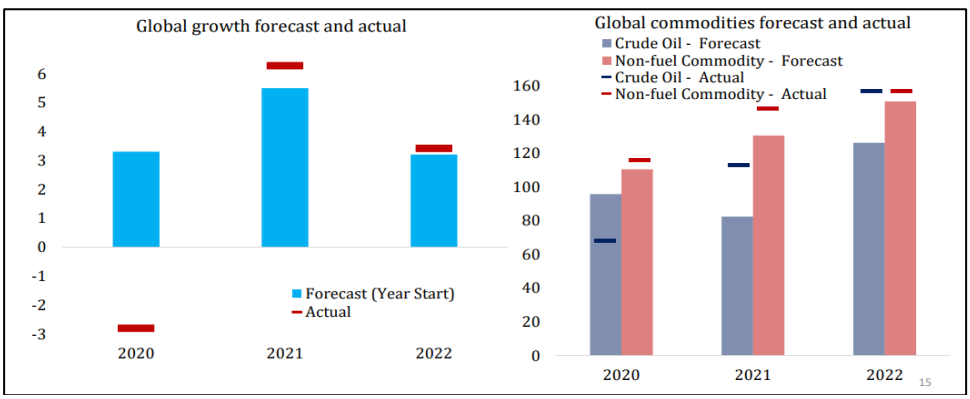


Figure 11

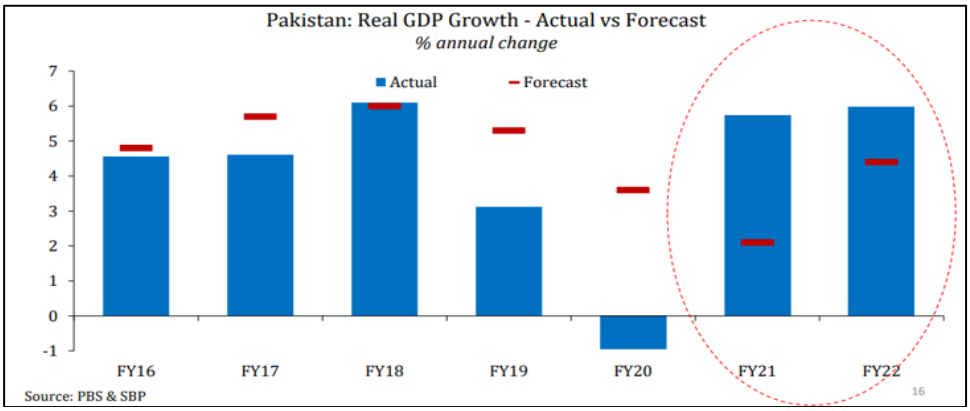


Figure 12

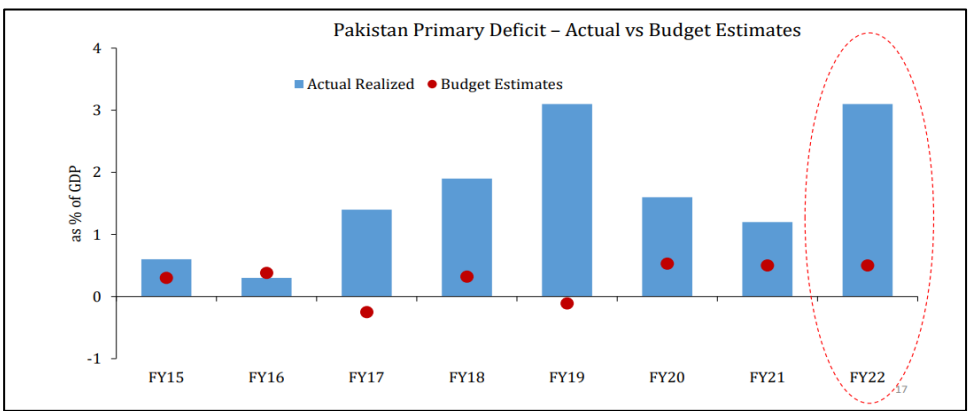


Figure 13

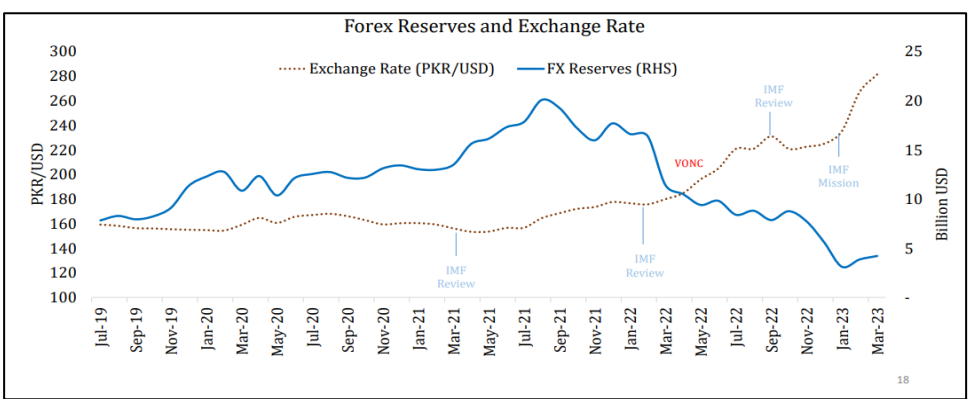


Figure 14

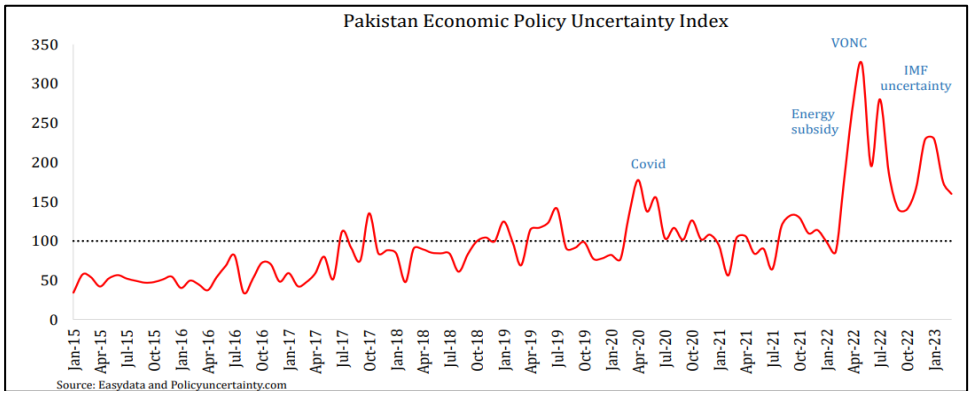


Figure 15

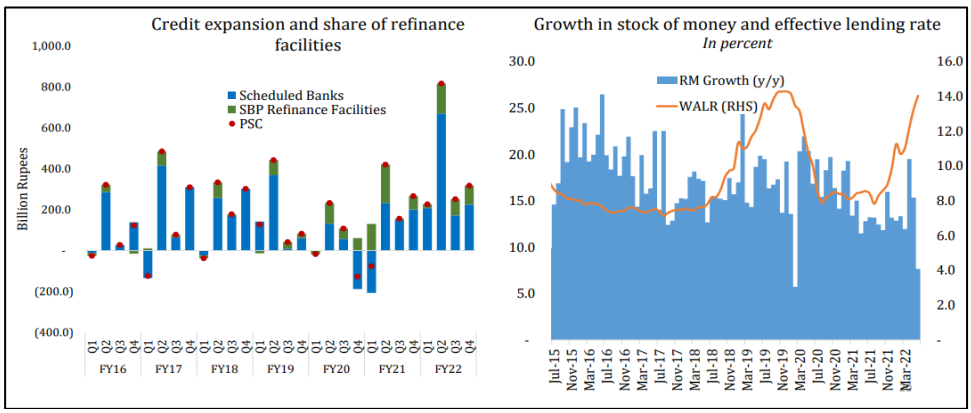
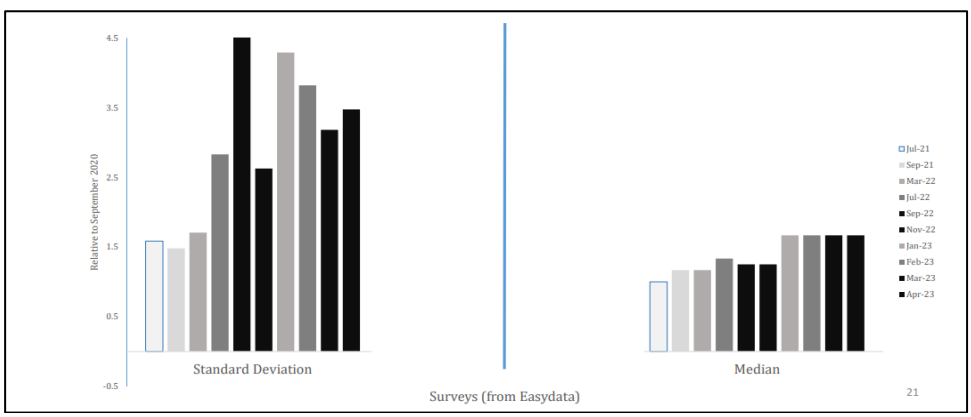


Figure 16



7

Inflation Surges under Incomplete Markets*

Ahmed Pirzada**

Abstract

Why did inflation in Pakistan increase from 13.8 percent in May 2022 to the peak of 38 percent in May 2023? Similar surges in inflation are also observed across other developing economies at times of financial stress. This short paper presents a small open economy model where current and expected future risk affects both domestic and CPI inflation. This is due to the assumption of incomplete markets which gives rise to deviations in the uncovered interest rate parity (UIP) condition, also known as excess returns or risk premium. This paper uses the model to demonstrate that the surge in inflation in Pakistan was primarily attributed to the sharp increase in risk premium rather than other factors frequently discussed in popular discourse such as cost shocks, differential in policy rates, inflation expectations, and money supply.

Keywords: Inflation New Keynesian, UIP deviations, Risk, Monetary Policy.

JEL Classification: E31, E32, E52, F4, G15.

Introduction

Inflation in Pakistan increased from 13.8 percent in May 2022 to a peak of 38 percent in May 2023. Similarly, core inflation jumped from 9.7 percent to 20 percent over the same period. To understand this sharp increase in inflation,

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within a short timeframe, this paper develops a small open economy new Keynesian model, following the approach in Justiniano & Preston (2010a). While the initial surge in inflation can be attributed to rising commodity prices, I show that the significant increase in current and expected future risk was the primary driver behind the sharp increase in inflation to the peak of 38 percent. Although risk levels continue to remain elevated, these have decreased significantly , contributing to a decline in inflation since then.

Specifically, the model in this paper assumes incomplete markets and allows for deviations in the uncovered interest rate parity (UIP) condition, as observed in data. This, in turn, results in the risk premium (or excess returns) affecting the value of a country's currency. Additionally, unlike Justiniano & Preston, this paper also incorporates imported inputs into production. This plays a crucial role in amplifying the effect of fluctuations in the risk premium on inflation, by influencing the cost of imported inputs. I then use the model to show that the observed increase in inflation in Pakistan was primarily due to a sharp increase in both current and expected risk premium. The model presented in this paper can also help explain sudden increases in inflation in developing economies during times of financial stress.

A substantial body of literature examines deviations from the uncovered interest rate parity (UIP) condition, which equates returns on assets denominated in different currencies. These deviations imply excess returns that can both be positive or negative for currencies of advanced economies. However, Kalemli-Ozcan & Varela (2021) document that, unlike advanced economies, excess returns for emerging economies are not only positive but also exhibit relatively higher volatility. Furthermore, excess returns for emerging economies are negatively correlated with capital flows. While Kalemli-Ozcan & Varela emphasize the role of policy uncertainty in driving excess returns for countries that borrow from international creditors in their own currencies, default risk is the likely the primary driver of excess returns for countries that borrow in foreign currency, such as Pakistan.

Despite extensive research on the factors driving excess returns, there is a limited body of literature examining how these factors may influence inflation dynamics in developing economies and their implications for monetary policy.1 Brandao-Marques et al. (2020) find that the effect of monetary policy on the economy in emerging economies is similar to that observed in advanced economies, but only after controlling for changes in exchange rates. As changes in the exchange rate reflect unexpected shifts in interest rate differentials and excess returns (or risk premium), the results in Brandao-Marques et al. highlight the

1 Justiniano & Preston (2010b) study the extent to which external (US) shocks can explain fluctuations in the Canadian economy.

significance of risk as a key factor determining how monetary policy affects the economy in developing countries.

The remainder of this paper is organized as follows: Section 2 outlines the model and discusses how risk may affect both domestic and CPI inflation within the economy. Section 3 calibrates the model and examines how an exogenous increase in risk premium would influence inflation in the model economy. Importantly, I consider both scenarios where the increase in risk premium is relatively persistent and where the central bank places less emphasis on stabilizing inflation. Section 4 uses the model to analyze which of the factors can potentially explain the sharp increase in inflation observed in Pakistan. Section 5 is speculative, briefly discussing how increasing interest rates beyond a certain threshold may prove ineffective. Finally, Section 6 concludes the paper.

However, before proceeding, I briefly discuss why increase in money supply cannot explain the recent increase in inflation in Pakistan.

Why Money Supply is not the answer

Considerable discussion on inflation in Pakistan revolves around the role of money supply, and for good reason. Figure 1 presents a scatter plot comparing the five-year moving averages of annual inflation on the vertical axis and broad money growth (M2) on the horizontal axis. The strong positive correlation between the two variables is evident. Moreover, this correlation remains close to 1 when the same figure is plotted using 10-year moving averages for both variables. Therefore, it is reasonable to conclude that, in the case of Pakistan, money growth plays an important role in determining inflation over a medium to long run.

Theoretically, using the equation for the quantity theory of money and further assuming the change in the volatility of money to equal zero, we can write inflation as given by,

$$\pi_t = gr_t^m - gr_t^d \tag{1}$$

where π_t is inflation, gr_t^m is the growth in money supply, and gr_t^d is the growth in money demand. Equation 1 implies that inflation in any given period t equals the difference between the growth in money supply and the growth in money demand. With the average GDP growth of 3.5 percent over the last decade, average gr_t^m must be around 13 percent to explain an average inflation rate of close to 9 percent as seen in data. Figure 2 plots data for gr_t^m over the last decade.

While money supply is a significant factor in inflation discussions in Pakistan, it alone cannot fully explain the increase in inflation from 13.8 percent in May 2022 to 38 percent in May 2023. Money growth did rise to 17 percent during Covid-19.

However, holding g_t^d fixed, this increase can only account for a maximum inflation rate of 14 percent.

The inability to explain inflation dynamics solely using money supply growth necessitates an alternative framework that can provide a better understanding of the underlying factors driving inflation. I will now turn to this framework.

Model

The model presented here is similar to Justiniano & Preston (2010), with the key distinction being the incorporation of imported inputs in firms' production. This is an important departure, as it allows uninsured risk to directly affect firms' input costs and, consequently, domestic inflation. Without this, risk would primarily affect domestic inflation indirectly through changes in relative prices due to variations in the price of imported consumption goods and their impact on real economic activity. This modification is likely to be quantitatively significant in understanding both the determinants of inflation and how monetary policy operates in emerging economies. In the remaining sections, I provide a concise overview of the model, focusing on the features that differentiate the model in this paper from Justiniano & Preston.

Households

The households' problem is similar to that presented by Justiniano & Preston (2010). Households choose $\{C_{t+s}\}_{s=0}^{\infty}$ and $\{L_{t+s}\}_{s=0}^{\infty}$ to maximize expected lifetime utility,

$$E_t \sum_{s=0}^{\infty} \beta^s \left[lnC_{t+s} - \frac{L_{t+s}^{1+\varphi}}{1+\varphi} \right] \tag{2}$$

where L_t is labour supply and C_t is the consumption basket which includes both the domestic and imported consumption goods such that,

$$C_t = \left[(1-\alpha)^{\frac{1}{n}} C_{h,t}^{\frac{n-1}{n}} + \alpha^{\frac{1}{n}} C_{m,t}^{\frac{n-1}{n}} \right]^{\frac{n}{n-1}}$$

where $C_{h,t}$ is domestic consumption and $C_{m,t}$ is imported consumption. Both $C_{h,t}$ and $C_{m,t}$ are the Dixit-Stiglitz aggregates of differentiated goods produced at home and abroad, respectively. α is the weight on the consumption of domestic goods in households' consumption basket and η is the elasticity of substitution between domestic and imported consumption goods.

Households maximise their expected lifetime utility subject to the flow budget constraint of the form,

$$P_t C_t + D_t + S_t B_t = D_{t-1}(1 + i_{t-1}) + S_t B_{t-1}(1 + i^*_{t-1})\rho_t(.) + W_t L_t + \prod H, t + T_t \quad (3)$$

where W_t is the nominal wage and P_t is the price of the consumption basket. P_t is a composite of both the price of the domestic consumption good, $P_{h,t}$, and the imported consumption good, $P_{m,t}$,

$$P_t = [(1 - \alpha)P_{h,t}^{1-n} + \alpha P_{m,t}^{1-n}]^{\frac{1}{1-n}} \quad (4)$$

$\Pi_{H,t}$ in the flow budget constraint represent profits from firms which are transferred to the households. T_t is lump-sum taxes and transfers. Finally, D_t is a one-period domestic bond with a corresponding (nominal) interest rate of i_t, and B_t is a one-period foreign currency bond with a corresponding interest rate of i_t^*.

Importantly, and as in Justiniano & Preston, B_t and D_t are the only assets available to the households. Since households cannot fully insure themselves against future states, the return on foreign currency bonds also carries a risk premium,. ρ_t. ρ_t can be endogenised (reduced-form) such that,

$$\rho_t = ex\,p\left[-x\left(Z_t + \widetilde{\phi_t}\right)\right] \quad (5)$$

where ρ_t is a function of some endogenous variable, Z_t, and an exogenous shock, $\tilde{\phi}_t$.

UIP condition under incomplete markets

The no arbitrage condition in the international finance literature requires that returns on different currency assets are always equal. However, the presence of a risk premium, arising from the assumption of incomplete markets, results in the no-arbitrage condition holding only after adjusting for risk. The log-linearized version of the UIP condition under incomplete markets, derived from households solving their maximization problem as outlined above, is given by,

$$\underbrace{i_t^*}_{\text{return on foreign assets}} = \underbrace{i_t - E_t \Delta s_{t+1} - \rho_t}_{\text{risk-adjusted return on domestic assets}} \quad (6)$$

where $E_t\Delta s_{t+1}$ is expected percentage change in the exchange rate. s_t is defined as the log of the value of one unit of foreign currency in terms of domestic currency. Importantly, for this paper, we can rewrite equation 6 as,

$$s_t = E_t\Sigma_{s=0}^{\infty}(i_{t+s}^* - i_{t+s}) + \underbrace{E_t\sum_{s=0}^{\infty}\rho_{t+s}}_{\text{due to incomplete markets}} \tag{7}$$

While Equation 7 is not be new, it is essential to understanding the discussion in this paper. It states that the value of a country's currency depends not just on the expected path of interest rate differential between domestic and foreign markets but also on the expected path of risk premium. For a given expected path of interest rate differential, a sharp increase in risk premium will result in the exchange rate depreciating significantly. The magnitude of exchange rate depreciation will be even greater if the increase in risk premium is expected to be more persistent.

CPI Inflation

Before proceeding, it is also useful to consider an expression for CPI inflation. Log-linearising equation 4 and further assuming law of one price allows me to write CPI inflation as a function of domestic inflation, $\pi_{h,t,}$ and percentage change in terms of trade, Δtot_t,

$$\pi_t = \pi_{h,t} + \alpha\Delta tot_t \tag{8}$$

where terms of trade is the ratio of the price of imported and domestic consumption goods. CPI inflation in equation 8 can be rewritten as a function of domestic inflation, foreign inflation (π^*), and change in the exchange rate.

$$\pi_t = (1-\alpha)\pi_{h,t} + \alpha(\pi_t^* + \Delta s_t) \tag{9}$$

Equation 9 makes explicit the direct effect of exchange rate depreciation, Δs_t, on CPI inflation. But what does Δs_t depend on? Iterating equation 6 one period backward gives an expression for the value of Δs_t, as expected in the previous period,

$$E_{t-1}\Delta s_t = E_{t-1}s_t - s_{t-1} = i_{t-1} - i_{t-1}^* - \rho_{t-1} \tag{10}$$

In the framework in this paper, any new information that results in $s_t \neq E_{t-1}s_t$, arrives in the form of an exogenous shock that the framework allows for. For now, and mostly to ease exposition, I denote $s_t - E_{t-1}s_t$ with ϵ_t which is a function of any other shocks in the paper, and has a mean value of zero. This gives us an expression for the change in exchange rate,

$$\Delta s_t = i_{t-1} - i^*_{t-1} - p_{t-1} + \epsilon_t \tag{11}$$

A notable example of ϵ_t taking a positive value in the context of Pakistan occurred in September 2022 when the then Prime Minister declared to a Bloomberg interviewer that "all hell will break loose" if the world did not step forward with (external) financial assistance. This new information led to a significant upward revision in the expected path of risk premium, explaining the subsequent exchange rate depreciation. The depreciation was initially observed in in the black market before mirroring in the official rate once exchange rate restrictions were lifted.

The discussion in this section makes explicit the link between the exchange rate and the risk premium, and how it directly affects CPI inflation. I return to this in section 5 where I discuss the role of monetary policy in stabilizing inflation.

Firms

Unlike in Justiniano & Preston, I assume that each firm f uses both labour and imported inputs to produce differentiated output using production technology of the form,

$$Y_{f,t} = (A_t L_{f,t})^{1-\gamma} {M_{f,t}}^{\gamma} \tag{12}$$

where A_t is productivity, and $L_{f,t}$ and $M_{f,t}$ represent labour and imported inputs used by firm f in production. $M_{f,t}$ is the Dixit-Stiglitz aggregate of the differentiated imported inputs. Firms choose $L_{f,t}$ and $M_{f,t}$ to minimise their costs subject to the production function. The cost minimisation problem gives us an (log-linearised) expression for firms' real marginal costs, mc_t,

$$mc_t = (1-\gamma)(w_t - a_t) + \gamma q_t \tag{13}$$

where w_t is the real wage and q_t is the real exchange rate.

New Keynesian Philips Curve

Following the New Keynesian tradition, I assume that firms have price-setting power but face nominal rigidities a la Calvo (1983), allowing them to adjust their prices in any given period with a probability less than one. Consequently, when setting their prices, firms must adopt a forward-looking approach and set a price that maximizes their expected future profits over the expected duration during which they may not have the opportunity to reset their prices. Firms' profit maximization problem yields the New Keynesian Philips curve of the form,

$$\pi_{h,t} = E_t \pi_{h,t+1} + kmc_t \tag{14}$$

Equation 14 states that domestic inflation depends on expected domestic inflation in the next period and marginal costs. The sensitivity of domestic inflation to firms' marginal costs is captured by the parameter κ which itself depends on the Calvo probability and the elasticity of substitution between goods produced by each firm f. After some algebraic manipulation and using the expressions for q_t and tot_t, equation 14 can be rewritten in the following form which is helpful for subsequent discussion:

$$\begin{aligned} \pi_{h,t} = E_t \pi_{h,t+1} &+ k(1-\gamma)(w_t - a_t) \\ &+ k_\gamma E_t \sum_{s=0}^{\infty} (i^*_{t+s} - i_{t+s}) \\ &+ k_\gamma (p^*_t - p_t) \\ &+ k_\gamma \underbrace{E_t \sum_{s=0}^{\infty} \rho_{t+s}}_{= \rho_t + E_t \sum_{s=1}^{\infty} \rho_{t+s}} \end{aligned} \tag{15}$$

Equation 15 shows that domestic inflation depends on expected domestic inflation in the next period, the labour market, expected path of interest rate differential, terms of trade shock, and the expected path of risk premium. In the special case where firms do not use imported input in production (i.e., $\gamma = 0$), equation 15 is reduced to,

$$\pi_{h,t} = E_t \pi_{h,t+1} + k(w_t - a_t) \tag{16}$$

Equations 15 and 16 make explicit how abstracting from the role of imported inputs in production can lead to an overemphasis on the importance of domestic inflation expectations and labour market conditions in driving domestic inflation

dynamics. This is particularly important for understanding inflation dynamics in small open developing economies.

Monetary Policy

I assume that the central bank conducts monetary policy according to a Taylor-type rule. Specifically, I assume that the central bank sets the nominal interest rate in response to changes in inflation and output gap. The log-linearised version of the Taylor rule is given by,

$$i_t = \chi_\pi \pi_t + \chi_y y_t \tag{17}$$

where y_t is output gap, and χ_π and χ_y are coefficients in front of the targeting variables such that $\chi_\pi > 1$ and $\chi_y \geq 0$.

The market clearing and the rest of the foreign block is standard as in the small open economy literature. Therefore, I do not discuss it here for brevity.

Table 1: Structural Parameters

Parameters	Values	Parameters	Values
B	0.97	α	0.1
χ	0.05	η	0.5
$1/\varphi$	0.5	θ	10
γ	0.1	ζ	0.6
χ_π	1.5	$\boldsymbol{\chi_y}$	0.2
ρ_ϕ	0.7	$\boldsymbol{\sigma_\emptyset^2}$	0.0025

Note: This table provides calibrated values for the structural parameters of the model.

Simulation results

Before analyzing the recent surge in inflation in Pakistan, I present simulation results from the model outlined in the previous section. The objective is to show how an exogenous increase in risk premium, ρ_t, would affect inflation. Specifically, I calibrate model parameters as in Table 1 and assume the risk premium shock, $\tilde{\phi}t$, to follow an AR(1) process:

$$ln\tilde{\phi}_t = \rho_\phi ln\tilde{\phi}_{t-1} + \sigma_\phi \hat{\epsilon}_{\phi,t} \tag{18}$$

Figure 3 plots impulse responses to a one-standard-deviation risk premium shock, considering both when the shock process is less persistent (ρ_ϕ = 0.7) and more persistent (ρ_ϕ = 0.9). Let us first consider the case where ρ_ϕ = 0.7. A one-standard-deviation shock increases risk premium (or excess returns) by nearly 5

percentage points. The risk premium remains high for the following few quarters before gradually returning to its initial level. The increase in demand for excess returns by investors results in capital flight, causing the exchange rate to depreciate by almost 20 percent at the time of the shock. As households directly consume imported consumption goods, CPI inflation jumps by more than 4 percentage points. However, CPI inflation does not simply increase due to the rise in the price of imported consumption goods. Since firms also rely on imported inputs, domestic inflation also increases by almost 2 percentage points in the next period. As CPI inflation also includes domestic inflation, the increase in domestic inflation provides an additional explanation for why CPI inflation rises upon impact of the shock. However, as the shock dissipates, inflation returns to the trend.

What happens when the shock is more persistent? In other words, when everyone expects risk premium to remain high for a longer period? To answer this question, I increase the persistence of the shock process, ρ_ϕ, from 0.7 to 0.9. The solid-red line in Figure 3 plots impulse responses under this scenario. The IRFs demonstrate that, while the initial increase in risk premium is similar to the case where $\rho_\phi = 0.7$, it is expected to remain high for an extended period. It is estimated to take approximately 15 quarters for the risk premium to decline from 5 percentage points to 1 percentage point.

Figure 3 illustrates that when the risk premium is anticipated to stay high for a longer period, the same shock has a significantly greater impact on the economy. The exchange rate depreciates by almost 50%. Consequently, both domestic and CPI inflation increase by twice as much and take even longer to return to the trend, despite the exchange rate stabilizing after two periods.

It is important to note that, in both cases, the increase in inflation also leads the central bank to raise the nominal interest rate by more than one-to-one in response. While this helps to curb inflation and return it to the trend sooner, it also causes economic activity to contract significantly. When the shock is more persistent, GDP contracts by more than 7% on impact before returning to its trend level. Similarly, consumption falls. The increase in the price of imported goods and the sharp contraction in economic activity result in a considerable improvement in the trade balance, due to both a sharp drop in imports and an increase in exports.

Monetary Policy

An important question is what would happen if the central bank was to respond less aggressively to the increase in inflation, following the shock? To test this, I recalibrate the value for χ_π from 1.5 to 1.1 in equation 19. In other words, in the new world, the central bank places less emphasis on stabilizing inflation compared to the previous scenario. Figure 4 plots the impulse responses from this exercise.

The solid-red line represents the case where $\rho_\phi = 0.9$ and $\chi_\pi = 1.5$, similar to Figure 3. The dashed-blue line also has $\rho_\phi = 0.9$ but $\chi_\pi = 1.1$. The impulse responses to the shock offer valuable insights.

First, note that, in both cases, the risk premium increases by the same amount and takes the same time to return to its trend. However, the responses for the remaining variables differ significantly. Since the central bank is less concerned about stabilizing inflation, real economic activity, as measured by GDP and consumption, falls by slightly less and recovers more quickly. This also means that trade balance improves to a lesser extent and returns to its trend within a shorter timeframe.

What about inflation? Since the central bank is expected to respond less aggressively to an increase in inflation, the exchange rate depreciates by more. Moreover, unlike under the previous scenario, it continues to depreciate in subsequent periods, albeit at a slower rate than initially. Knowing that the exchange rate will continue to depreciate in the future, firms that use imported inputs in production would significantly increase their prices, causing domestic inflation to increase by more than 10 percentage points instead of the 4 percentage points when $\chi_\pi = 1.5$. Because prices are sticky, domestic inflation continues to remain high and returns to the trend over a very long time. The response of domestic inflation, combined with the much larger increase in the price of imported consumption goods, implies that CPI inflation also increases by as much as 15 percentage points on impact, returning to its trend at a much slower pace. Most interestingly, because of the much larger increase in CPI inflation, the central bank is forced to increase the nominal interest rate by much more than it would have had to if everyone expected it to respond more aggressively to an increase in inflation.

Understanding the sharp increase in inflation in Pakistan

To analyze the potential factors which contributed to the sharp increase in inflation in Pakistan, I should ideally estimate the model using relevant data and decompose inflation into contributions from different underlying shocks. However, the lack of high-quality quarterly time series data on domestic inflation expectations, real wages, consumption, and GDP in most developing countries, including Pakistan, makes this exercise challenging. I hope that this limitation will be less severe in the future as better macroeconomic data becomes available. Given these constraints, I use the model presented in section 2 to gain insights into which factors may have been more important than others in explaining the inflation surge seen in Pakistan.[2] Equations 15 and 9 explicitly identify several potential factors

[2] The role of money supply as is current in popular discourse has already been discussed in section 1.1 and is, therefore, not considered in the rest of this paper.

affecting domestic and CPI inflation, respectively. The figures for this section are provided at the end of the paper.

Domestic inflation

To understand domestic inflation, $\pi_{h,t}$, I begin by considering the factors which are identified in Equation 15: expected inflation, real wages, terms of trade, the expected path of the interest rate gap and the risk premium.

Figure 7, from PIDE (2021), presents data on business inflation expectations over different horizons. The survey was conducted just before the crisis began. Although inflation expectations were clearly higher than the SBP's medium term inflation target of 5-7 percent, these were still far from what is required to explain the increase in inflation from 13.8 percent in May 2022 to the peak of 38 percent in May 2023.3

Next, I consider real wages. Examining $w_t - a_t$ is crucial because it captures the extent of overheating in the economy. This is particularly relevant if we consider the labour market as an appropriate indicator of overheating. Figure 8 presents the average annual growth in real wages for different time periods, based on the labour force survey data. The figure also includes data on average annual productivity growth for Pakistan, as calculated in Pirzada et al. (2024). Finally, it reports the value for $w_t - a_t$, indicating the degree of overheating in the economy. While the period between 2014 to 2018 clearly shows evidence of overheating, the opposite is true for the period between 2018 to 2021.

Figure 9 depicts the terms of trade measure, calculated as the difference between the log of World CPI and the CPI in Pakistan. To account for differences in trend inflation between the World and Pakistan, I de-trended the CPI data for both. The figure indicates significant inflationary pressures arising from a sharp increase in world prices relative to prices in Pakistan, particularly during 2021 and 2022. However, these inflationary pressures began to diminish during the second half of 2022 and almost disappeared entirely by early 2023. Despite this, inflation continued to rise, reaching its peak in May 2023.

Next, I consider the current and expected path of interest rate differential. Figure 10 illustrates the current interest rate gap between the policy rate set by the US Federal Reserve and the policy rate set by the SBP. To adjust for differences in natural real rate and trend inflation, the figure plots the interest rate gap after demeaning the rates. The figure suggests that the policy rate in Pakistan was sufficiently high to have a favourable impact on domestic inflation through the interest rate gap. While the figure only shows the current interest rate gap, the

[3] While domestic inflation is different from core inflation, core inflation also increased substantially from 9.7 percent in May 2022 to the peak of 20 percent in May 2023.

negative gap implies that the expected path was also negative, further benefitting domestic inflation.

While the previous discussion has not identified any factors that can fully explain the sharp increase in inflation in Pakistan, I now turn to the most important factor: risk premium. Figure 11 plots the credit default swaps (CDS) for Pakistan over a one-year horizon. CDS rates increase from approximately 5 percentage points before the crisis to an average of 40 percentage points during the second half of 2022. This helps explain the increase in inflation during this period.

Although the magnitude of the increase in CDS was similar to that seen in 2008, inflation rose significantly more. If the increase in risk premium is the key factor explaining the surge in inflation, why does the inflation response differ so much across these two episodes? The answer lies in the differences in the expected path of risk premium.

Figure 12 presents the CDS yield curve for Pakistan in 2008 and early 2023. While the short-term CDS spreads were comparable, the CDS yield curve was upward sloping in 2023 and downward sloping in 2008. Given the importance of the expected path of risk premium in understanding inflation dynamics, the divergence in this expected path between 2008 and 2022 may explain the remaining difference in the inflation response across the two episodes.

CPI inflation

Equation 9 indicates that the sharp increase in domestic inflation is a significant contributor to the rise in CPI inflation. However, it is not the sole factor. Foreign inflation and exchange rate depreciation also directly affect the price of imported consumption goods. The increase in risk premium, as discussed in the previous section, increases ϵ_t which in turn affects CPI inflation through its impact on the exchange rate. The surge in foreign inflation, π^*, during much of 2021 and 2022, also contributed to the increase in CPI inflation. Nevertheless, as noted above, π^* decreased during the second half of 2022 and therefore cannot explain the continued sharp rise in CPI inflation in Pakistan during much of 2023.

Monetary policy in times of financial distress

In section 3.1, I showed how the economy responds to a risk premium shock when the central bank is expected to respond more aggressively to an increase in inflation. The key finding was that this leads to a much larger increase in inflation and, consequently, the central bank ends up increasing the nominal interest rate by more than it would have otherwise. This phenomenon is evident in several economies such as Turkey, where a less aggressive monetary policy stance has resulted in both higher inflation and higher nominal interest rates.

In this section, I briefly consider how monetary policy affects the economy as outlined in this model. To do so, I modify the Taylor rule in equation 19 by allowing for an exogenous monetary policy shock to affect the nominal interest rate.

$$i_t = \chi_\pi \pi^t + \chi_y y^t + m_t \tag{19}$$

where m_t is the exogenous monetary policy shock which follows an AR(1) process of the form,

$$m_t = \rho_m m_{t-1} + \sigma_m \hat{\epsilon}_{m,t} \tag{20}$$

where $\hat{\epsilon}_{m,t}$ is the i.i.d. shock with mean zero. I calibrate ρ_m to equal 0.4 and σ_m to equal 0.04.

How does an increase in nominal interest rate affect the economy? Figure 5 illustrates the impulse responses to a-one-standard deviation contractionary monetary policy shock. The economy behaves as expected. The increase in current and expected interest rate differential causes the exchange rate to appreciate. Simultaneously, real economic activity contracts, leading to an improvement in the trade balance. The appreciation of the exchange rate and the decline in real economic activity results in both CPI and domestic inflation decreasing by more than 2 percentage points.

While the results so far align with what is traditionallly believed, it is important to note that the risk premium (i.e., spread) also increases. As shown in equation 5, the risk premium depends on both an exogenous component, $\tilde{\phi}_t$, and an endogenous component, Z_t. In this paper, and in much of the literature, Z_t is modeled as the external debt to GDP ratio.4 Therefore, in Figure 5, the decline in GDP is sufficient to increase both Z_t and, consequently, risk premium. However, the increase in the risk premium is small and has no significant impact on the rest of the economy. Monetary policy operates as expected.

[4] In Justiniano & Preston (2010) and other papers in this literature risk premium is modelled as "debt elastic interest rate premium" which depends positively on the ratio of external debt to potential output, and an exogenous shock. Specifically, Z_t in equation 5 is assumed to be,

$$Z_t = \frac{S_t B_t}{P_t Y} \tag{21}$$

where a negative value for B_t would imply external debt.

Times of financial distress

But what about times when the economy is in financial stress? This should be modeled in a more elaborate manner than what I do here. However, to still say something useful about this, I model *financial stress* as an increase in the sensitivity of risk premium to the changes in the external debt to GDP ratio. Specifically, I compare thee impulse responses to a contractionary monetary policy shock as presented in Figure 5 (baseline) with impulse responses when χ equal 0.5. Note that $\chi = 0.05$ in the baseline.

Figure 6 compares the impulse responses under the baseline scenario ($\chi = 0.05$) and during times of financial distress ($\chi = 0.5$). The results warrant caution. Unlike under the baseline scenario, the contraction in economic activity leads to a significantly larger and more persistent increase in risk premium. This is attributed to the heightened sensitivity of financial markets to a country's external position. Specifically, the risk premium increases by 40 basis points at its peak.

The significant increase in the current and expected risk premium now prevents the exchange rate from appreciating, even when the current and expected interest rate differential should have led to currency appreciation, as in the baseline scenario. In fact, the exchange rate depreciates in the periods following the shock. This finding that an increase in the interest rate can increase the risk premium and lead to exchange rate depreciation is consistent with the empirical evidence presented in Kalemli-Ozcan & Varela (2021). Kalemli-Ozcan & Varela note, "investors expect further depreciation after an exogenous shock to interest rate differentials, leading to depreciation of the EM (emerging markets) currency."

This has implications for both CPI and domestic inflation, which not only fall by less, but also exhibit a quicker recovery. The absence of appreciation and relatively higher prices results in a declining GDP and consumption by almost twice as much as in the baseline, and taking longer to recover to the trend.

These results imply that the central bank's aggressive stance may have unintended consequences. Section 3.1 that, when the central bank is expected to be *dovish*, a financial shock can prove to be more destabilizing. However, the results in this section also call for caution. While maintaining an aggressive stance which is aligned with what is suggested by the policy rule (equation 19) is crucial, the central bank may also be cautious by not surprising the market with contractionary shocks.

The key theme underlying why central banks may want to exercise caution - as described in the previous paragraph - in times of financial distress is the possibility that an increase in the interest rate would increase risk premium by enough such that it would prevent the central bank from achieving its objective of stabilising

inflation and economic activity. However, this is not always the case and depends crucially on the underlying factors driving the increase in the risk premium. A body of literature explores these factors. Hilscher & Nosbusch (2010) explore the role of volatility in terms of trade. Longstaff et al. (2011) and Pan and Singleton (2008) study the influence of global factors such as the US interest rate and stock market volatility. Bellas et al. (2010) and Dell'Erba et al. (2013) highlight the role of public debt, particularly external debt. Petrova et al. (2010) also find that foreign reserves, debt servicing burden, political risk, and domestic financial stress play a significant role in explaining the fluctuations in risk premium. It is conceivable that increasing interest rates might help decrease the risk premium by improving the trade balance, particularly if the factors driving the increase in risk premium include the depletion of the reserve cover and large current account deficits. However, the discussion in this section on how changes in interest rates may affect the risk premium remains largely speculative. Equation 5 is reduced-form equation and not derived from micro foundations.

Nonetheless, while the utility of increasing interest rates must be emphasized to prevent the crisis, it is essential to remember that excessive interest rate hikes can also be harmful. In the context of Pakistan, while such hikes have arguably helped reduce the risk premium by improving the trade imbalance and increasing the reserve cover, excessive exposure of banks to the government, coupled with interest payments constituting a large fraction of government tax and non-tax revenue, could lead to a scenario where the crisis spills over and exacerbates domestic financial stress. This could undermine the effectiveness of further interest rates increases beyond a certain point.

Conclusion

This paper presents a model that can help understand inflation surges in developing economies during times of financial stress. I then apply the model to analyze the surge in inflation in Pakistan between May 2022 and May 2023. While the increase in global commodity prices played a significant role during the first half of 2022, the analysis presented here shows that the increase in current and expected risk premium was the key driving factor behind the surge during the period under consideration. The paper also examines the role of money growth, labour market conditions, differences in policy rates, and inflation expectations. None of these factors appear to be important for explaining the surge in inflation observed in the data.

I also discuss the implications for monetary policy during times of crisis. A contractionary policy can help address economic imbalances in the economy, such as large current account deficits, by reducing aggregate demand and potentially decreasing the risk premium. A casual examination of the data reveals this to be true for Pakistan in the past two years. The economic slowdown, caused by various

factors including tighter monetary policy, reduced imbalances, leading to a decline in default risk and subsequent inflation. However, caution is warranted. Excessive interest rate hikes can exacerbate financial stress in certain cases. For example, in Pakistan, excessive exposure of banks to the government can make the banking system vulnerable if rising interest payments threaten sovereign default. In such cases, a country might consider non-traditional approaches to restore economic stability, such as debt restructuring, as suggested by Rogoff (2022).

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Appendix

Figure 1: Inflation and Broad Money Growth: 5 Year Moving Average

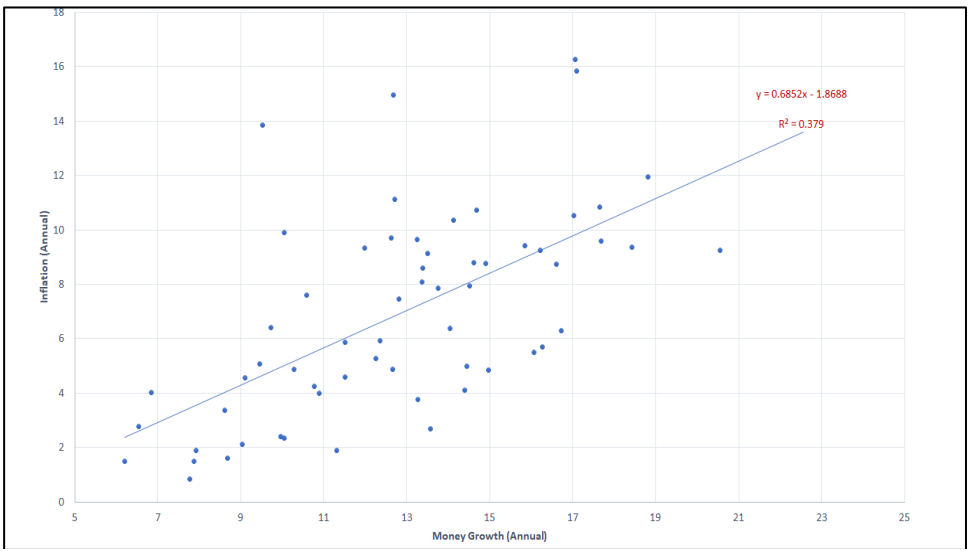


Figure 2: Broad Money Growth

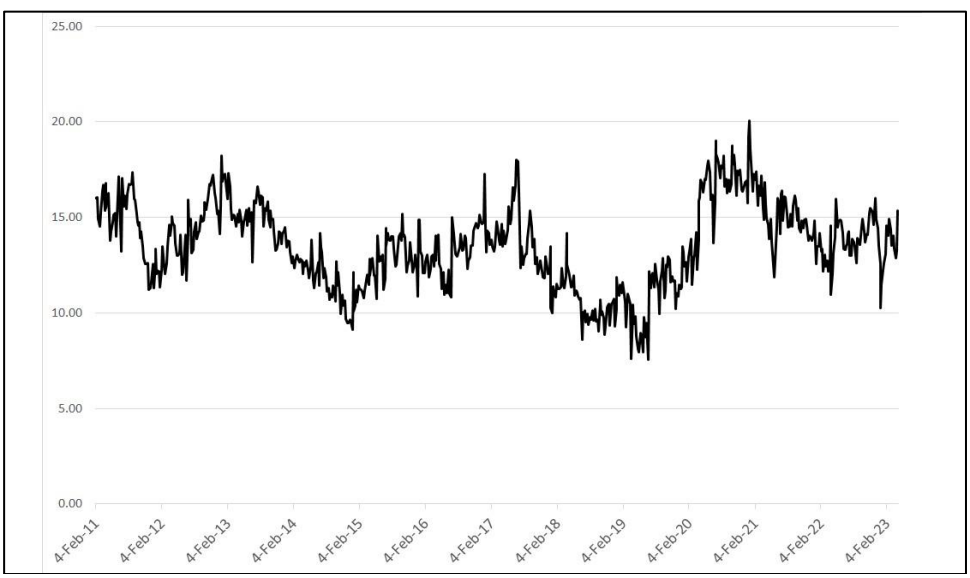


Figure 3: Impulse response to a risk premium shock. I define less persistent as when $\rho_{\emptyset}$ = 0.7, and high persistent as when $\rho_{\emptyset}$ = 0.9

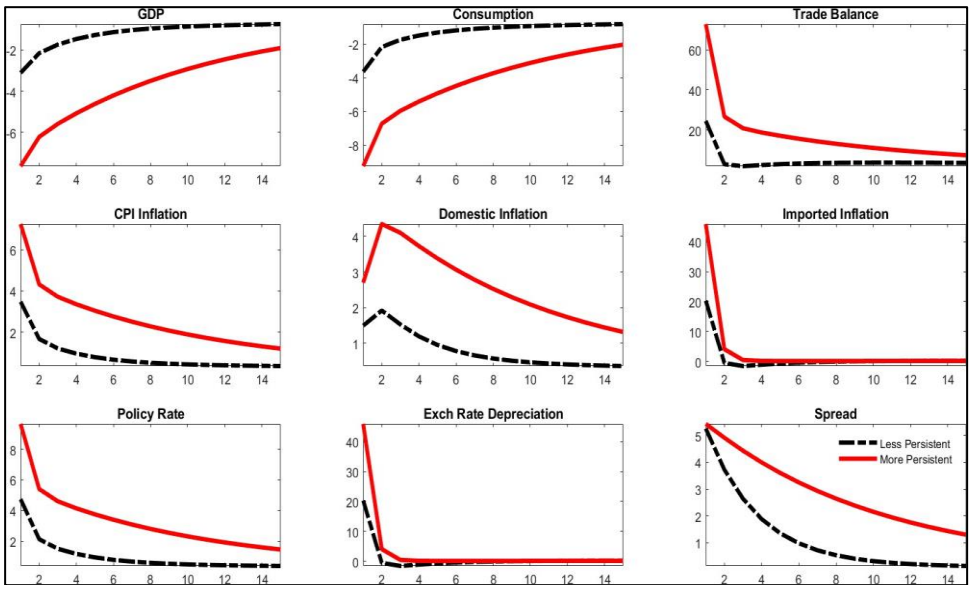


Figure 4: Impulse response to a risk premium shock when the central bank cares less about stabilising inflation. ***High Persistent + Slack SBP is when*** **$\rho_{\emptyset}$ = 0.9** ***and*** **χ_{π} = 1.1.**

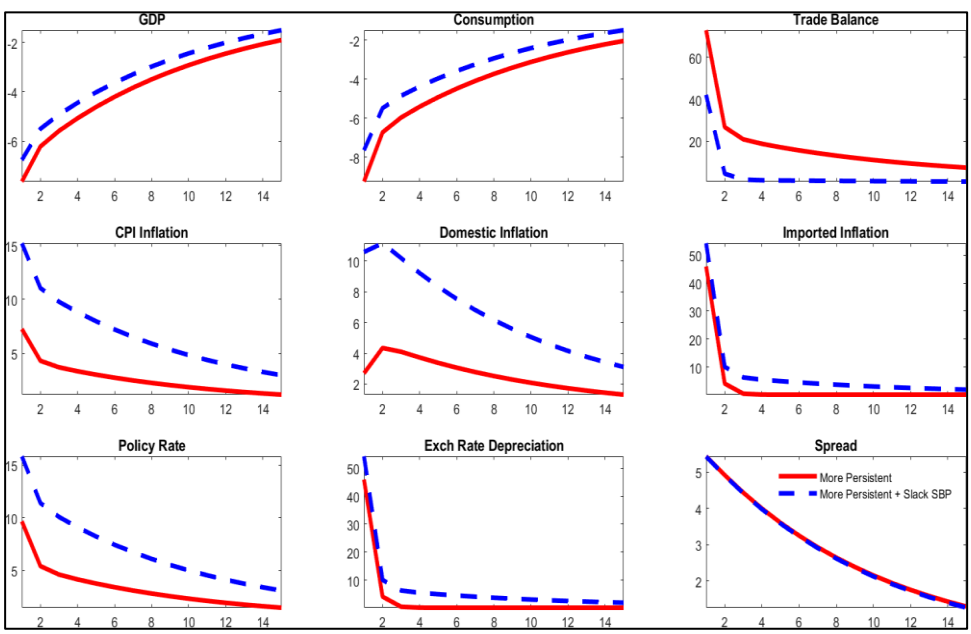


Figure 5: Impulse response to a contractionary monetary policy shock

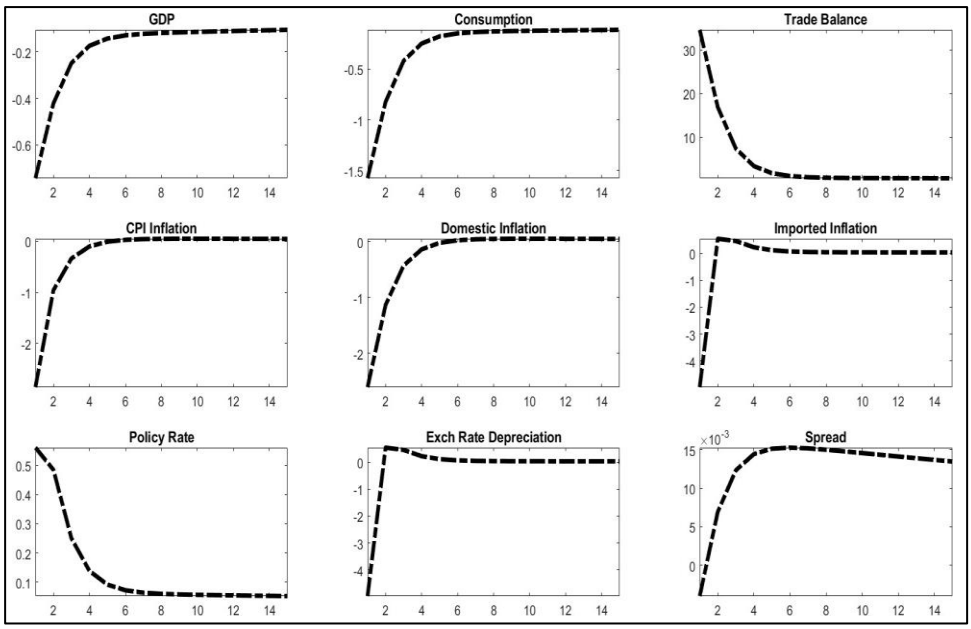


Figure 6: Impulse response to a contractionary monetary policy shock in normal times (baseline) and in times of financial stress.

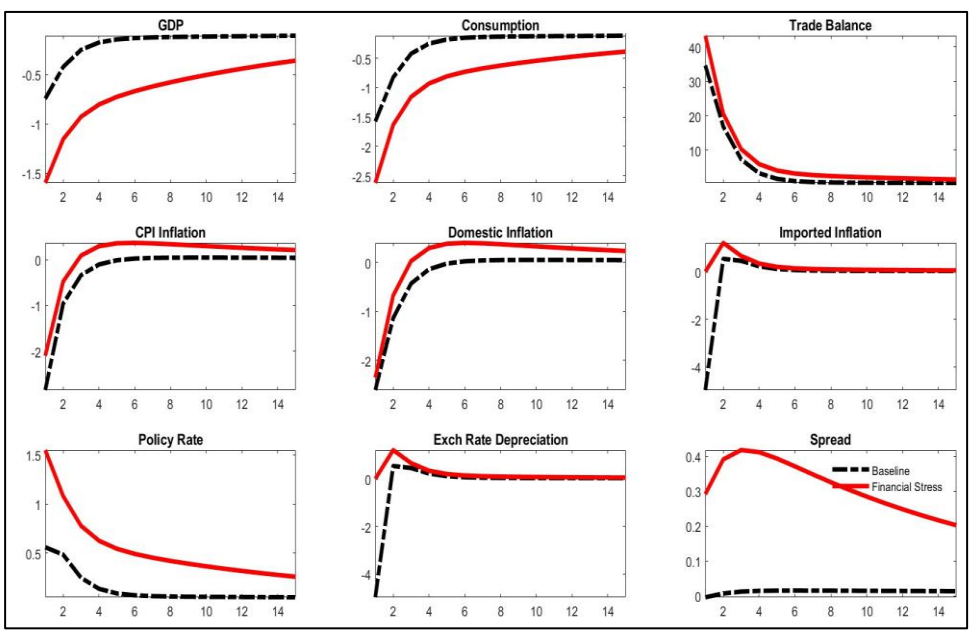


Figure 7: Inflation Expectations (PIDE, 2021)

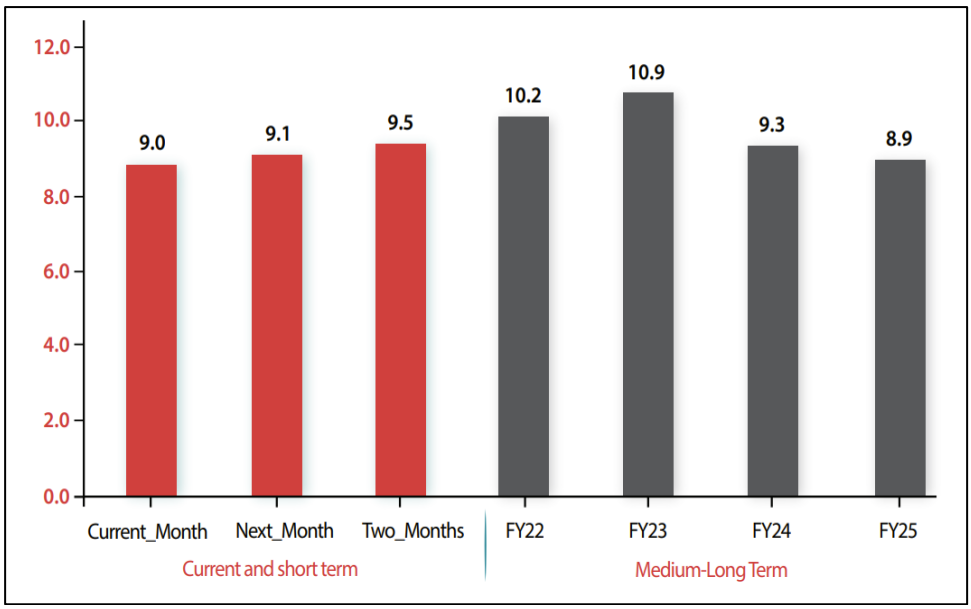


Figure 8: Real Wages (source: PBS Labour Force Surveys)

	Annual Wage Growth	Annual Productivity Growth	Overheating
FY08 – FY13	0.6	1.5	-0.9
FY14 – FY18	4.3		2.8
FY18 – FY21	-3.4		-4.9

Figure 9: World prices minus Pak prices (detrended)

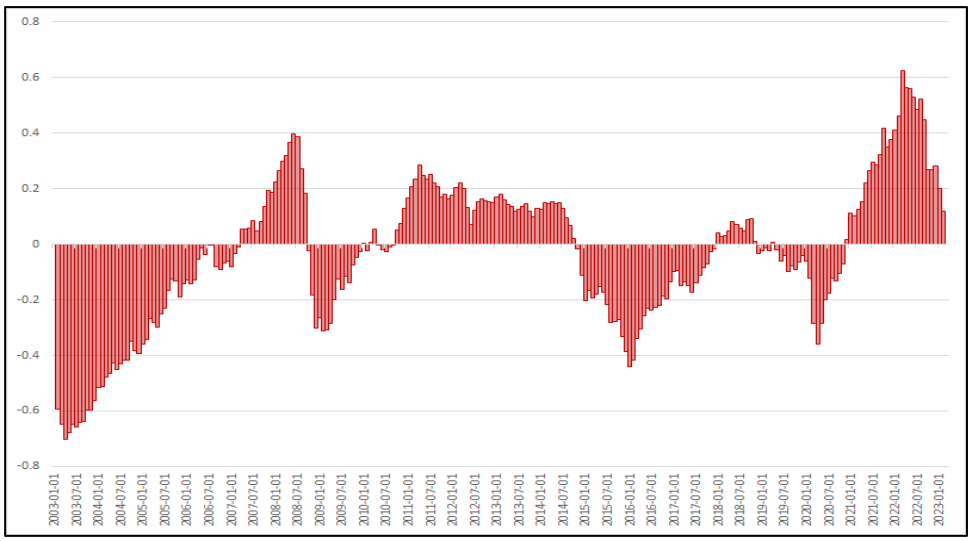


Figure 10: US policy rate minus Pak policy rate (demeaned)

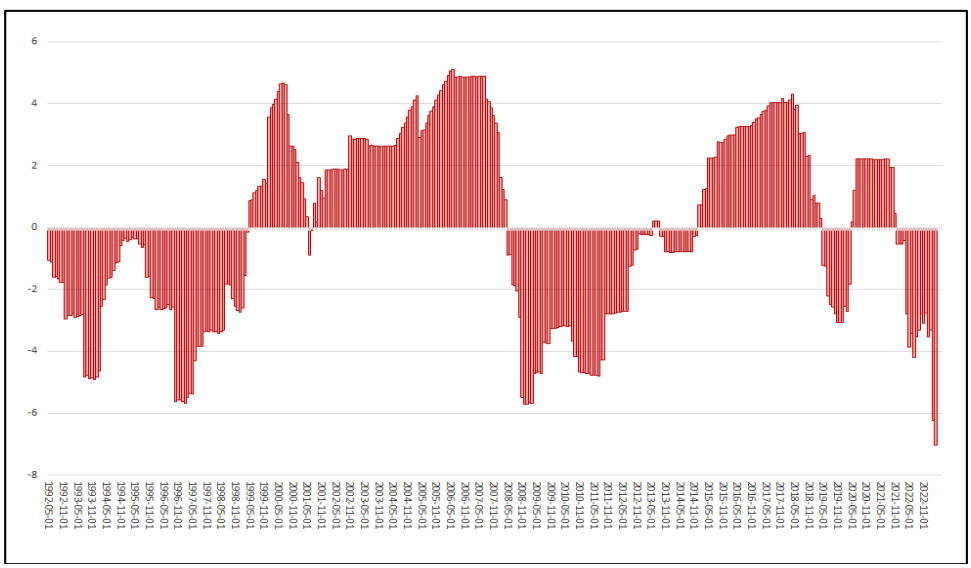


Figure 11: 1 Year CDS spread

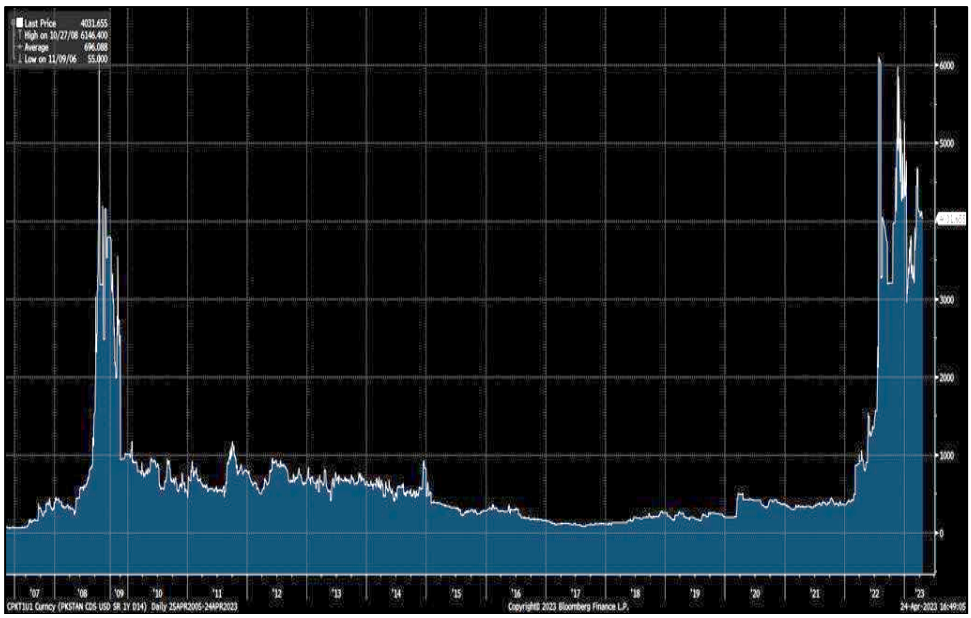
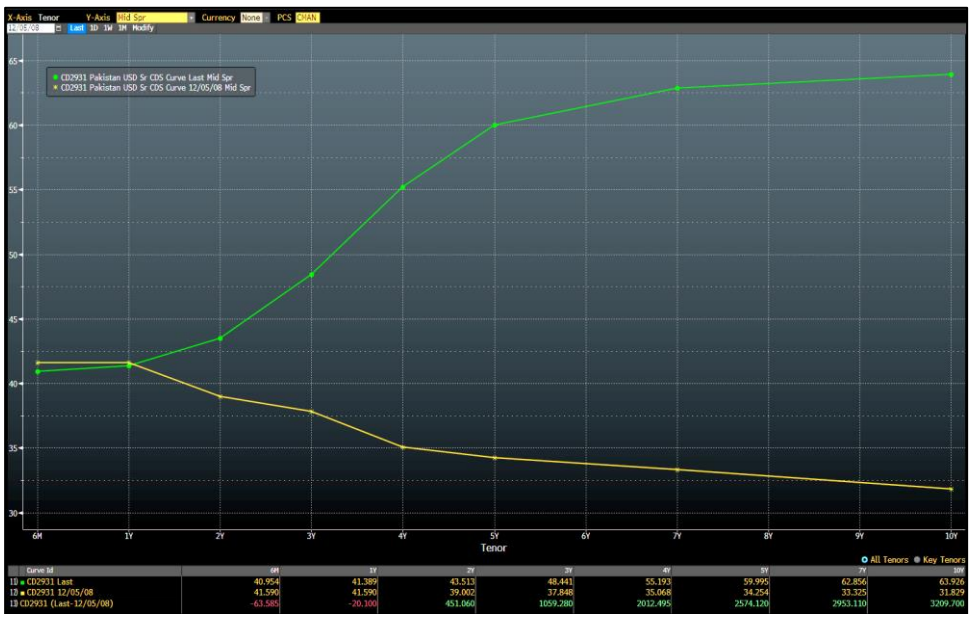


Figure 12: Term structure of Credit Default Swaps. The yellow line shows the CDS spreads over different horizon as observed in May 2008. The green line shows the same as observed in March 2023



8

Third Time Lucky? A Comparative Perspective of IMF Programmes in Pakistan, 2000, 2013, and 2023

Matthew McCartney*

Abstract

Pakistan spent much of 2022 mired in economic crisis and in 2023 the IMF arrived to negotiate an agreement, economic reforms in exchange for a large loan. It would be easy to be pessimistic about the prospects of Pakistan completing the 2023 vintage IMF programme and its multitude of conditionalities. Pakistan has signed off on more than 20 such agreements since 1958 and failed to complete all but one of them. There are grounds for optimism. Pakistan responded successfully to both the 2000-01 and 2013-16 IMF programmes in respect to a wide-range of economic and policy variables. This paper draws on a theoretical framework from Mancur Olson – the distinction between 'roving' and 'settled' bandits - to help think about the wider political economy that allowed Pakistan to (briefly) implement successful economic reform during these two periods. This paper uses this theoretical perspective to think about whether Pakistan will successfully complete the 2023 IMF programme. The tantalising conclusion is that Pakistan is more likely to do so if the criminal convictions against Nawaz Sharif are dropped and he is allowed to run for political office in the 2024 general election.

Introduction

Pakistan spent most of 2022 grappling with a severe economic crisis. As seasoned scholars and commentators anticipated, the International Monetary Fund's (IMF) arrival in 2023 marked another predictable chapter to the country's economic crisis. The year witnessed a protracted agreement with the IMF as negotiations unfolded amidst ongoing economic and intensifying political crises. Inflation soared as the political fortunes of former Prime Minister Imran Khan plummeted from leading the country to court and ultimately, imprisonment (as of the time of

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this article). Pakistan hosted an IMF mission in late January 2023, signed off on a new IMF agreement in July, and hosted a follow-up mission in August. It would be easy to be pessimistic about the prospects of Pakistan completing the 2023 IMF program and its multitude of conditionalities. Since 1958, Pakistan has signed off on more than 20 such agreements, yet it has failed to complete all but one.

This paper begins on a slightly more optimistic note, observing that Pakistan successfully implemented the IMF programme of 2000-01 and made a lot of progress in the 2013-16 IMF programme across a broad range of economic and policy variables. The variables examined in this paper include the budget deficit, inflation, non-performing bank loans, the current account deficit, debt service as a share of total exports, short-term debt as a share of total reserves, and total reserves as a share of external debt. Drawing on Mancur Olson's theory of "roving" and "settled" bandits, this paper explores the wider political economy that facilitated Pakistan's brief periods of successful economic reform. By applying this theoretical perspective, we can consider whether Pakistan is likely to complete the 2023 IMF program. Intriguingly, the conclusion suggests that Pakistan's success hinges on dropping the criminal convictions against Nawaz Sharif and allowing him to participate in the 2024 general elections.

Section 2 examines the urgent need for economic reform in Pakistan during 2022 and 2023. Section 3 delves into the history of IMF engagement in Pakistan. Section 4 presents the claim that the reform efforts undertaken in 2000-01 and 2013-16 were successful. Section 5 introduces several well-established economic theories that fail to explain the reform success of those two periods. Section 6 introduces a theory from Olson, distinguishing between "roving" and "settled" bandits, that could help the reform success of these two periods. Section 7 provides a detailed justification for the successful implementation of reforms during these two periods. Section 8 concludes and discusses the implications of these findings for the likely success of the 2023 IMF mission.

Need for Reform in Pakistan

Pakistan endured a severe economic crisis in 2022 and 2023, marked by a sense of urgency for neglected reforms and the looming threat of IMF intervention. During 2022, Pakistan faced a series of economic challenges, including devastating floods, soaring commodity prices exacerbated by Russia's invasion of Ukraine, rising inflation, an unsustainable current account deficit, a sharp depreciation of the Pakistani rupee, and a foreign exchange crisis. In 2023, Pakistan's response to these problems was inconsistent, involving a combination of "monetary tightening, new subsidies, and an informal exchange rate cap. These measures resulted in the depletion of foreign exchange reserves and undermined progress toward planned fiscal consolidation" (World Bank, 2023:1). International commentators offered a smorgasbord of pessimistic projections. The Asian Development Bank forecast

inflation to more than double from 12.2 percent in 2022 to 27.5 percent in 2023 (2023a:169). Economic growth was projected to slow from 6 percent in 2022 to 0.6 percent in 2023, and even into 2024, growth was expected to reach no more than 2 percent (2023b:81). Even this anaemic revival into 2024 was predicated on "assuming sustained macroeconomic policies, reform implementation, recovery from supply shocks caused by flooding, and improving external conditions" (Asian Development Bank, 2023a:172). The crisis was forecast to have a real impact on well-being, "with slowing activity, the lower middle-income poverty rate is expected to increase to 37.2 percent in FY23" (World Bank, 2023:1).

An IMF mission to Pakistan in late January and early February 2023 intoned a familiar list of reforms necessary to "regain macroeconomic stability and resume economic growth". The "key priorities" included "strengthening the fiscal position with permanent revenue measures and reducing untargeted subsidies, while scaling up social protection for the most vulnerable and flood-affected populations; allowing the exchange rate to be market-determined to gradually eliminate the foreign exchange shortage; and enhancing energy provision by preventing further accumulation of circular debt and ensuring the viability of the energy sector." (IMF, 2023a).

The World Bank largely concurred, stating that "to facilitate new external financing, regain stability, and establish a base for medium-term recovery, the Government must maintain overall sound macroeconomic management, including a flexible exchange rate and controlling inflation through appropriate monetary policy; increase revenues and rationalize expenditure (including reducing untargeted energy subsidies); and implement trade and private sector reforms to support improvements in investment, competitiveness, and productivity" (World Bank, 2023:1).

Results of IMF engagement

A passing familiarity with Pakistan's previous engagement with the IMF would likely lead to pessimism regarding the country's ability to implement IMF-mandated reforms. As of February 2020, Pakistan had signed 22 agreements with the IMF and failed to complete 21 of them. The exception was a Standing Arrangement of US$596 million, signed in November 2000 under the military government of General Musharraf and running until September 2001 (IMF, 2023b).

One means of quantifying this failure is to focus on tax revenue. In 2000, the IMF approved a Stand-By Credit for Pakistan of US$596 million, regarding which, the IMF's Managing Director indicated that the "budget target is to be achieved through increased tax collections, a widening of the tax base, improved tax administration, and strict expenditure controls." (IMF, 2000). In 2003, the IMF approved a loan of US$123 million. The IMF's Managing Director was quoted as

saying "This will require forceful pursuit of reforms aimed at simplifying the tax system and broadening the tax base, including through the elimination of a number of tax exemptions, to reduce distortions and the potential for corruption" (IMF, 2003). In 2009, the IMF completed a review of a US$11.3 billion loan to Pakistan. At the time, the Deputy Managing Director was quoted as saying "A durable solution to the problem of low tax revenue should start with the early implementation of Value Added Tax (VAT) and the ongoing tax administration reform" (IMF, 2009). In 2010 the Deputy Managing Director of the IMF said, "Achieving the 2009/10 fiscal target will require strong efforts, including from the political leadership. Resolute continuation of tax collection efforts, tax administration reform, and expenditure restraint" (IMF, 2010).

These four quotes are not exceptions, but rather are entirely typical of the conditionalities imposed by the IMF. A more comprehensive list of 18 such examples can be found in McCartney (2015). Figure 1 shows the practical outcomes of these promises: Tax revenue in Pakistan barely changed between 2000 and 2021, fluctuating within a narrow band between 9 and 11 percent of GDP. Consequently, in 2021 (9.56 percent), tax revenue was lower than in 2000 (9.45 percent).

Two Success Stories: 2000-2001 and 2013-2016

As noted in Section 2, Pakistan only fully completed the conditionalities attached to one IMF program, the one launched in 2000. However, if we examine a broader range of macroeconomic indicators, we can extend the list of successes to two. Although two is not a large number out of the twenty occasions in which Pakistan has engaged with the IMF, it is at least adequate for a comparative perspective. Pakistan managed to implement economic reforms sufficiently to ensure that the main macroeconomic indicators quickly moved in the right direction after both 2000 and 2013. We introduce these two programs in this section and provide a more comprehensive justification for why they can be considered "successes" in Section 6.

In 2000 Pakistan received US$596 million from the IMF, which went to the then-newly installed military government of the late General Pervez Musharraf. At the time, IMF appeared to be optimistic about the prospects for reform and declared, "The new government, shortly after assuming office in October 1999, announced that it would make a clean break from the past by forcefully implementing reforms to address these long-standing structural problems facing the economy. They set forth a wide-ranging reform agenda aimed at reducing poverty, improving governance, and sustaining a high rate of economic growth." (IMF, 2001:6).

The IMF did acknowledge, however, that looking at past engagements with the IMF, performance in Pakistan had been disappointing. "Policy implementation

and economic performance have been disappointing. Tax revenue performance has repeatedly fallen short of programme targets, public sector indebtedness—both external and domestic—has continued to rise, the external position has remained fragile, and economic growth has been low, while the number of people living in poverty has increased and Pakistan's social indicators remain weak." (IMF, 2001:6).

In 2013 Pakistan requested US$6.68 billion from the IMF through an Extended Fund Facility. Whereas previously the IMF had heralded the arrival of a reforming military government, in 2013 they praised the merits of a newly installed democratic civilian government. "The convincing win provides a strong mandate to implement a bold reform agenda required to lift Pakistan's growth potential, which deteriorated significantly over the past decade" (IMF, 2013:1).

The IMF did acknowledge Pakistan's reform history, saying "the programme carries significant implementation risks given Pakistan's track record" (IMF, 2013:2), but noted that these risks were "mitigated by critical upfront actions and even phasing of Fund disbursements, as well as by the strong electoral mandate and commitment to reform of the new government" (IMF, 2013:2).

Theories of Reform that Do Not Fit Pakistan

This paper seeks to explain why and how the reform episodes in 2000-01 and 2013-16 were relative successes. Economic theory and case studies of reform have generated various possible explanations, most of which do not fit these two Pakistan case studies. These theories include IMF conditionalities, democracy and dictatorship, a discredited former regime, and a developmental state.

IMF Conditionalities

The IMF intends and various scholars support the use of conditionalities as a buttress to strengthen the reform drive of recipient governments. Turning to the IMF is often a last resort when other sources of commercial or low-interest credit have dried up, and there is no alternative. The Cold War bipolarity, in which countries such as China and the USSR offered donor support as a distinct ideological alternative to the US, has since collapsed. Loans from the IMF, especially when phased over time (as in 2013) can serve as a reward for adhering to reforms. An IMF program often signals intent and seriousness to other potential donors, who may offer assistance contingent upon adherence to the IMF program. However, this explanation does not help with regards to our two Pakistan case studies, both of which were subject to IMF conditionalities, as were the numerous failed reform efforts noted in Section 3.

Democracy and Dictatorship

Other scholars have focused on the nature of the political system, investigating whether democracy or dictatorship is more effective in implementing radical, IMF-style policy reform. Some have noted that democracy often leads to more fitfulreforms, because of the greater need to avoid imposing costs on politically influential groups. For example, India's reform process in the 1990s has been described as "a process of change that was not so much gradualist as fitful and opportunistic", with India evidently possessing a "strong consensus for weak reforms" (Ahluwalia, 2002:86). Conversely, democratic countries may be better equipped to foster coordination and cooperation among various groups. Consistent with these arguments, evidence suggests that countries with greater civil liberties and political rights during the 1970s were more resilient to the global economic shocks and slowdown in global growth in the mid-1970s, experiencing lower declines in economic growth when their trend rate of growth changed (Rodrik, 1997). Moreover, the volatility of economic growth tends to decrease following democratization (Rodrik and Wacziarg, 2005). However, this debate has limited relevance to our case studies, which compare successful adjustment under a dictatorship (Pakistan in 2000), followed by a democratic government (Pakistan in 2013).

A Discredited Former Regime

Economic reform may be facilitated when an incoming government can attribute economic and social problems, as well as the short-term costs of reform, to a discredited former regime. This was one factor that enabled rapid and systemic change in the socialist transitionary economies of the 1980s (China) and 1990s (the former Soviet Union, and Central and Eastern Europe). To some extent, the military government under Musharraf was able to do so in Pakistan in 1999. The military coup was justified on the grounds of the perceived corruption and incompetence of the democratic civilian governments of the 1990s, three of which had been dismissed by the Pakistani President. The incoming Pakistan Muslim League government under Nawaz Sharif in 2013 similarly attempted to blame the outgoing Pakistan People's Party under Asif Zardari for economic problems, in a traditional democratic manner. There is limited scope for this argument, particularly regarding why Pakistan was able to implement successful reforms in 2000-01 and 2013-16. Pakistan in 2000 and 2013 was markedly different from the transition economies of the 1980s and 1990s. These transitionary economies were undergoing a systemic shift from closed, state-run, and planned socialist systems to open-market, private sector economies. In many cases the political system had transitioned from authoritarian to democratic. These were examples where a discredited political regime and economic system could be blamed for current economic problems and any associated costs of reform. In 2000, Pakistan witnessed the rise to power of a military government, the same military that had

been at the centre of Pakistan political life since at least the 1950s and had seized power through military coups in 1958 and in 1977, ruling for a decade in both instances. the third military coup in 1999 was not particularly novel. The Muslim League, which came to power in 2013, was the successor to the Muslim League which was the party of independence in the 1940s and came to power in 1947. Nawaz Sharif and the Muslim League had formed the national government between 1990-93 and 1996-99.

A Developmental State

Other scholars have argued that a "strong state", regardless of whether it is democratic or dictatorial, is essential for promoting market-oriented economic reform and overcoming the entrenched special interests that benefit from government intervention. The market-oriented reforms implemented by Prime Minister Margaret Thatcher in Great Britain during the 1980s are often cited as an example (Gamble, 1988). This idea has been generalised by scholars of developmental states, who seek to explain the economic success of countries such as Japan, South Korea, and Taiwan, and China, as a product of effective and developmentally oriented states (Leftwich, 1995). Some authors have suggested that the incoming military government of General Pervez Musharraf in 1999 attempted to make the civil service more autonomous from politicians, more technocratic, and more development-oriented. General Musharraf appointed Shaukat Aziz (then senior manager at the Citibank) as Finance Minister. Aziz put together a team of international bankers and former/current employees of the World Bank and IMF, including Ishrat Husain, a former director for central Asia at the World Bank who was appointed governor of the State Bank of Pakistan (SBP). Aziz became Pakistan's most important minister and was given the freedom and mandate to tackle the financial crisis, often bypassing the prime minister. At the time, military rule was viewed as a benefit, insulating the state and empowering a technocrat to implement long-term, tough economic reforms (Khanna, 2010). The World Bank's "Government Effectiveness" index "captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5." Figure 2 shows that there were brief, slight improvements in government effectiveness around 1999-2000, a deterioration soon after, an improvement between 2003 and 2006, a slump after 2006, and some signs of an improvement in 2013, though from very low levels. At no point between 1999 and 2013, did Pakistan have an effective, East-Asian style government.

A Theory of Reform that Does Fit: Mancur Olson, Roving Bandits, and Settled Bandits

This section introduces the Roving vs Settled Bandit theory of Mancur Olson. According to this theory, all politicians are bandits and seek to benefit themselves and their networks through "theft". When facing imminent loss of office, the most profitable option is to raid the state's coffers. However, in a more stable political environment with a long-term tenure, promoting economic growth by protecting the property rights of investors becomes more lucrative. This section introduces the Olson theory and explains how Pakistani politics shifted from "roving" to "settled bandits" in the 1990s compared to the 2000s.

The Olson Theory

Mancur Olson provides a useful framework. Olson assumed all politicians to be "bandits" seeking to maximise their personal wealth and power by using political office. When facing imminent and certain loss of office (being a long way behind in the opinion polls with an election looming), a politician would have no incentive to consider future societal output, becoming a "roving bandit" (Clague et al, 1996). Whenever a politician faces a higher likelihood of losing power or a shortened time horizon, they may be tempted to expropriate assets from businesses, households or farmers. Short-term tax yields are often less than the capital value of expropriated assets. In the 1990s Pakistani politicians faced uncertain and likely brief tenures in office. This incentivized them to grab wealth for themselves and their networks as quickly as possible, making them "roving bandits". A quick plunder and subsequent departure was the political maxim.

Investment is essential for growth, but returns on investment may take time. This means that a politician with a long-term perspective will try to convince constituents that their assets are protected from theft by others and expropriation by the politician themselves (Olson, 1993, 2000). This paper argues that politics in Pakistan shifted toward greater stability and longevity after 1999. However, this did not indicate a change in the politicians of the military dictatorship or subsequent democracy. They still sought to maximise their wealth and power; they were still "bandits". The incentives for politicians changed. For those with extended tenure, maximizing personal wealth and benefits for their networks involved taking a more regular and predictable income share while incentivizing businesses to expand production over the longer term (Olson, 1993; 2000).

Pakistani Politics: From Roving Bandits in the 1990s to Settled Bandits in the 2000s

The military governments that took power in 1958 and 1977 each lasted more than a decade. The 1999 military takeover ousted former Prime Minister Nawaz Sharif,

who went into exile. The new president, General Pervez Musharraf—responsible for the said takeover—faced the prospect of a similarly extended tenure in office.

The nature of civilian democracy and its return to Pakistan after 2008 require further justification. In the 1990s, Pakistani governance was characterized by minority-led coalitions that consistently failed to complete a five-year term in office. These coalitions included the Pakistan People's Party (PPP)-led four-party "Democratic Alliance" (1988-90), the Pakistan Muslim League-Noon (PML-N)-led nine-party "Islami Jamhoori Ittehad" (IJI) alliance (1990-93), and the subsequent PPP (1993-96) and PML-N (1997-99) governments. The PPP-led "People's Democratic Alliance" (PDA) also proved short-lived. The PML(N)-led IJI alliance was promoted by Pakistani intelligence agencies to unite various supporters of President General Zia-ul Haq, who died in August 1988 (who came to power by overthrowing Zulfikar Ali Bhutto's civilian PPP government). The alliance survived under various guises and fluctuating membership throughout the 1990s. The largely urban and Karachi-based Muttahida (formerly the Muhajir) Qaumi Movement (MQM) party was a shifting alliance partner. It switched between the PPP and PML-N based on its own internal political compulsions. The first three governments of the 1990s were dismissed by the President for corruption and maladministration. The last one was overthrown in a military coup. The PML-N's victory in 1997 was the only national-level majority for a single party in Pakistan during the 1990s.

The 2000s saw the gradual stabilisation of a two-party coalition system, where governments were only removed by the electorate or through constitutional means. The 2008 PPP administration completed its full five-year term, the first since 1971. The 2013 PML-N victory heralded Pakistan's first ever democratic transfer of power after a full term in office. The PML-N went on to complete its five-year term in office and was ousted at an election (2018) by the Pakistan Tehreek-e-Insaf (PTI) party headed by the cricketer and philanthropist Imran Khan. PTI lost its majority in parliament and a subsequent parliamentary vote of no confidence, which in turn led to the resignation of Imran Khan as PM, and his replacement by Shahbaz Sharif and the PML-N.

A significant indicator of increasing political stability in the 2000s was the evolving role of independent members of parliament (MPs) in national elections. Independent MPs, often with a local power base and prior party affiliations, increasingly won seats. The victories frequently led to negotiations with established political parties, typically the majority party, for various benefits such as financial payoffs or ministerial office in exchange for support.

Independent candidates often demonstrate flexibility in joining and leaving ruling coalitions, which can weaken party attachment and the stability of party rule. In the 1988 elections in Pakistan, independent candidates played a pivotal,

role, winning 48 of 217 seats and 22.12 percent of the vote. Many of these candidates were local notables who had been denied tickets by the main political parties (PPP or PML-N), leading them to run as independents. The party-political system lacked the robustness to retain these candidates within the system to work for party interests. Since 1988, the role of independent candidates has steadily declined, with seats won dropping from 48 in 1988 to 27 in 2013 and plummeting to 13 in 2018. The vote share for independent candidates experienced an even sharper decline, falling from 22.12 percent in 1988 to a negligible 3.8 percent in 2018. These small, often one-person, parties represent single constituencies and have little incentive to consider the wider social costs of any benefits they secure for their narrow interests. Special interest groups, which significantly influence government policies, have minimal incentive to consider the social costs of the redistributions they obtain. A typical lobby in the United States represents less than 1 percent of the country's income-earning capacity, leading it to stop advocating further redistribution only when the social costs exceed the benefits by a factor of one hundred (Olson, 1993).

The nature of the political leadership in Pakistan strengthened the impact of the "settled" nature of the ruling bandits. In Pakistan, Asif Ali Zardari headed the PPP and became President in 2008. It was widely assumed that Zardari's son, Bilawal Bhutto, would eventually take over the party leadership. Bilawal was the son of former Prime Minister Benazir Bhutto, who in turn was the daughter of former Prime Minister Zulfikar Bhutto. Nawaz Sharif, the Prime Minister, and his brother, Shahbaz Sharif, the Chief Minister of Punjab, were both first-generation politicians. However, they had various sons and daughters who were speculated to become the next generation of democratic-dynastic political leaders of the PML-N. The perception of ruling leadership in Pakistan during the 2000s extended beyond that typical of a five or ten-year period in office. In both countries, the leadership had an incentive to act as settled bandits to pass on the benefits of long-term policy orientations to their dynastic family successors.

In Pakistan, the nature of political competition is crucial; to win office, politicians must form winning coalitions. The number of competitors a party faces in a first-past-the-post system influences the size of the constituency a politician must appeal to in order to secure a majority. If there are only two effective parties or alliances, each needs a majority to win the seat, which compels a party to build broad alliances across social groups. In such cases, politicians will seek a more encompassing interest (Olson, 1993). However, as the number of competitive parties increases, a party requires an increasingly smaller coalition to win the seat. For example, in the Lok Sabha elections in India between 1957 and 1991, a winning party needed 55 percent of the vote in districts with two competitive parties, compared to 38 percent in districts with three or more effective parties. Empirical evidence shows that multi-party systems in India spend less on public goods

relative to targeted goods and salaries (Chibber & Nooruddin, 2004). Evidence from India also indicated that the successful implementation of the National Rural Employment Guarantee Act (NREGA) in Andhra Pradesh (Khosla, 2011) and in Rajasthan (Gupta & Mukhopadhyay, 2014) was linked to close two-party competition for power at the state level. A study of 3,701 country-years from 107 countries investigates whether electoral rules and the form of government affect economic growth. The results show no robust impact of presidentialism or parliamentarism on economic growth. However, there is robust evidence of a positive and substantial, impact of proportional representation (PR) electoral rules on economic growth. This is partly due to the propensity of PR systems to generate broad-interest policies, such as universal education spending, property rights protection, and free-trade, rather than special interest economic policies (Knutsen, 2011).

Evaluation of 2000-01 and 2013-16

This section provides empirical evidence to support the claim in section 4 that economic reforms undertaken by Pakistan, after engaging with the IMF, were sufficient for macroeconomic indicators to move swiftly in the right direction after 2000 and 2013. It also provides the evidence to support the theoretical framework of the Olson thesis from Section 6, which suggests that greater stability and longevity in Pakistani politics, as seen in 2000 and 2013, resulted in improved macroeconomic management. The variables discussed in this section include the budget deficit, inflation, non-performing bank loans as a share of total loans, the current account deficit, debt service as a share of total exports, short-term debt as a share of total reserves, and total reserves as a share of external debt. These variables are common to IMF programs in Pakistan and are critical for ensuring sustainable economic growth.

Figure 1 shows that the general stagnation of tax revenue across 2000 to 2021 masks moderate increases during both 2000-2001 and 2013-2016. Tax revenue as a share of GDP was stable at around 9.5 percent in both 2000 and 2001, then increased to 10.3 percent in 2003. The tax ratio increased from 9.8 percent in 2013 to 11.19 percent in 2016. However, these increases were not sustained as the tax ratio declined after 2003 and 2018.

Figure 3 shows that the budget deficit was sharply reduced between 2000-2001 (-4 to -3 percent) and 2013-16 (-8.4 to -4.42 percent). However, in both cases, this progress was not sustained, and the budget deficit increased afterward.

Figure 4 illustrates that inflation decreased in 2000-01 (from 5 to 3 percent) and 2013-16 (7.2 to 3.8 percent). Yet, as with the budget deficit, reforms were not sustained, leading to an increase in inflation after 2003 and 2015.

Figure 5 shows that problematic lending by the banking system was successfully addressed in both 2000-2001 and 2013-2016. In 2000-2001 non-performing loans initially increased from 19.5 percent to 23.4 percent of GDP, but then sharply declined to 6.9 percent of GDP by 2006. Between 2013 and 2016 non-performing loans declined from 13 percent to 10 percent, before showing an increase after 2018.

Figure 6 shows that the current account balance was well managed during both 2000-2001 and 2013-16. Between 2000-2001 the current account balance increased from 0 percent to 2 percent of GDP, further improving to 5 percent in 2002, before deteriorating rapidly. In 2013-2016, the balance was maintained between -1 to -2 percent of GDP, but there was a sharp deterioration after 2016.

Figure 7 shows that debt service as a share of exports of goods, services, and primary income, remained stable at around 28 percent between 2000-01, then fell sharply. It declined from 22.7 percent in 2013 to 15.7 percent in 2016, before rising sharply again.

Figure 8 shows that significant progress was made in reducing the ratio of short-term debt as a share of total reserves (a proxy measure of financial vulnerability) during both 2000-01 and 2013-16. The ratio declined from 72.8 percent in 2000 to 31.1 percent in 2001, and from 60.8 percent in 2013 to 32.3 percent in 2016. However, the ratio subsequently increased after 2009 and 2016.

Figure 9 shows that total reserves as a share of total external debt increased during both 2000-2001 and 2013-2016. The ratio increased from 6.3 percent in 2000 to 13.1 percent in 2001, and from 12.7 percent in 2013 to 29.4 percent in 2016. The ratio subsequently declined, after 2007 and 2016.

Conclusion and Discussion: Implications for 2023

It would be easy to adopt a pessimistic view regarding Pakistan's ability to fulfil the conditions of the 2023 IMF programme. Pakistan has failed to complete all but one of the more than twenty IMF programs it has entered into since 1958. However, this paper takes a slightly more optimistic perspective, arguing that Pakistan responded successfully to both the 2000-2001 and 2013-2016 IMF programs across a wide range of economic and policy variables. This paper draws on Mancur Olson's theoretical framework—specifically the distinction between 'roving' and 'settled' bandits—to explore the broader political economy that enabled Pakistan to briefly implement successful economic reforms during these two periods. This paper used this theoretical perspective to explain why Pakistan was better able to implement economic reform in both 2000-2001 and 2013-2016. The explanation offered here is that Pakistani politics shifted from roving to settled bandits in the 2000s compared to the 1990s. Politics in Pakistan during the 2000s

was characterized by greater stability and longevity in office. This stability provided politicians, both dictators and democrats, with the incentive to adopt a long-term perspective and implement the economic reform measures requested by IMF.

After eight months of protracted negotiations, amid loud media commentary, and inflation reaching 30 percent, the IMF Executive Board approved a US $3 billion Stand-by Arrangement for Pakistan in July 2023 (IMF, 2023c). The new IMF loan acknowledged that Pakistan had been buffeted by a "difficult external environment" which included "devastating floods", but also acknowledged that much of the crisis resulted from domestic "policy missteps". Together, these forces "led to large fiscal and external deficits, rising inflation, and eroded reserve buffers" (IMF, 2023c). The package of reforms Pakistan agreed to implement in exchange for the loan was a familiar one. It included "fiscal adjustment", "protecting critical social spending", a "return to a market-determined exchange rate", "an appropriately tight monetary policy aimed at disinflation", and "further progress on structural reforms, particularly with regard to energy sector viability, SOE governance, and climate resilience" (IMF, 2023c). Unsurprisingly, there was a ritual emphasis on taxation, the "anticipated improvement in tax revenues is critical to strengthening public finances, and eventually creating the fiscal space needed to bolster social and development spending." (IF, 2023c).

The IMF Managing Director emphasised the importance of implementation: "The authorities' new Stand-By Arrangement, implemented faithfully, offers Pakistan an opportunity to regain macroeconomic stability and address these imbalances through consistent policy implementation." (IMF, 2023c).

There are mechanisms built in to help ensure the programme is a success. Pakistan received a US$1.2 billion upfront payment from the IMF, with the remaining to be disbursed over the next nine months, contingent on meeting various targets. The United Arab Emirates and Saudi Arabia also provided significant financial assistance (US$1 billion and US$2 billion, respectively), but their support was contingent on Pakistan reaching an agreement with the IMF (BBC, 2023).

Benighted

An IMF team visited Pakistan in early August 2023 to evaluate progress on the loan conditionalities and contribute to a decision about whether to release a further US $700 million of IMF lending (IMF, 2023d). The team noted that "a nascent recovery is underway, buoyed by international partners' support and signs of improved confidence" and commended Pakistan for the "steadfast execution of the FY24 budget". Even in historically challenging areas the IMF were positive. The IMF team noted, the "authorities are determined to achieve a

primary surplus of at least 0.4 percent of GDP in FY24, underpinned by federal and provincial government spending restraint and improved revenue performance supported, if necessary, by contingent measures." While "protecting vulnerable consumers, the authorities implemented power tariff adjustments that were pending since July 2023 and increased gas prices after a long time", and following "passage of the State-Owned Enterprises (SOE) law, the authorities are moving forward with their SOE policy and implementation of their triage plan, including the privatization of select SOEs." (IMF, 2023d).

The successful reforms of 2000-01 and 2013-16 demonstrate that Pakistan can achieve significant progress under both democratic and dictatorial regimes, even with little government effectiveness, but only when incentives are aligned. Applying Olson's theory, we can identify the conditions under which the government would be motivated to implement the current IMF programme. We must assess whether the current government operates in a relatively stable political environment and perceives itself as a long-term ruling entity (a "settled bandit"). The answer to both questions appears to be negative.

The PML-N government led by Shabaz Sharif (Nawaz Sharif's brother) before February 2024, came to power in 2022 after the incumbent Prime Minister was ousted in a vote of confidence. This was the culmination of a period of political instability. The PPP administration (2008-2013) saw Prime Minister Yousaf Raza resign in 2012 due a corruption scandal. His replacement, Mr Haza Khan Khoso, served until the party's defeat in 2013. The PML-N government (2013-2018) was led by Prime Minister Nawaz Sharif until 2017, when he was replaced by Shahid Khaqan Abbasi. Imran Khan led the PTI government from 2018 until his ouster in 2022. The incumbent government, a hastily formed alliance, was tasked with ousting and replacing Prime Minister Imran Khan. The incumbent government under Shahbaz Sharif was facing pressure to implement tough IMF reforms before the February 2024 general election. The leading candidates, Imran Khan (imprisoned and facing legal charges) and Nawaz Sharif (three times former Prime Minister, recently returned from exile and disqualified), were vying for the position. Given the political instability and the likelihood of losing political office, the government's incentives are shifting toward short-term gains, similar to those of a "roving bandit", as per the Olson theory. This could hinder the successful implementation of the 2023 IMF program.

Another trend may alter this trajectory. Nawaz Sharif's return from exile, coupled with his abandonment of opposition to the military, has predictably led to the overturning of his past convictions (Afzal, 2023). This includes his conviction for corruption in the Avenfield properties case (Burney, 2023). There is widespread speculation that the military and other organisations were working to ensure a victory for the incumbent Muslim League in the 2024 elections, while simultaneously undermining the prospects of Imran Khan and the PTI (Afzal,

2023). If this trend gains momentum and the likelihood of a PML(N) victory under either Shahbaz or Nawaz Sharif increases, the incentives faced by the PML(N) government may shift towards those of "settled bandits".

Throughout this paper, "success" has been narrowly defined as the ability to complete a short-term IMF program. The 2023 IMF program, lasting only nine months, would likely require the winner of the 2024 general elections to negotiate another program soon after taking office. Our two case studies of success, 2000-2001 and 2013-2016 were short-lived. Section 7 demonstrated how quickly economic policy and related macroeconomic indicators deteriorated after the completion of these IMF programs. Even the favorable incentives faced by "settled bandits" are insufficient in the Pakistani context to foster long-term, sustainable policymaking.

Upon assuming power, every new government In Pakistan pledged to implement policies that will foster economic growth, enhance social services and alleviate poverty. However, the state's limited resources, due to low tax revenue hinder the achievement of these ambitious goals. Consequently, an increasing number of voters and elites become disillusioned with the government (Lieven, 2011). As the likelihood of re-election diminishes, the government's incentives shift from "settled" to "roving bandits", undermining reform, economic growth and further reducing the chances of re-election.

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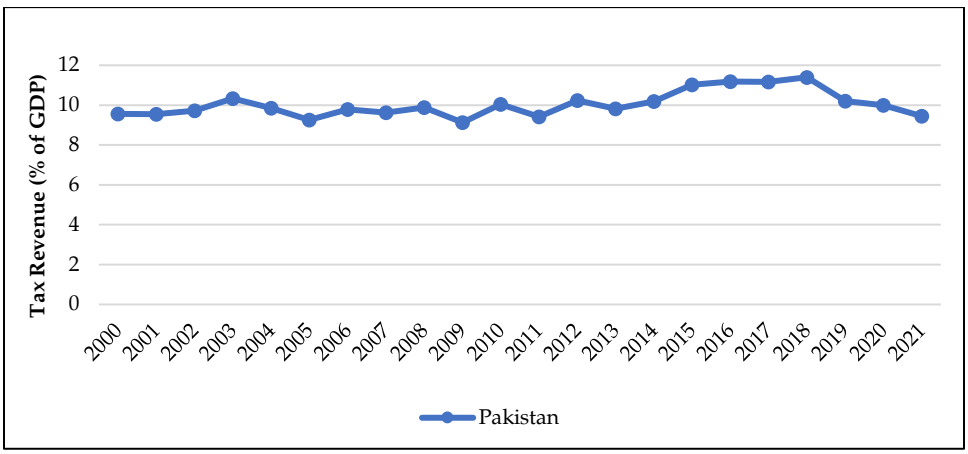
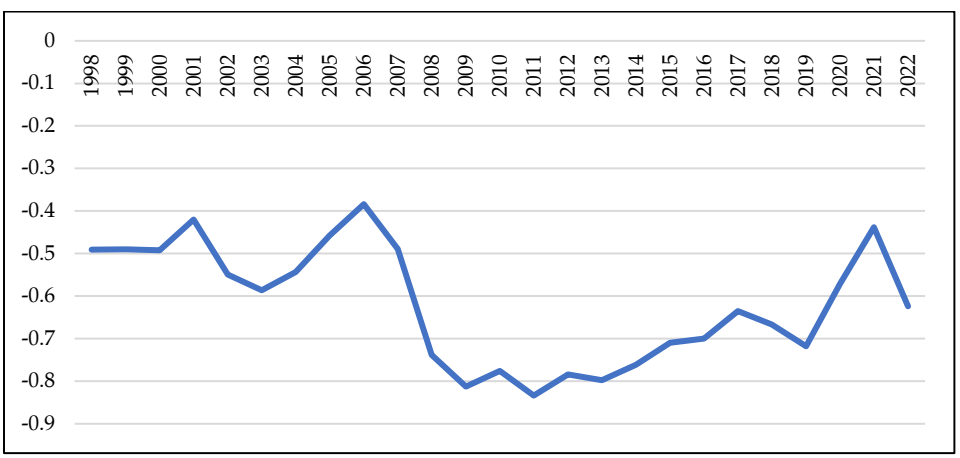
Appendix

Figure 1: Tax revenue (% of GDP), Pakistan 2000-2021



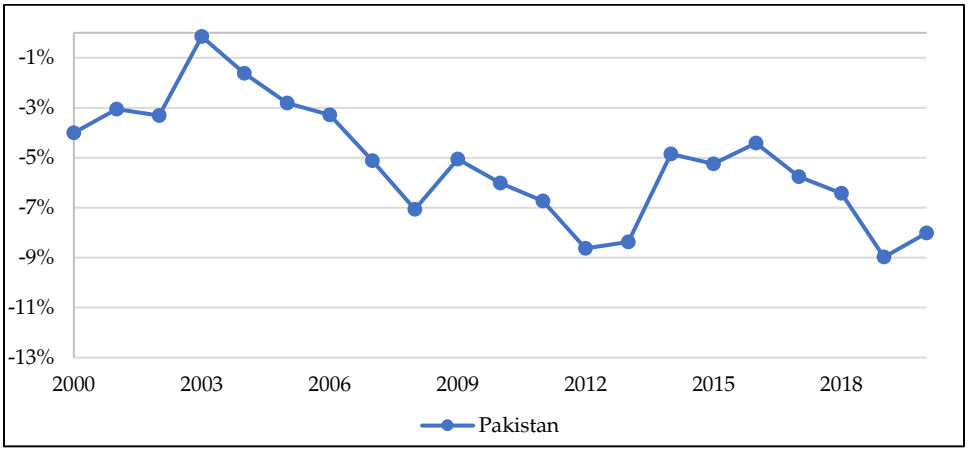
Source: Asian Development Bank (2022)

Figure 2: Government Effectiveness in Pakistan, 1998 to 2022



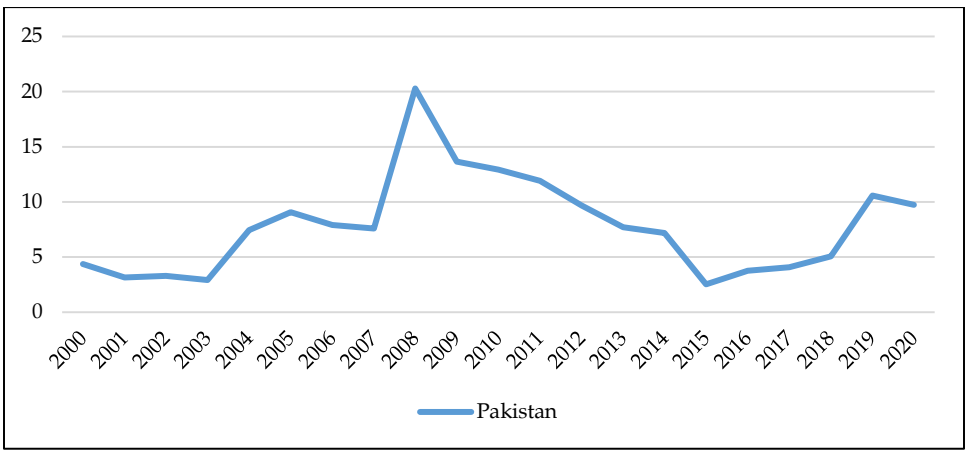
Source: World Bank (2022)

Figure 3: Budget deficit as % of GDP, Pakistan 2000-2020



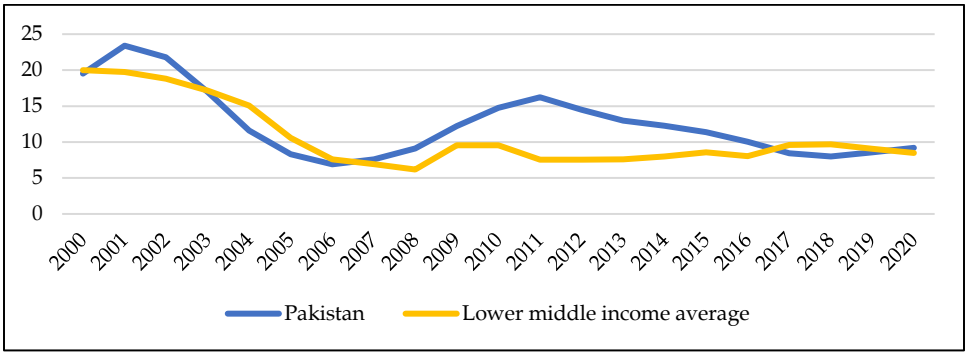
Source: Pakistan Bureau of Statistics

Figure 4: Inflation, Consumer Prices (annual %), Pakistan 2003-2019



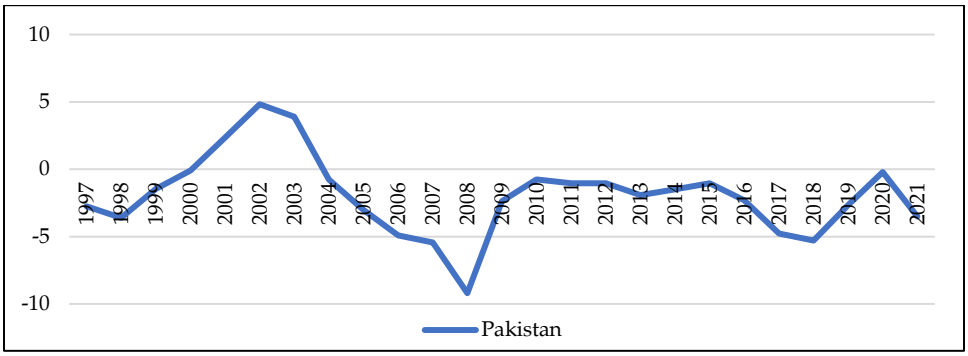
Source: World Bank (2022)

Figure 5: Non-performing loans (NPLs) in the Banking System as % of total loans, Pakistan and Lower-middle income countries 2000-2020



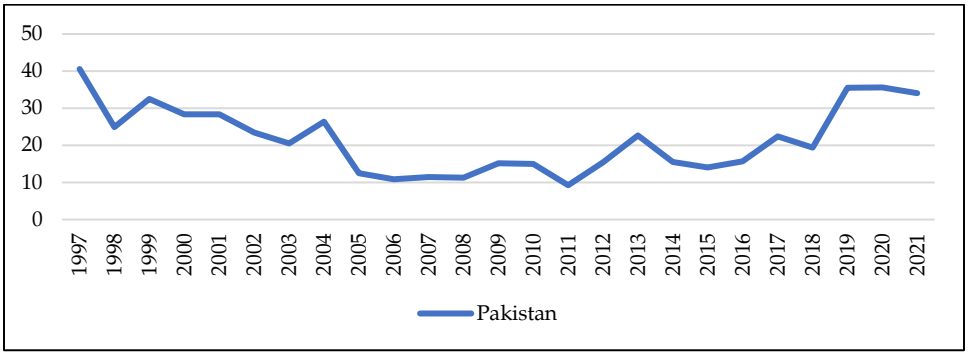
Source: International Monetary Fund (2022)

Figure 6: Current account balance (% of GDP), Pakistan 1997-2021



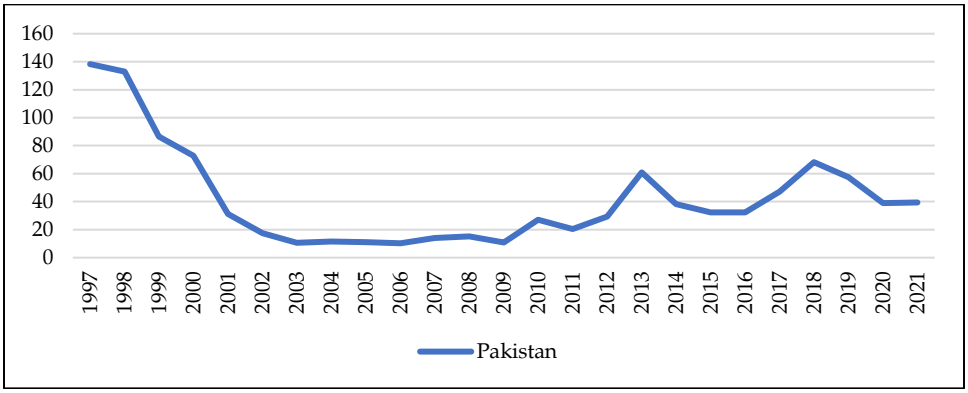
Source: World Bank (2023)

Figure 7: Total debt service (% of exports of goods, services and primary income), Pakistan 1997 to 2021



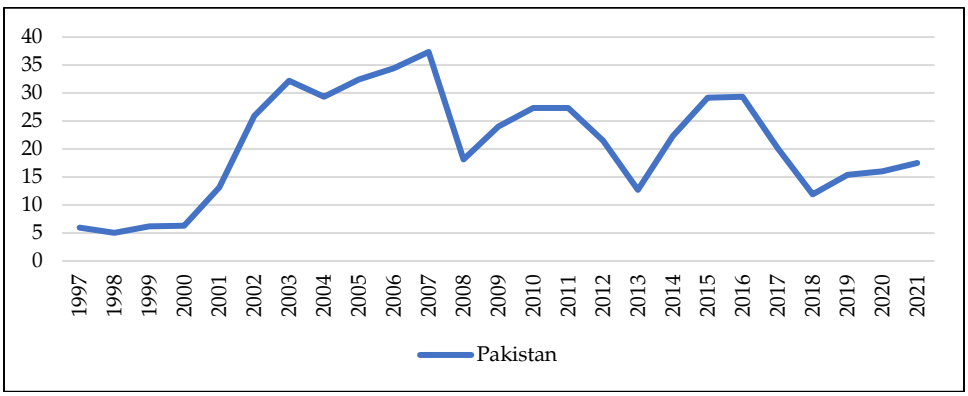
Source: World Bank (2023)

Figure 8: Short-term debt (% of total reserves), Pakistan 1997 to 2021



Source: World Bank (2023)

Figure 9: Total reserves (% of total external debt), Pakistan 1997 to 2021



Source: World Bank (2023)

9

The Relationship between Fiscal Policy and BOP Constraints: A Crisis is a Terrible Thing to Waste

Moazam Mahmood*, Azam Chaudhry and Shamyla Chaudry*****

Abstract

Pakistan's current crisis converges on balance of payments (BOPs). Several factors contribute to this crisis, including a significant and growing Current Account (CA) deficit, debt repayments, dwindling foreign exchange reserves, a depreciating rupee and a high budget deficit. These issues are further compounded by rising inflation, stagnating output growth and the stringent requirements of the International Monetary Fund (IMF) program on macro fundamentals. At the core of this crisis lies an acute shortage of foreign exchange reserves. Consequently, the current economic predicament is often characterized as a balance of payments crunch, with primary analytical and policy focus on the current account deficit. This paper looks at fiscal expenditures to establish two propositions: Firstly, there is a strong positive relationship between Pakistan's fiscal deficit and current account deficit, where the fiscal deficit further exacerbates the current account deficit and capital financial account deficit on account of tradeables and global capital flows. Secondly, to accurately reflect this relationship, the National Income Accounting framework needs revision.

The Root of The Crisis: Our Theoretical Argument

The economic crisis in Pakistan arises from the inability of the government to meet its external debt obligations, a direct consequence of the country's persistent trade imbalance.

The State Bank of Pakistan's (SBP) foreign exchange reserves plummeted from US$20.1 billion in August 2021 to US$2.9 billion in February 2023. Global

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economic uncertainty, rising commodity prices, and debt repayments exacerbated this situation. This lack of external funds strained the country's external account, negatively impacting the entire economy. Although the Government of Pakistan successfully met its external debt obligations, a decline in the SBP's foreign exchange reserves and negative market sentiment led to a considerable depreciation of the Pakistani Rupee (PKR) by 28.5 percent during the fiscal year 2023. Consequently, the current crisis is primarily seen as a BOP crunch with the primary analytical and policy focus on the CA deficit.

Selected Economic Indicators

During the fiscal year 2023, external financing was a cause for major concern: The worsening external account discouraged and hindered the inflow of public and private investment, leading to significant delays in scheduled debt repayments.

Table 1 summarizes key economic indicators for Pakistan over the past few years. Real GDP growth plummeted to 0.3 percent in FY 2023, the third-lowest level since fiscal year 1952. While the current account deficit decreased significantly, this did not alleviate Pakistan's financial woes. Insufficient foreign inflows put the external account under immense pressure, leading to a sharp decline in SBP's foreign exchange reserves to US$4.5 billion. By the end of FY 2023, the rupee had depreciated by 28.5 percent.

Higher interest payments coupled with substantial subsidies and lower tax collections, resulted in a significantly larger fiscal deficit in FY 2023 compared to previous years.

Table 1: Debt repayments, Reserves, Exchange Rate Depreciation and Budget Deficit

	FY 21	FY 22	FY 23
	Growth rate[1] (percent)		
Real GDP	5.8	6.1	0.3
Tax revenue –FBR	19.2	28.9	16.7
Exchange rate (+app/-dep)	-1.3	-9.8	-28.5
	Billion US dollars		
SBP's reserves (end-period)	17.3	9.8	4.5
Workers' remittances	29.5	31.3	27.0
Current account balance	-2.8	-17.5	-2.4
	Percent of GDP		
Fiscal balance	-6.1	-7.9	-7.7
Current account balance	-0.8	-4.7	-0.7
Investment	14.5	15.7	13

Source: SBP

[1] Real GDP growth rates are as per constant basic prices of the 2015-16 period

Propositions for Pakistan's Case

This paper examines fiscal expenditures to investigate the following two propositions:

1) A strong positive relationship exists between the fiscal budgetary deficit and the CA deficit. In other words, the fiscal deficit exacerbates pressures on both the CA and KA deficits, primarily through tradeables and global capital flows.
2) Further research is necessary to modify the National Income Accounting framework to accurately reflect this relationship.

To establish a strong positive relationship between the fiscal budgetary deficit and the CA deficit, this paper will conduct an empirical study of the fiscal account and correlate its empirical findings with theoretical predictions.

During fiscal year 2023, total expenditures increased by 21.5 percent, compared to 29 percent in 2022. This slower growth in expenditure can be attributed primarily generally to a sluggish rise in non-interest expenditures, coupled with reduced grants, subsidies, reduction in overall development spending and net lending.

Within the current expenditure structure, the substantial rise in interest payments on debt had a more significant impact than the reduction in subsidies and grants. The growing debt stock and increasing interest rates drove up interest rates on both domestic and external debts.

A Theoretical framework to Examine Fiscal expenditures

We begin our accounting framework by examining the current fiscal constraints and their implied policy implications.

We use the basic aggregate demand equation by adding to it:

$$Y = C\,(Y - T) + I\,(r) + G\,(T + D) + Nx\,(e) \quad (1)$$

The fiscal relationships are captured by the expression that government expenditures (G) equal taxation (T) plus a deficit (D) :

$$G = (T + D) \quad (2)$$

Table 2 estimates equation 2 for FY 2022, where total government expenditure is PKR 13.3 trillion , consisting of total government revenue of PKR 8 trillion and a government deficit of PKR 5.3 trillion.

Table 2: Government Expenditure, Revenues and Deficit

Equation 2: G= (T+D)				
	Description	**FY22** (PKR billion)	**% of Total**	**% GDP**
T	Total Revenue	8,035.4	60.4%	12 %
D	Deficit	5,259.9	39.6%	8%
G	Total government Expenditure	13,295.3	100%	20%

Source: SBP, 2022

As a percentage of total government expenditure, total revenue accounted for 60.4 percent, while 39.6 percent needed to be financed due to the shortfall between revenue and government expenditure.

The fiscal account is defined by three terms: Government expenditures (G), Taxation (T), and the Deficit (D). As we are not analyzing taxation, we will focus on decomposing the remaining two terms: government expenditures (G) and the deficit (D).

One way to categorize government expenditures is by dividing them into recurrent and development components. Annual recurrent expenditures are those incurred to maintain the government's day-to-day operations such as wages, salaries, subsidies, interest payments and transfers.

Development expenditures, on the other hand, are government spending directly related to the social and economic development of the country. Examples include expenditures on agriculture, health, and education.

$$G = G_c + G_d \tag{3}$$

Table 3: Government Expenditure

Equation 3: $G=G_C+G_D$			
Description	**FY22** (PKR billion)	**% of Total**	**% GDP**
Current expenditure	11,521.4	86.7%	17%
Development Expenditure & Net Lending	1,657.4	12.5%	2%
Total government Expenditure	13,295.3	99.1%	20%
Current Federal expenditure	8,451.6	-	13%

Source: SBP, 2022

Table 3 estimates this equation 3 for FY 2022, where *Total Government Expenditure* was PKR 13.3 trillion, consisting of the government's current expenditure of PKR 11.5 trillion and *Development Expenditure & Net Lending* of PKR 1.7 trillion.

As a percentage of *Total Government Expenditure*, *Current Expenditure* contributes to 86.7 percent while *Development Expenditure & Net Lending* accounted for 12.5 percent.

Focusing initially on government's Current Expenditure (Gc), it can be decomposed into debt servicing (rd), subsidies (sub), defense (def), provincial grants (prov), civil government (CSP), and pensions (pen), as stated in equation 4 below.

$$G_c = rd + sub + def + prov + CSP + pen \quad (4)$$

Table 4 estimates equation 4 for FY 2022 at the federal level. The share of each expenditure item is given in nominal terms as well as a proportion of the total current federal expenditure.

Table 4: Federal Expenditure

Equation 4: G_{CF}=rd + Arm + Pen + CSP + sub + $prov_g$		
Description	**FY22 (billion rupees)**	**% Of Total**
Debt servicing	3,182.4	37.7%
Subsidies	1,529.6	18.1%
Defense affairs and services	1,411.6	16.7%
Grants to provinces and Others	1,239.3	14.7%
Running of civil govt	546.7	6.5%
Pension	541.9	6.4%
Current Federal expenditure	8,451.6	100%

Source: SBP, 2020

A theoretical framework to examine deficit

Focusing on the second fiscal term we wish to examine, the deficit (D). We can decompose it as shown in equation (5). The *primary balance* (P_b) is the remaining deficit (D) after subtracting *debt servicing* (r_d).

$$P_b = D - r_d \quad (5)$$

The *primary balance* represents the returns that institutional entities receive for their contributions to the production process, provision of financial assets, or leasing of natural resources. Table 5 estimates equation 5 for FY 2022.

Table 5: Total Deficit

Equation 5: P_b=D - r_d			
Description	**FY 22 (billion rupees)**	**% of Total**	**% GDP**
Total Deficit	5,259.9	100%	8%
Debt servicing	3,182.4	60.5%	5%
Primary Balance	2,077.5	39.5%	3%

Source: SBP, 2022

Debt servicing is the largest component of the total deficit, which highlights one of the reasons for Pakistan's economic challenges. The crucial equation for our analysis is the financing of the deficit *(D)*. This deficit can be financed both domestically and externally, as shown in equation (6).

$$D = D_{dom} + D_{ext} \quad (6)$$

Domestic Debt is debt owed to creditors who are residents of the same country as the debtor. It can be categorized as either sovereign (borrowed by a government) or non-sovereign (borrowed by the corporation).

Table 6: Deficit Financing

Deficit Decomposition by Financing (FY2022)				
Equation 6: $D = D_{ext}+D_{dom}$				
	Description	**FY22 (billion rupees)**	**% of Total**	**% GDP**
D_{dom}	Domestic financing	4,081.5	77.6%	6%
D_{ext}	External financing	1,178.4	22.4%	2%
D	Deficit	5,259.9	100.0%	8%

Source: SBP, 2022

Table 6 estimates equation 6 for FY 2022. *Total debt* was PKR 5259.9 billion, consisting of *domestic debt* of PKR 4,081.5 billion and *external debt* of PKR 1,178.4 billion. The table also provides the dollar value of the externally financed portion of the deficit, which was equivalent to US$6.473 billion. This externally financed deficit of US$6.473 billion must be financed through Pakistan's global capital flows.

Table 7 : Net Financing (FY 2022)

Net Financing (FY 2022)									
Equation 7: D_{ext} = Inflows - Outflows									
	Net			**Inflows**			**Outflow**		
	US$ (Millions)	PKR (Billions)	%	US$ (Millions)	PKR (Billions)	%	US$ (Millions)	PKR (Billions)	%
External Debt	6,473	1,178	21%	16,461	2,996	10%	9,988	1,818	8%
Domestic Debt	24,089	4,384	79%	141,491	25,751	90%	117,403	21,367	92%
Total Debt	30,562	5,562	100%	157,952	28,747	100%	127,390	23,185	100%

Source: Ministry of Finance, 2022

Another critical equation that demonstrates the financing of the deficit is equation 7, which shows that the net financing of external debt is based on *inflows* minus *outflows*.

$$D_{ext} = Inflows - Outflows \quad (7)$$

Table 7 estimates equation 7 for FY 2022. It shows a deficit of US$6.473 billion, consisting of inflows of US$16.461 billion and outflows of US$9.988 billion.

Additions to existing Theoretical Framework

Expanding our theoretical framework, we have an endogenously given fiscal account consisting of *government expenditure, taxation and deficit*. The unfinanced portion of *government expenditure* is represented by the deficit, which is logically financed both domestically and externally. Empirically, we observed a significant externally financed deficit of US$6.473 billion for FY 2022.

Consequently, the domestically financed portion of the fiscal account must be related to the external account in our macroeconomic equations. However, standard macroeconomic equations often fail to capture this relationship.

The fundamental macroeconomic equation linking the domestic economy to the external economy states that *investment (I)* minus *savings* (S), known as the savings gap, is equal to the *CA* deficit, as shown in equation 8.

$$I - S = CA \quad (8)$$

However, this standard model falls short in terms of relating the externally financed deficit to the external account. Given this externally financed deficit, we may need to reconsider our main macro equation (see Equation 1)2.

Rewriting equation 1 to reflect this:

$$Y = C\,(Y - T) + I\,(r) + G\,(T + D) + Nx\,(e)$$

The domestically financed part of the deficit can remain in the fiscal account expression of government expenditure:

i) Possibly as an additive term to output (Y) on the left-hand side.

ii) However, the externally financed portion of the deficit must be subtracted from the CA.

2 Macro equation 1 adds the deficit D to output Y on the right-hand side but Deficit (D) is financed from Internal sources and External sources.

iii) Consequently, it will need to be subtracted from *output (Y)* on the left-hand side.

$$Y = C(Y - T) + I(r) + G(T + D_{dom}) + X - M - D_{ext} \quad (9)$$

Equation 9 combines the two propositions of our analysis. Therefore, the externally financed portion of the deficit must be paid for by the external *CA* or *KA* annually. However, this analysis leaves aside the domestically financed portion of the deficit, which also must be paid for annually.

To determine the annual contribution of the externally financed portion of the deficit to the balance of payments crisis, we have empirically estimated equation 9. This is crucial, given our primary concern with the balance of payments crunch.

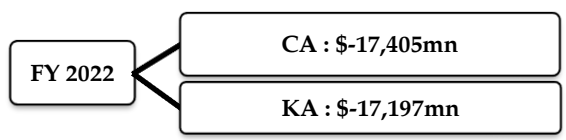
Therefore, D_{ext} has to be subtracted from Y just like M in equation 9;

$$X - M - D_{ext} = CA \quad (10)$$

However, the BOPs always balance annually. Therefore, if there is a *CA* deficit, it must be offset by a *KA* surplus, which involves adjusting claims to the country's assets held abroad.

$$CA = KA \quad (11)$$

CA must be paid annually by KA.



For FY 2022, the *CA* balance stood at -US$17,405 million whereas the capital account stood at -US$17,197 million. However, both the *CA* and *KA* deficit are negative values, which raises the fundamental question of how they were paid for.

$$KA = FA + Reserves + (\bar{e} + capacc) \quad (12)$$

The KA combines the *financial account (FA)* and foreign reserves held by the SBP, as well as some adjustments, where the *financial account* comprises *net borrowing*, *net foreign direct investment (FDI)* and *net portfolio investment*.

$$FA = NetBorrowing + NetFDI + NetPortfolio \quad (13)$$

Recalling the externally financed part of the deficit for FY 2022 stood at US$6.473 billion, approximately 38 percent of *KA*. From equation 11, we put this in perspective by proposing that nearly 40 percent of the current BOP crisis is based on the government's deficit.

Table 8 estimates equation 12 for FY 2022:

$$KA = FA + Reserves + (\bar{e} + capacc)$$

$$-\$17{,}197mn = -\$11{,}149mn - \$6{,}316mn + (\$268mn)$$

Table 8 : Decomposition of the Capital Account (FY 2022)

	US $ (Million)
KA	**-17,197**
FA	-11,149
Net Borrowing	-9,567
Net FDI	-1,635
Net Portfolio	54
Reserves	-6,316
ē + cap acc	268

Source: SBP, 2022

Table 8 also estimates Equation 13 for fiscal year 2022 that shows that *FA* of US$11,149 million constitutes *net borrowing* of US$9,567 million added to *net foreign direct investment* of US$1,635 million and *Net Portfolio* of US$54 million.

$$FA = NetBorrowing + NetFDI + NetPortfolio$$

$$-\$11{,}149mn = -\$9{,}567mn - \$1{,}635mn + \$54mn$$

Therefore, in the year 2022, a CA deficit of US$17.197 billion was financed by the KA through net borrowing worth US$9.567 billion from external sources, and resulting in the depletion of reserves by US$6.316 billion. Within this *KA*, we locate the component of the deficit-financed externally of US$ 6.473bn. Now *net borrowing* externally comprises *inflows* minus *outflows* as in equation 14.

$$Netborrowing = Net\ liabilities - Net\ Acquisitions \quad (14)$$

Using data for fiscal year 2022, Table 9 estimates equation 14 for FY 2022

$$-\$9{,}567mn = -\$12{,}057mn + \$2{,}490mn$$

Table 9: US$ (Million)

Net Borrowing	**-9,567**
Net Liabilities	-12,057
Net Assets bought	2,490

Source: SBP, 2022

This table shows *net borrowing* of -$9,567 million equals *net liabilities* of -$12,057 million if *net acquisitions* of $2,490 million are subtracted.

From equation 14:

Net Liabilities by Pakistan in FY 2022 are incurred, as in Equation 15

$$Net\ Liabilities\ =\ Govt\ +Sectors\ +SDRs+Corps \tag{15}$$

Table 10 estimates Equation 15.

$$\$12{,}057mn = \$6{,}073mn + \$2{,}333mn + \$2{,}773mn + \$879mn$$

Table 10: Net Liabilities (FY 2022)
($ million)

FY 2022	**US $ (Million)**
Net Liabilites	**12,057**
By Govt	6,073
Sector	2,333
SDRs	2,773
Corps	879

Source: SBP, 2022

Table 10 estimates equation 15. It highlights that the government's externally financed deficit of US$6.473 billion was primarily based on the government's incurrence of *net liabilities*, specifically borrowing of US$6.073 billion.

Therefore, in our equation 10, where:

$$(X - M - D_{ext}) = CA \tag{10}$$

The (X-M) component makes for only 60 percent of the BOP crisis today, while the D_{ext} component adds another 40 percent to it.

This *net government borrowing* of US$6,073 billion is based on *higher gross borrowing* compromising *disbursements of loans* (by others to the Government), incurrence of further *net liabilities*, and *debt servicing* called *amortization*, as in equation 15.

So,

$$Net.Govt.Borrowing = Disbrsements + Other\ Net\ \text{Liabilities} - Amortization \quad (15)$$

Table 11 estimates this for FY 2022.

$$6{,}073 = 11{,}230 + 3{,}176 - 8{,}333$$

This makes the ratio of debt servicing to the KA of $\frac{8{,}333}{17{,}197} = 48\%$

Table 11: Government Liabilities (FY 2022)

FY 2022	US $ (Million)
Govt Liabilities	**6,073**
Disbursement	11,230
Other Liabilities	3,176
Amortization	-8,333

Source: SBP, 2022

Policy Recommendations

To alleviate future BOP crises, we primarily need a policy that acknowledges the dual nature of the problem: 60 percent lies in the tradeable sector, while a substantial 40 percent stems from the need to curb the annual government budget deficit. In FY 2022, government expenditure reached 8 percent of GDP with 2 percent financed externally. Additionally we advocate for further research to conceptualize macro equation 1. Instead of adding the externally financed deficit *(D)* to aggregate output *(Y)*, it should be subtracted from Net Exports (*NX)*.

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10

Tax Revenue Mobilization in Pakistan: Challenges and Recommendations

Arshad Hasan* and Naeem Sheikh**

Abstract

Pakistan's economy has been grappling with the challenge of revenue mobilization for decades. This issue has reached a critical juncture where the nation's economic growth, the well-being of its citizens, and even its sovereignty are at stake. Despite numerous policy initiatives and reforms, previous efforts have fallen short of delivering sustainable results. This paper aims to conduct a comprehensive evaluation of Pakistan's revenue mobilization system and identify the critical factors that have been overlooked in past reform endeavors. Our findings suggest that trust is the missing linchpin. Previous reforms have failed to prioritize establishing trust with the most crucial stakeholder in the system: the taxpayer. To address this issue, we recommend that future reform initiatives focus on enhancing governance and structure, improving facilitation, strengthening enforcement and compliance through the implementation of a robust risk management framework, monitoring economic activities and combating smuggling. By prioritizing these areas, Pakistan can foster a more equitable and efficient tax system that promotes economic growth and development.

Introduction

Revenue mobilization has been a longstanding challenge for Pakistan's economy (Cyan et al., 2016). The nation's future, sovereignty, economic stability, and citizen's prosperity are now inextricably linked to successful revenue enhancement (Hasan et al., 2023). Consequently, it has transcended beyond an economic concern to a matter of national security. Previous legislative and administrative reforms, as documented by Bukhari and Haq (2020), have failed to achieve the desired results. A fresh perspective is needed to identify the critical

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factors that have been overlooked in past attempts, particularly regarding the primary stakeholders: the citizens of Pakistan and their inclination towards tax compliance. The following is an excerpt taken from the Report of the Task Force on Reform of Tax Administration in Pakistan (RTAP, 2001):

"Pakistan's fiscal crises are deep and cannot be easily resolved. Taxes are insufficient for debt service and defense. If the tax-to-GDP ratio does not increase significantly, Pakistan cannot be governed effectively, essential public services cannot be delivered, and high inflation is inevitable. Reform of tax administration is single most important task for the government."

It is alarming that the issues highlighted in the RTAP report not only persist but have seemingly worsened over the past two decades. The Federal Government's net revenue, after accounting for provincial shares, now falls short of covering even fifty percent of the expenditures on defense and debt servicing. The figures for the 2023-2024 budget (Table I), as reported by the Ministry of Finance (MoF, 2023), clearly illustrate this concerning trend.

Table 1: Fiscal Outlook

	2020-21	2021-22	2022-23	2023-24
	Rupees in Billion	Rupees in Billion	Rupees in Billion	Rupees in Billion
Tax Revenue Receipts	4,963	6,050	7,470	9,415
Non-Tax Receipts	1,610	1,315	1,935	2,963
Total Receipt	6,573	7,365	9,405	12,378
Less: Provincial Share in Taxes	2,874	3,541	4,373	5,399
Net Federal Resources	3,699	3,824	5,032	6,979
Current Expenditure				
Defense	1,293	1,373	1,567	1,809
Debt repayment	4,359	5,575	7,884	11,748
	5,652	6,948	9,451	13,557
Others	3,472	3,242	1,946	4,371
	9,124	10,190	11,397	17,928
Development Expenditure	1,137	434	1,023	1,609
Total Expenditure	10,261	10,624	12,420	19,537
Net Deficit	(6,562)	(6,800)	(7,388)	(12,558)

Source: Ministry of Finance, Government of Pakistan

The analysis above demonstrates that the Federal Government's net revenue at Rs. 6,979 billion falls significantly short of covering the projected total expenses for defense and debt servicing, which are estimated at Rs. 13,557 billion. Given

past trends, achieving this estimated figure seems highly unlikely. For example, the Federal Board of Revenue (FBR) collection for 2022-2023 of Rs.7,200 billion was revised downward from the initial target, suggesting ongoing challenges in revenue generation. The situation is further exacerbated by the decline in revenue collection when measured in US dollars. From 2020-2021 to 2022-2023, the total collection has decreased by more than a quarter, from US$23.45 billion to US$17.56 billion.1 This stark decline underscores the severity of the revenue crisis and Pakistan's inability to generate sustainable revenues. To address this critical challenge, this article will examine the reform efforts undertaken over the past two decades. We will analyze *why* these efforts have fallen short of achieving desired results and identify the missing elements. This paper seeks to answer the following question: What has led to the stagnation in revenue mobilization, keeping us entrenched in the same quagmire? By delving into these issues, we aim to propose potential solutions that can address the fundamental problems and enhance revenue mobilization within the country.

Reform Efforts in Pakistan

A national government's primary responsibility is to generate sufficient revenue to meet spending requirements, support essential public services, and implement crucial development projects. In both developed and emerging economies, a significant portion of government revenue comes from tax collection (Ahmed & Sheikh, 2011). Effective tax collection is a cornerstone of fiscal and economic development. A robust tax system must be simple, transparent, fair and administratively efficient (SDPI, 2013). Unfortunately, Pakistan's tax system is inefficient, complex, and plagued by administrative bottlenecks. Despite numerous reform attempts by various regimes, substantial progress has been elusive (Hassan et al., 2021).

One of the earliest tax reforms in Pakistan dates back to 1985 when a National Tax Reforms Commission (NTRC) was established. The NTRC recommended a comprehensive overhaul of the direct and indirect tax structures, as well as administrative reforms, including the creation of a new revenue division. Based on these recommendations, the first wave of tax reforms was introduced in the early 1990s. The primary goal was to transform the General Sales Tax (GST) into a Value Added Tax (VAT) and increase the proportion of direct taxes in total tax collection while reducing reliance on excise and trade-related taxes. Subsequent reforms focused on improving transparency, simplifying processes, documenting the economy, reducing tax rates, shifting the tax burden toward consumption and income, and enhancing the overall capacity of the tax administration (Ahmed & Sheikh, 2011).

[1] Year 2020-2021: 3,699/157.74 = $23.45 billion
Year 2022-2023: 5,032/286.43 = $17.56 billion

Despite these ambitious reform efforts, the Pakistani government failed to achieve its desired objectives (Hasan et al., 2023). In response, the government established a task force in 2000 to identify the core issues plaguing the tax system. The task force highlighted critical areas such as human resources, business processes, information management, taxpayer relations, tax policy, and targets (RTAP, 2001). To address these challenges, the task force recommended reorganizing the board of revenue and incorporating functional specialists in human resources, audit, and information management. Following a comprehensive review and consultation with multilateral organizations, the government launched a fresh wave of reforms focused on policies, legislation, and organizational structures. The aim was to create a simpler and more efficient tax system (FBR, 2020).

The Tax Administration Reforms Program (TARP) launched in 2005, aimed to increase revenue collection, improve the tax-to-GDP ratio, expand the tax base, enhance FBR personnel capacity, improve transparency, and ensure compliance with tax laws (Ahmed, 2018). TARP concluded in 2011 and achieved some positive results, particularly in expanding the tax base through VAT. VAT is a globally significant source of tax revenue, accounting for one-fourth of government revenue on average (Keen & Lockwood, 2010). However, TARP fell short of achieving substantial improvements in overall tax revenue collection (Hasan et al., 2023).

In keeping with a longstanding tradition, the newly-elected Pakistan Muslim League-N (PML-N) government established a Tax Reform Commission (TRC) to propose recommendations for enhancing the transparency and rationalization of the tax system. The TRC identified a significant bias in the tax system that favored the elite and advocated for taxing officeholders, ministers, and judiciary members. The TRC also proposed short- and long-term structural changes to the FBR, including creating a national tax agency responsible for overseeing tax collection at both the provincial and federal levels. Additionally, the TRC suggested strengthening anti-money laundering regulations in accordance with international standards set by the Financial Action Task Force (FATF). Unfortunately, these recommendations were implemented selectively and ineffectively (Bukhari & Haq, 2020).

In 2018, the government prioritized combating corruption and money laundering in Pakistan. A significant step was the implementation of the Benami Transaction Act, passed in 2017. Benami transactions facilitate tax evasion, money laundering, and terror financing. While the Act was dormant, the government operationalized it in 2019. To strengthen the tax structure, the government launched the $400 million "Pakistan Raises Revenue" program in collaboration with the World Bank (World Bank, 2019). This program focuses on procedural and operational improvements and upgrading FBR's internet and communication technologies. A notable omission in previous reforms was the lack of emphasis on information and data exchange between provinces and the federal government.

The Pakistan Raises Revenue (PRR) project has allocated US$34 million to address this critical issue.

Why Reforms Failed

This review of Pakistan's tax system and its administrative bodies demonstrates that numerous reform efforts have been undertaken, but unfortunately, they have failed to yield substantial results. Successive Pakistani governments have proposed exciting new reforms over the past decades, but the implementation of these reforms has consistently fallen short of the desired outcomes. This pattern is not unique to tax reforms but has also been observed in other economic reforms proposed by international bodies and donor agencies. The intended objectives of these reforms were also achieved sparingly. While recent efforts such as the Anti-Money Laundering Act, the Benami Act, the OECD's Multilateral Convention on Common Reporting Standards (OECD, 2020), and certain aspects of TARP have shown promise, they have not been sufficient to significantly enhance the tax-to-GDP ratio or generate the desperately needed increase in revenue.

Pakistan's tax-to-GDP ratio has consistently hovered around 10 percent, falling far short of the minimum standard of 15 percent. This ratio pales in comparison to several regional economies, such as India and Turkey, highlighting a significant gap in tax contribution relative to its counterparts. The primary reason for this persistent gap lies in the failure to address the fundamental issues affecting tax collection efforts. Moreover, these reforms were often implemented in a piecemeal fashion, focusing on low-hanging fruits rather than addressing the more challenging and systemic issues.

Previous reform efforts have failed to prioritize building trust with the key stakeholder: the taxpayers. Researchers have observed low tax morale and a decreased willingness to pay taxes (Cyan et al., 2016; Kamal, 2019). The current structure lacks meaningful engagement between taxpayers and government bodies, including the FBR (Marwat et al., 2023). Taxpayer engagement is limited and primarily focused on the budget-making process. Establishing trust and support from the state is essential for taxpayers to fulfill their obligations (Hasan et al., 2023; Ogbonna & Appah, 2016). Without the state's willingness to address these concerns, improving the revenue mobilization situation will remain an uphill challenge.

The current structure raises serious concerns about the FBR's ability to handle core functions effectively. Addressing the challenges related to capability, capacity, and governance within the FBR is imperative. A comprehensive approach is needed to address issues related to human resource management, governance, autonomy, and oversight in the short, medium, and long terms. Partial or incomplete implementation of administrative reforms can undermine

overall efforts and may even have counterproductive consequences. Consistency and full execution are crucial for successful reforms.

Pakistan's tax authorities are only capturing half of their potential revenue (World Bank, 2019). The estimated tax revenue potential stands at 26% of GDP, while the actual collection is only 12.9%. The significant gap underscores the urgent need for the FBR to accelerate digitalization, modernize outdated operational procedures, and adopt the latest tax administration practices, particularly those rooted in big data and business intelligence.

Moreover, there is consensus among various stakeholders that the FBR's inability to guarantee taxpayer compliance is a significant challenge facing the national tax system. Numerous efforts have been undertaken to enhance and modernize this function, but they have fallen short of achieving acceptable levels of taxpayer compliance. This is reflected in the low tax-to-GDP ratio.

Lastly, smuggling has been a persistent problem for Pakistan's economy since its inception. Despite repeated calls from successive governments, efforts to address this issue have consistently failed. The fundamental cause for this persistent challenge lies in the disjointed operations of over two dozen government agencies, which lack proper coordination. The absence of streamlined human resources, logistical support, weak prosecutions, and inadequate monitoring of cross-border activities are key factors contributing to the prevalence of smuggling in Pakistan.

The Way Forward

In today's world, a state's success hinges on the effectiveness of its fiscal policy and management. To collect revenue, a nation-state requires three fundamental elements: the capacity to monitor the wealth created by its citizens, the capacity to tax that wealth, and the trust of its citizens (Steinmo, 2018). A successful state needs three sets of conditions to achieve these goals: delivering value for tax collection, having efficient administrative and monitoring systems, and practicing procedural fairness. Without strengthening these three pillars, significant improvements in resource mobilization will remain elusive. It is time for deeper, faster, more radical, and ambitious reforms to create an independent, strong, and efficient institution. This institution must enjoy the trust of its citizens, be professionally skilled, and be highly adaptable to a rapidly changing environment. The following sections discuss the key areas where reforms are needed to address this situation.

Building Taxpayer Trust

Recent research in revenue mobilization highlights the importance of 'tax morale' (Matthaei et al., 2023). Tax morale is the intrinsic motivation to pay taxes rather than relying solely on enforcement and compliance (Horodnic, 2018). Empirical

evidence suggests that states cannot truly achieve revenue mobilization without building a consensus with taxpayers (Luttmer & Singhal, 2014). Social scientists worldwide have moved away from the traditional economic theory that views humans as inherently selfish creatures who only pay taxes out of fear of punishment. In modern states, governments must convince citizens about the benefits of taxation to win their trust and gain their willingness to pay taxes. This requires a leap of faith (Steinmo, 2018).

Levi (1988) proposes the concept of 'quasi-voluntary compliance', suggesting that tax compliance is a financial exchange where individuals will only comply and contribute if they perceive a benefit. If taxpayers feel they are bearing an unfair burden, they will resist paying taxes. This perspective views taxpayers as strategic partners who will only comply if others are also complying (Steinmo, 2018).

Sweden's tax gap of 6% is one of the lowest in the world, and its citizens are among the most compliant taxpayers (OECD, 2020). Sweden is a prime example of a state that has achieved a high equilibrium of compliance (Steinmo, 2018). By earning the support and trust of its people, Sweden has been able to reduce monitoring costs and improve service delivery. Swedish citizens perceive that the state treats them equitably and provides value in return for their tax compliance.

Recent international literature highlights the critical role of public trust in any tax reform (Prichard et al., 2019). The World Bank emphasizes that effective reforms require political support, taxpayer trust, and a fiscal contract ensuring service and accountability. The World Bank proposes a framework that integrates these factors and translates research findings into practical guidelines (World Bank, 2019). Furthermore, it suggests that investing in trust, facilitation, and enforcement can improve enforced compliance, enhance quasi-voluntary compliance, strengthen financial contracts, and foster continued political support for reforms. Figure 2 provides a detailed examination of each component of this framework.

It is worth exploring whether there is a direct link between taxpayers' trust in the state and their commitment to pay taxes. Does increased trust in the political government, executive machinery, judicial system, and tax authorities lead to more effective compliance? We analyzed World Values Survey (WVS) data with tax compliance, measured by the tax-to-GDP ratio. Figure 3 reveals a strong correlation between a country's tax-to-GDP ratio and its people's trust in the government, civil service, and judicial system. This suggests that increased trust in these institutions stimulates the willingness to pay taxes and enhances tax morale.

It is also worth noting that taxpayers play a crucial part in the tax collection exercise. Compliance with indirect and direct taxes in Pakistan is largely voluntary. Taxpayers deposit most taxes, both as advance taxes and with returns on a voluntary basis. Table II shows that a significant portion of tax collection is

deposited voluntarily by taxpayers. While taxpayers generally have the willingness to pay their legitimate taxes, distortions and unfavorable circumstances can hinder compliance. The lack of a level playing field provokes taxpayers to evade taxes and avoid compliance.

Table 2: Voluntary Tax Collection

Year	Total Tax Collection	Collection on Demand	Voluntary Collection	
	Rupees in billion			%
2013	1939	89	1850	95
2014	2266	81	2186	96
2015	2590	115	2474	96
2016	3112	88	3024	97
2017	3368	93	3275	97
2018	3842	104	3738	97
2019	3829	103	3726	97
2020	5555	61	5494	99
2021	4963	80	4883	98
2022	5829	101	5728	98

Source: FBR Yearbooks (2021-22 and previous issues)

Tax morale is a cornerstone of the state-building and state-citizen relationship (Belmonte et al., 2023). To implement meaningful tax policy reform, the federal government must prioritize ongoing dialogue with all stakeholders and revise its fiscal agreement with the people. The state should empower Parliament, the judiciary, civil society, and the media to hold the government accountable for its tax collection, spending, and any potential corruption. The budget-making process must be fully transparent, and the state may consider linking its revenue to expenses. Taxpayers must be assured that their tax money is used for the collective good. Benjamin Franklin, a founding father of the United States, famously observed that there is nothing inevitable in this world except death and taxes. We must instill this understanding and doctrine in our youth from a young age. The philosophy of taxation and its role in nation-building should be integrated into the national educational curriculum. However, it is currently impossible to pay taxes honestly in the prevailing circumstances.

The business landscape is significantly disrupted by smuggling, high tax rates, tax evasion, and corruption within the FBR (Chaudhry & Munir, 2010). This makes it extremely challenging for any willing taxpayer to bear the current tax burden equitably, often leading them to become part of the problem. Every business entity in the organized sector is eager to meet its legal obligations, provided there is a fair and level playing field and tax compliance does not render their operations unsustainable. The business sector generally lacks confidence in the system, as the state has not actively engaged with it to address these challenges and create a conducive environment for tax payments.

Given the enormity of the problem, it is recommended that the government establish a truth and reconciliation commission to engage with diverse stakeholders. The commission should convene representatives from all sectors of the economy to understand their concerns and challenges. Subsequently, it should propose potential solutions to shape tax policy development through collaborative efforts with stakeholders. Ideally, the commission should consist of representatives from Parliament, the FBR, tax professionals, and trade bodies.

Furthermore, it is crucial for tax laws to be simple and easily comprehensible, facilitating taxpayers' compliance with ease. A conscious effort is needed to keep the law simple and clear of any ambiguities. The income tax return is the main interface of the FBR with the taxpayer, but it is very complicated. It cannot be filled by individuals or small businesses themselves unless they hire taxation experts. Efforts should be made to make the income tax return as simple as possible and available in all regional languages. Taxpayers lack confidence in the FBR, viewing it as an entity stuck in corruption and primarily interested in extracting taxes, whether lawful or not. Hence, concerted efforts are needed to transform this perception. The FBR should prioritize offering support to taxpayers in fulfilling their tax responsibilities. It should also improve its conduct and approach by practically taking necessary steps as a matter of policy to win the trust and hearts of the taxpayers.

Enhancing Governance and Organizational Structure

Despite significant time and resource investments in developing an effective governance and oversight structure of the FBR, there have been limited improvements. Consequently, it is crucial to examine the FBR's governance structure in detail and propose solutions to address its shortcomings in terms of structure, policies, and procedures.

FBR Headquarters

Efficiency and effectiveness in revenue administration are heavily influenced by robust headquarters. As part of the Tax Administration Reforms Program (TARP), the FBR was restructured along functional lines at the field formation level. However, while the FBR operates with a functional hierarchy at the top level, this organizational structure is not consistently reflected in field formations. Headquarters are linked to the field formations through the centralized authority of Member Inland Revenue (IR) and Member Customs. Member Taxpayer Audit and Member Legal act solely as policymakers and do not participate in the implementation, supervision, or management (Hasan et al., 2023). This formation creates a disconnect between the functional departments at the headquarters and functional lines at the field formation levels, hindering compliance and enforcement efforts. This is a significant issue that requires immediate resolution.

Under the current structure, the Operational Members[2] effectively serve as the supervisors of the field formations, regardless of their functional line. The other functional members are linked by dotted lines and have minimal influence over field formation officers. Due to the nature of their roles, operational members experience excessive workloads and primarily focus on achieving tax targets. Consequently, all other critical functions are sacrificed. This distortion contributes significantly to several challenges faced by the FBR.

Another crucial aspect, the expansion of the tax base, is overseen by a Director General, who also reports ultimately to the Operational Members. The failure to significantly expand the tax base reflects the lack of prioritization of this critical area within the existing setup. Furthermore, the FBR headquarters also faces limitations in terms of both professional expertise and technical capabilities (Ahmed, 2016). Consequently, there is a lack of necessary professional leadership and efficient supervision to implement taxpayer risk and compliance programs.

Within the current organizational structure, the FBR chairperson is heavily burdened with routine responsibilities such as attending formal meetings across various federal ministries and parliamentary proceedings, which leaves limited time to focus on the fundamental role. A senior-level support function is urgently required to assist the chairperson in effectively fulfilling their duties and addressing succession planning for this vital position. Contemporarily, most tax administrations are semi-autonomous, functioning independently and reporting directly to the state (Fjeldstad, 2014). Considering the scope and complexity of the laws to be administered, revenue administrations must cater to a diverse client base, therefore, they require sufficient authority and independence to operate efficiently and effectively. These organizations follow a business model that is free of perceived political interference and civil service regulations, recruit the best talent, reward according to market standards, and dismiss the "non-performers".

There is a necessity to transform the FBR into a semi-autonomous institution through legislation passed by Parliament. An autonomous board should oversee this restructured body. The board should consist of the chairperson, vice chairperson, and all relevant members. The role of the vice-chairperson holds significant importance in effectively assisting the chairperson in carrying out the organization's core functions.

The tax administration should be reorganized into four functional divisions: Operations/Enforcement, Taxpayers' Audit, Registrations[3], and Litigation Support. Each division should have dedicated staff at the field-formation level with direct reporting lines to their respective functional heads. This restructuring will enable

[2] Member Inland Revenue and Member Customs
[3] Aimed at expanding the tax base.

the development of risk-based compliance programs within each division, fostering complete ownership and accountability for these programs. Additionally, the Inland Revenue headquarters should maintain a well-structured audit function that regularly communicates with field audit units. This function should engage in strategic discussions, provide case guidance, and monitor audit outcomes. To fully realize the benefits of functional specialization, the headquarters should directly supervise and coordinate with junior auditors at field formations.

Policy & Oversight Board

Tax policy plays a pivotal role in a nation's economic policy and planning (Bird & Wilkie, 2013). In developed countries, various stakeholders actively participate in policy formulation. Historically, this process was hampered by a lack of democratic foundations, transparency, and autonomy. Consequently, potential tax revenue was lost due to inadequate policy development, which is essential for sustained long-term revenue growth (King & Rebelo, 1990).

The FBR lacks essential strategic oversight to assess its performance in fulfilling legal obligations. The Directorate of Internal Audit, tasked with conducting internal audits and reporting to the chairperson, has failed to achieve its intended objectives of enhancing efficiency and accountability. Instead, its operations have become counterproductive. The Parliament oversees the FBR through external audits by the Auditor General of Pakistan (AGP), which have also been ineffective, wasting resources without any resulting improvements (ICAP, 2016). Reviews conducted by both the finance ministry and Parliament are limited, primarily focusing on overall tax collection figures. These reviews do not provide comprehensive supervision of the entire workflow, which lies at the core of many issues within the FBR.

Developed jurisdictions have implemented robust oversight mechanisms for their revenue services (Crandall, 2010). These countries have well-organized supervisory bodies tasked with scrutinizing the operations of revenue agencies. In the United States, the Department of Treasury Inspector General for Tax Administration (TIGTA) was established by Congress in 1998 with a legal mandate to protect the integrity of the tax system. TIGTA provides independent audit and investigative services to enhance the efficiency, economy, and effectiveness of the Internal Revenue Service (IRS) (George, 2006). TIGTA's oversight functions focus on identifying systemic inefficiencies with high risks in IRS operations and investigating vulnerabilities in tax administration.

It is imperative that policymakers remain independent from the tax administration. The Policy Board, established under section 6 of the Federal Board

of Revenue Act, 2007,[4] should have been a collaborative platform for shaping national tax policy by engaging with various stakeholders (Hasan et al., 2023). However, section 6 has limited the board's role to that of a facilitator, providing guidance on fiscal policies. This section should be revised to expand the board's responsibilities and allow it to actively contribute to the creation of fiscal policies. The current board composition, which includes the Minister of Finance and several Federal Ministers, as well as the chairpersons of the relevant parliamentary committees, has hindered its effectiveness in achieving the desired objectives.

The Policy Board should be led by the Minister for Revenue/Finance and comprise a panel of 8 to 12 members representing a diverse range of stakeholders, including Parliament, executives, civil society, and the public and private sectors. Potential members could include the chairpersons of the respective finance committees of both Houses of Parliament, the Minister of Commerce, the Deputy Chairperson Planning, prominent economists, intellectuals, technocrats, tax experts, and businesspeople. This board should oversee the FBR's activities and conduct ongoing assessments of its procedures, policies, budget allocation, and progress in achieving national goals. It has the potential to substantially improve the FBR's performance, serve as a watchdog for the state, and submit an annual report to Parliament.

Human Resource Management

Historically, human resource management (HRM) at the FBR has been largely overlooked in reform processes. The FBR needs the authority to recruit top talent and the ability to train and retain it. Currently, FBR personnel are selected through a civil service recruitment process and have diverse educational backgrounds (Ahmed, 2016). They undergo a six-month general training program followed by an additional six months of specialized training at the Inland Revenue Academy and Customs Academy, covering tax, accounting, auditing, and business laws. Given the highly technical nature of the job, the quality of human resources produced through this process is questionable. Many staff members lack a background in business or accounting, requiring them to be trained in forensic audits, advanced accounting, and law. In today's era of digitalization, e-commerce, and online banking, it is evident that the current staff produced may be incapable of performing the necessary tasks.

Tax audits are essential for any revenue service, especially in self-assessment systems (Fatt & Khin, 2011; Wadesango et al., 2018). They are effective tools for ensuring legal compliance and addressing underreporting issues. Currently, approximately two thousand officers oversee this critical task, and there is a significant shortage in the capacity to conduct meaningful tax audits, both at the central office

[4] As modified by the finance Act, 2007.

and in field formations. An examination of the FBR staff composition reveals that over 90% of the workforce occupies positions at grade 16 or below, totaling approximately 20,000 individuals. In contrast, the total number of officers in grades 17 and above is 1,966. This staffing profile highlights significant operational issues. The absolute figures and the ratio of support to professional staff are unsustainable (ICAP, 2016). This ratio indicates a surplus of human resources within the organization, which lack the necessary skills, and this surplus can be counterproductive.

Evidence suggests that insufficient wages and a lack of accountability are key factors contributing to corruption within the FBR (RTAP, 2001). As a remedy, compensation for FBR employees was aligned with the fiftieth percentile of local banks' salaries, but the results were mixed. While all employees received salary increases, these were not considered rewards for performance and did not yield the desired outcomes. Additionally, the FBR has never conducted a comprehensive job analysis, and job descriptions (JDs) have not been developed and provided to the Federal Public Service Commission (FPSC) for officer recruitment. There is also a lack of career planning and an effective performance measurement system within the FBR. Job performance is not linked to promotions, and there is no structured training program at the FBR.

A comprehensive and holistic rehabilitation of human resource management is needed, encompassing recruitment, training, performance evaluations and promotions. The FBR must develop comprehensive plans to address these pressing human resource management issues, including short-term, medium-term, and long-term strategies. As an interim measure to address current challenges, the FBR should consider recruiting professionals on a contract basis, specifically for management positions (MP grades),

In the short to medium term, the training directorate's curriculum must be revised, and training programs must be intensified. Specialized training should be extended to eighteen months to enhance the technical expertise of new officers, followed by a mandatory six-month practical training period before formal assignments. Training should be an ongoing process within the FBR, and individual performance in these programs should be a factor in future promotions.

In the medium term, the Federal Board Revenue Act 2007 should be amended to allow for the hiring of highly skilled professionals at market-driven salaries. This initiative will enhance the management capabilities at the FBR's headquarters and improve its audit and compliance functions at field formation levels. In the long term, establishing an autonomous tax services cadre, separate from other civil service entities, with its own set of regulations and guidelines, is essential. This would require a comprehensive overhaul of the Directorate of Training, transforming it into a center of excellence.

Accelerating the Pace of Digitalization

Given global trends and the shifts towards digitalization, it is nearly impossible for any state to track economic activity and wealth creation without leveraging technology. Contemporary tax administration reforms worldwide emphasize information technology (IT), offering opportunities and innovative solutions to support tax revenue generation (Kloeden, 2011). In Pakistan, productive digitalization reforms have not only automated antiquated processes but have also significantly transformed the entire system, including electronic tax payments, electronic filing of tax returns, and eliminating unnecessary information requirements for taxpayers (Batool et al., 2021). Digitalization has reduced compliance costs for both the government and taxpayers. However, these reforms have been limited to data collection and storage and have not been fully utilized for resource mobilization. Governments can enhance tax policy implementation through improved information control and more robust systems (World Bank, 2018). Tax administrations can achieve remarkable results by effectively using information technology in all tax domains, particularly in broadening the tax base, enforcement, and taxpayer facilitation (Campbell & Hanschitz, 2018). These efforts are crucial for improving compliance and increasing the country's tax-to-GDP ratio.

Digitalization presents an opportunity to legitimize informal enterprises, broaden the tax base, and enhance tax revenue capacity (Coulibaly & Gandhi, 2018). Streamlining processes and reducing the costs associated with formalization can encourage businesses to transition into the formal sector. Encouragingly, Pakistan has made progress in this direction by adopting electronic platforms for tax filing, reporting, and payments. According to the World Bank and PwC (2020), one of the most successful aspects of tax reform in Pakistan is the implementation of electronic systems for filing and paying taxes. The Paying Taxes indicator, which measures the compliance cost of tax obligations, including tax return filing and payment, shows that Pakistan ranks last overall (see Figure 4).

The continued decline in the time required to file taxes and the number of tax-related payments made by firms globally indicates the growing use of information technology by both firms and tax authorities (World Bank & PwC, 2020). Since 2004, the worldwide average time to file taxes has decreased by 84 hours, and the number of tax payments has decreased by 10.3. Due to the significant drop in digitalization costs, many businesses are using tax software, while tax authorities are increasingly developing user-friendly online platforms to streamline compliance processes. The Time to Comply indicator measures the number of hours per year to prepare, file, and pay mandatory taxes. The Payments Indicator shows the total number of taxes and the frequency of payments during the tax year. Figure 5 exhibits the Time to Comply and Number of Payments rankings.

To address its IT needs, the FBR established Pakistan Revenue Automation (Private) Limited (PRAL). However, the FBR failed to document its IT policy and business objectives, and there is no mechanism to evaluate PRAL's performance. Moreover, the FBR's takeover of PRAL negatively impacted its professional competence. While the FBR has automated certain core business procedures, such as tax return submissions and the declaration of goods, these systems lack critical functionalities, including tracking tax arrears and effectively supporting business operations.

Technology alone is insufficient for improving performance; it is a tool whose effectiveness depends on its use. Simpler tax systems are more conducive to digitization (World Bank & PwC, 2020). Taxpayers and tax consultants have consistently demonstrated a positive and adaptable response to the IT systems introduced by the FBR over time. Regrettably, the FBR's internal utilization of IT has not yet reached its full potential.

In revenue administration, the most significant improvement in compliance can be achieved through real-time exchange and analysis of taxpayer and trader data among the FBR, withholding agents, and provincial tax authorities. The increased storage capacity[5] and computing power enable tax authorities to more effectively identify instances of tax evasion by capturing and recording a vast number of transactions (Mehta et al., 2019). While the FBR employs three key information and communication technology (ICT) systems with distinct databases managed by PRAL, the automated data exchange between these systems is limited. The FBR has established a national data warehouse, but its coverage and utilization should be expanded by receiving regular electronic data from all sources and employing advanced data mining techniques. Achieving this transformation requires substantial investments in ICT and technical expertise, which is currently lacking within the FBR. Additionally, there is a need to enhance the skills of the FBR personnel to align with automated processes and data-intensive tax administration practices.

The IT systems should be integrated with other national and international databases to gain a comprehensive view of taxpayers and identify potential tax evasion. The FBR should expand its data sources to include datasets from the National Database and Registration Authority (NADRA), State Bank of Pakistan (SBP), motor vehicle registration authorities, utilities, commercial banks, telecoms, and foreign jurisdictions. This will help uncover disparities and irregular patterns that indicate potential tax evasion or other questionable conduct, aiding in identifying individuals or entities operating without proper registration despite having taxable income or sales. This mechanism should be institutionalized by

[5] By utilizing big data.

regularly transmitting data to the FBR electronically and loading it into the national data warehouse.

The FBR requires significant IT proficiency, primarily due to its key clients, including multinational corporations and large domestic businesses, which employ advanced computer systems that surpass the technological capabilities of the tax administration. Furthermore, the lack of budgetary independence has limited the FBR's ability to replace aging ICT equipment in a timely manner, hindering its technological infrastructure. This situation has resulted in recurring hardware failures and disruptions in the FBR's operations.

Furthermore, sectoral analysis is a valuable tool for determining the taxable income from each sector, identifying discrepancies, and understanding the reasons for revenue shortfalls. To conduct this analysis effectively, a specialized team of tax experts and IT professionals with in-depth sector-specific experience is essential.

Beyond taxpayer registration, tax administration must evaluate compliance with legal obligations. Therefore, an audit and fraud investigation program based on clearly defined risk assessment criteria is essential. By transitioning to technology-driven audits, the FBR can reduce the number of audits, target high-risk taxpayers more effectively, and build trust among compliant taxpayers. Integrating modern technological features, especially big data management and smart portal solutions, will enhance staff productivity and effectiveness, improve service delivery and modernize tax administration.

Improving Tax Compliance

Taxpayer compliance is fundamental to any nation's tax system (Abdu & Adem, 2023; Rahayu et al., 2017). Ideal compliance means that every individual and business should fulfill their tax obligations, including registration, voluntary disclosure, accurate reporting, and timely payments. These four tax compliance responsibilities are essential for citizens, businesses and revenue authorities. Taxpayer compliance is a prime objective for revenue authorities. RTAP (2001) states:

"The primary goal of a revenue authority is to collect the taxes and duties payable in accordance with the law and to do this in such a manner that will sustain confidence in the tax system and its administration. The action of taxpayers - whether due to ignorance, carelessness, recklessness, or deliberate evasion- as well as weakness in a tax administration means that failure to comply with the laws are inevitable? Therefore, the tax administration should have in place strategies and structures to ensure that non-compliance with the tax law is kept to the minimum."

Pakistan faces significant tax collection challenges due to the risk of underreporting and non-reporting. Effective audits can address underreporting, while an effective registration strategy can alleviate the risk of non-reporting. Tax fraud, tax evasion, corruption, underreporting, under-invoicing, and smuggling undermine the tax system. This inequality burdens compliant taxpayers, who face unfair competition from those who evade taxes. The FBR's failure to collect legitimate taxes and meet budget targets negatively impacts the economy, businesses, and taxpayer trust. Consequently, honest taxpayers suffer from delayed tax refunds, including VAT refunds, arbitrary tax assessments, and undue advance taxes due to departmental inefficiencies and tax evasion.

To tackle the compliance issue in Pakistan, the FBR needs a comprehensive compliance risk management framework, as outlined in Figure 6. This framework consists of identifying, assessing, prioritizing, and treating compliance risks. It also includes a range of measures and indicators for each major risk type administered by the revenue body (Chooi, 2020). The FBR should document its monitoring initiatives and results to foster understanding and discussion among diverse stakeholders. To implement this program effectively, the FBR requires appropriate resources and a well-defined strategy.

Combating the Menace of Smuggling

Smuggling refers to importing or exporting goods through illegal channels to evade taxes, including overinvoicing exports and underinvoicing imports (Buehn & Farzanegan, 2012). It raises the cost of conducting legitimate business, weakens the state, hinders development, undermines the rule of law, and perpetuates poverty and instability. Studies worldwide have identified corruption, tariff burden, unemployment, trade restrictions, tax burden, and inflation as factors that encourage smuggling. Conversely, the rule of law and education can reduce smuggling (Aziz et al., 2014; Buehn & Farzanegan, 2012).

Buehn and Farzanegan (2012) developed a smuggling index for fifty-five countries, ranking Pakistan as the worst-performing state. Figure 7 illustrates that the level of smuggling in Pakistan is substantially greater than that its regional peers and countries with similar economic characteristics.

The Model Customs Collectorate (MCC) Preventive in Pakistan investigated thirteen products susceptible to smuggling, finding that eleven of them are significantly involved in illegal trade (Salman, 2018). Table III shows [6] that roughly 60 percent of the overall demand for these eleven commodities, including items like mobile phones, diesel, plastics, auto parts, vehicles, and tires, is fulfilled solely through smuggling activities. This contributes to lower tax revenue, hindering

[6] These figures are also endorsed by the Overseas Investors Chamber of Commerce and Industry (OICCI).

development and foreign investment. Many foreign investors have left Pakistan due to the difficulty of competing with the profit margins from smuggled goods, making it increasingly challenging to sustain their business operations.

Table 3: Share of Smuggled Products in Formal Sectors

Products	Smuggling	Formal Imports	Domestic Production
	%	%	%
Tires	59	23	18
Tea	47	53	0
Mobile Phones	59	41	0
Television	57	6	37
Auto Parts	57	25	18
Steel Sheets	10	87	3
Vehicles	12	21	67
Fabrics	17	25	58
Petroleum	33	62	5
Cigarettes	3	1	96
Plastic Granules	11	63	26

Source: Salman (2018)

An FBR study found that Pakistan loses $2.9 billion in tax revenue annually due to the smuggling of just eleven products (Shahbaz, 2016). Figure 8 illustrates the product-wise breakdown of this loss. These products account for 3.88% of Pakistan's GDP[7]. The Lahore Chamber of Commerce estimates smuggling caused approximately $35 billion in revenue loss from 2001 to 2009. The Device Identification, Registration, and Blocking System (DIRBS) has been effective in curbing mobile device smuggling by restricting unauthorized devices on networks.

Smuggled goods enter Pakistan through porous borders, high seas and containerized cargo, often with full support of the state machinery. The Afghan Transit Trade Agreement (ATTA) facilitates a significant portion of this smuggling (Sultana, 2011). Despite numerous checkpoints, smuggled goods find their way to major cities. Baluchistan's 1,615-kilometer border with Iran and Afghanistan, coupled with limited customs enforcement, creates opportunities for smuggling. The region's lack of educational and employment prospects drives many youths toward smuggling activities like fuel or vehicle smuggling.

To combat smuggling, the government should streamline import duties and establish a unified law enforcement agency. Increased customs inspections and surveillance, especially along western borders, are essential. The FBR should implement a third-party verification system for accurate customs valuations. This validation can guarantee fair, rational, and actual commercial value. Bilateral trade

[7] Compared to 0.43% in India, 0.04% in Bangladesh, 0.78% in Greece and 0.47% in Ireland.

agreements with anti-smuggling provisions are crucial. Stimulating domestic industry competition, as seen in India, can also help reduce reliance on imports and smuggling.

The FBR should modernize its customs system using cutting-edge equipment and software to facilitate non-intrusive inspections of imported, exported, and transit cargo. This initiative will expedite customs clearance, reduce inspection frequency, and significantly improve fraud detection. Additionally, electronic surveillance of production, distribution, and sales within high-risk sectors such as the tobacco, cement, beverages, sugar, and fertilizer sectors will significantly enhance compliance (World Bank, 2019). Rigorous and independent examinations of under-invoicing during imports will level the playing field for local manufacturers, boosting domestic production, employment generation, and foreign exchange earnings.

The customs wing should be restructured into a functional framework with a strong headquarters. This reorganization will facilitate the provision of top-tier technical guidance to field operations and the implementation of modern risk management strategies in valuation, transactional fraud, post-release auditing, and intelligence efforts. Establishing economic development zones and markets in border regions can create employment opportunities. Closer scrutiny of trade data is essential to mitigate the risk of smuggling through transit trade, which can harm local industries and the national economy.

Conclusion

To achieve successful tax reforms, a new fiscal agreement between the government and its citizens is necessary. This agreement should prioritize creating a fair business environment and making tax compliance a viable option for businesses. By clearly demonstrating the benefits of taxation to every citizen, we can foster voluntary compliance and build a stronger tax system.

Therefore, prioritizing taxpayer confidence is crucial, which has been largely neglected in the past. Gaining taxpayer trust is critical in ensuring voluntary compliance with tax laws. Additionally, strengthening the FBR's governance and organizational structure is imperative. This necessitates substantial reforms and investments to bolster human resource capacity and refine the institution's governance. Transitioning to the third area, prioritizing the improvement of facilitation services through technology investments remains pivotal for the FBR's progress. PRAL needs to be upgraded and strengthened by investing in data warehousing tools that help collect, analyze, and assess taxpayer information. Investing in digital infrastructure and technical proficiency is imperative to unlock efficiency gains, promote paperless administration, ensure real-time interaction

with the FBR field offices, provide robust oversight, expedite data collection, facilitate tax base expansion, and provide e-services to taxpayers.

Fourth, a systematic approach toward improving tax compliance needs to be implemented by utilizing a 'compliance risk management framework'. Additionally, addressing smuggling, both formal and informal, is crucial for any successful tax reform. Pakistan has the potential to increase its tax-to-GDP ratio by an additional 3.9 percent by rigorously enforcing measures and strengthening the roles of the FBR, Frontier Corps (FC), Coast Guard, and Maritime Agency.

The history of past reforms strongly indicates that a comprehensive overhaul is necessary to address the deeply entrenched issues. The FBR should be transformed into a more robust, autonomous professional organization committed to earning the trust of its citizens. It should have an independent human resource function, allowing for competitive compensation and merit-based performance. The reformed FBR should monitor the wealth generated by citizens and ensure tax compliance. It should operate autonomously under the supervision of a robust and effective board and be accountable to Parliament, civil society, courts, and media.

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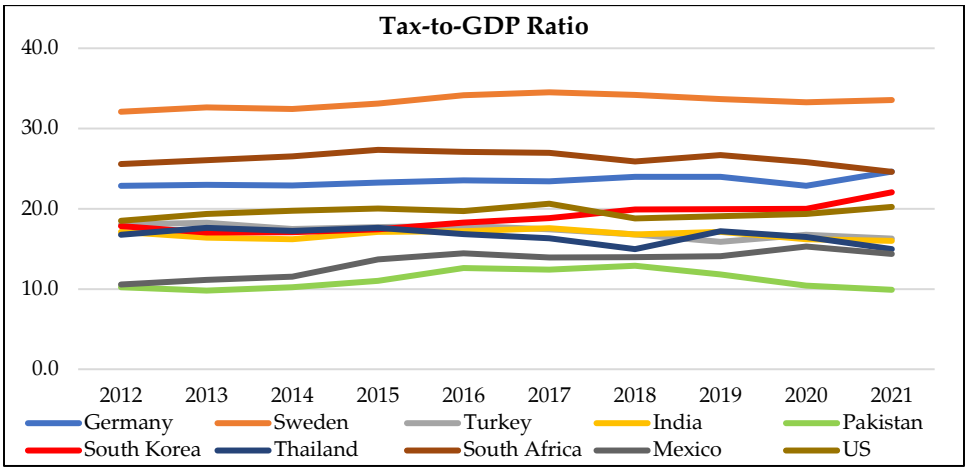
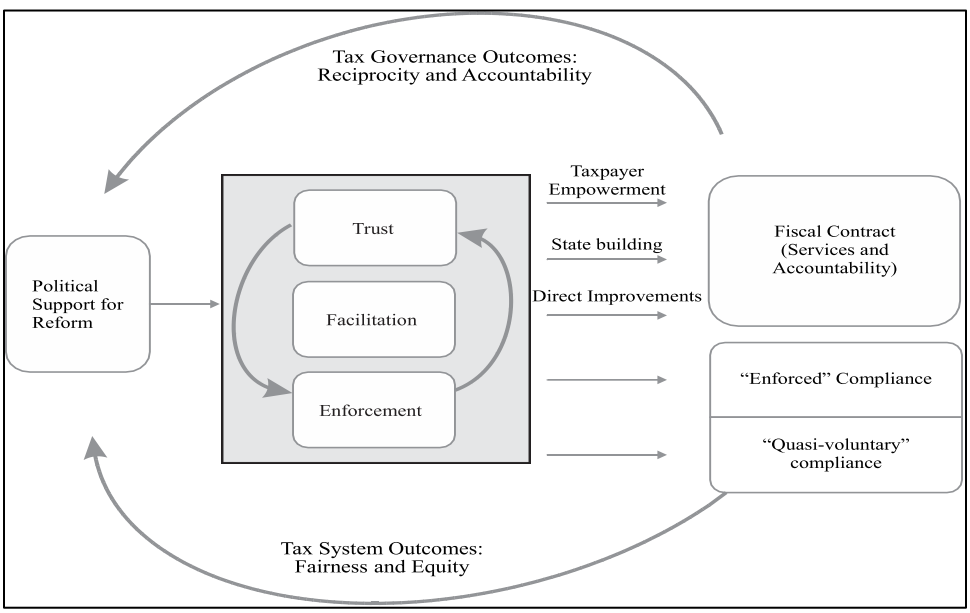
Appendix

Figure 1: Tax-to-GDP Ratio



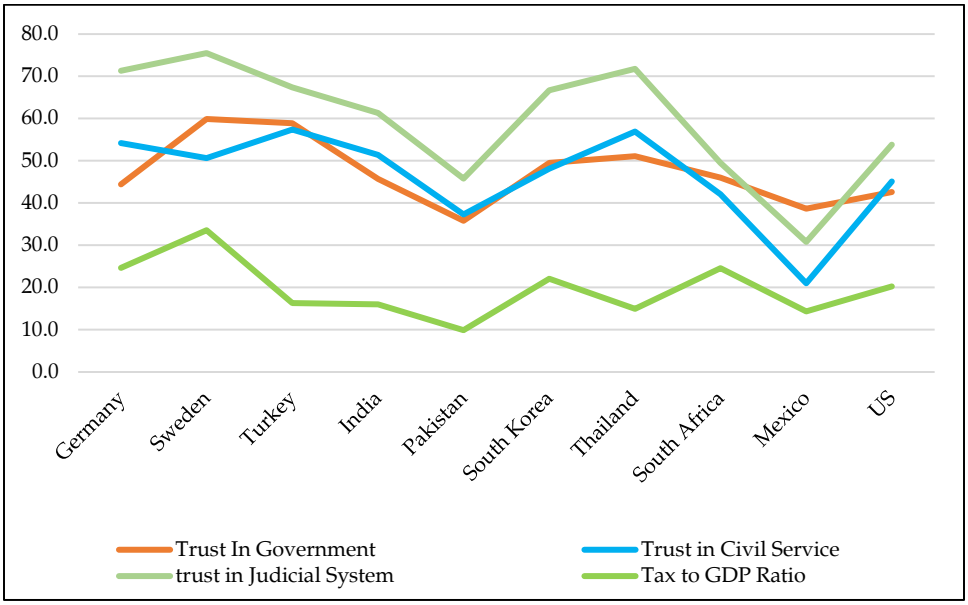
Source: OECD, World Bank

Figure 2: Innovations in Tax Compliance



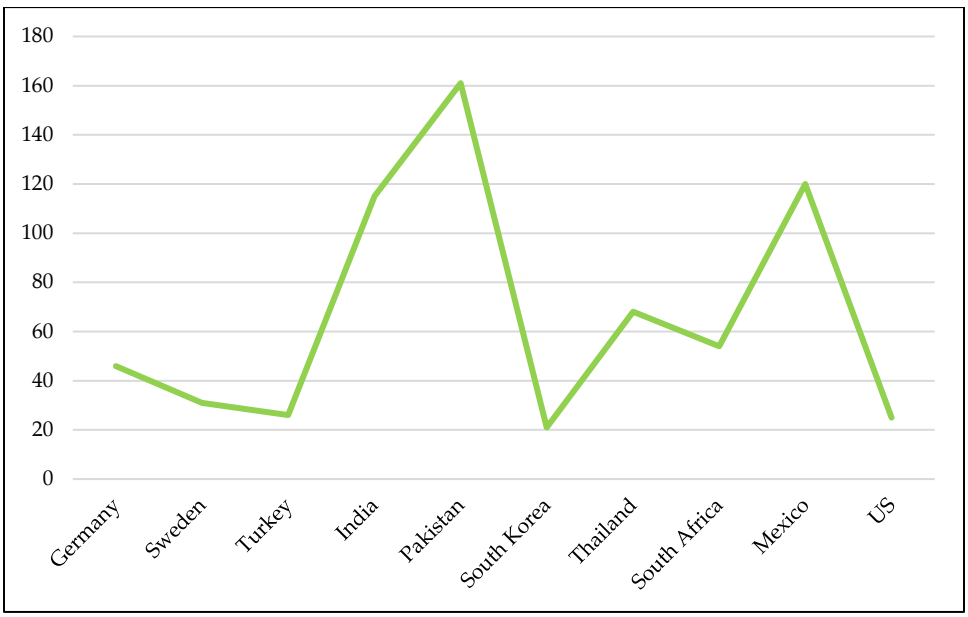
Source: World Bank (Prichard et al., 2019)

Figure 3: Trust and Tax-to-GDP Ratio



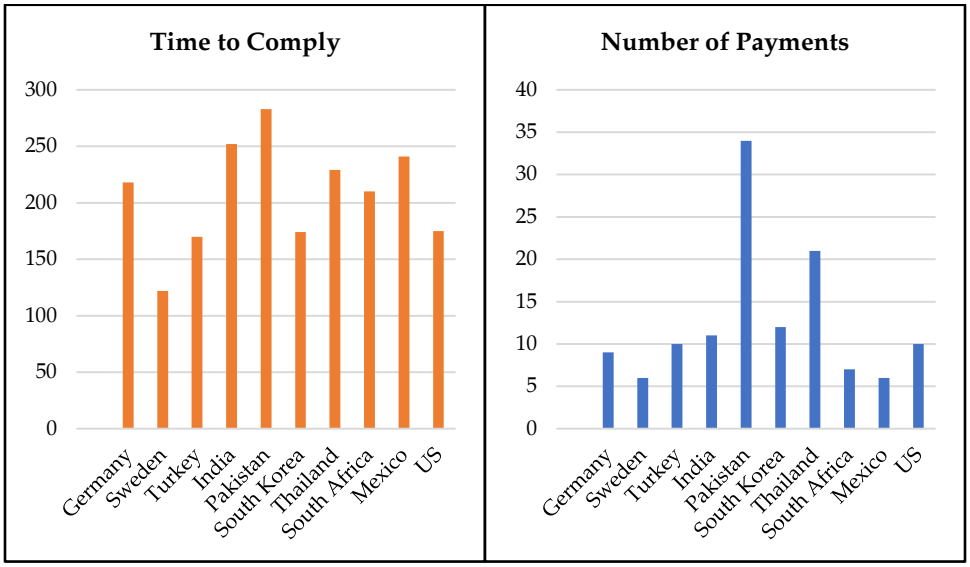
Source: WVS, OECD, World Bank

Figure 4: Overall Paying Taxes Ranking



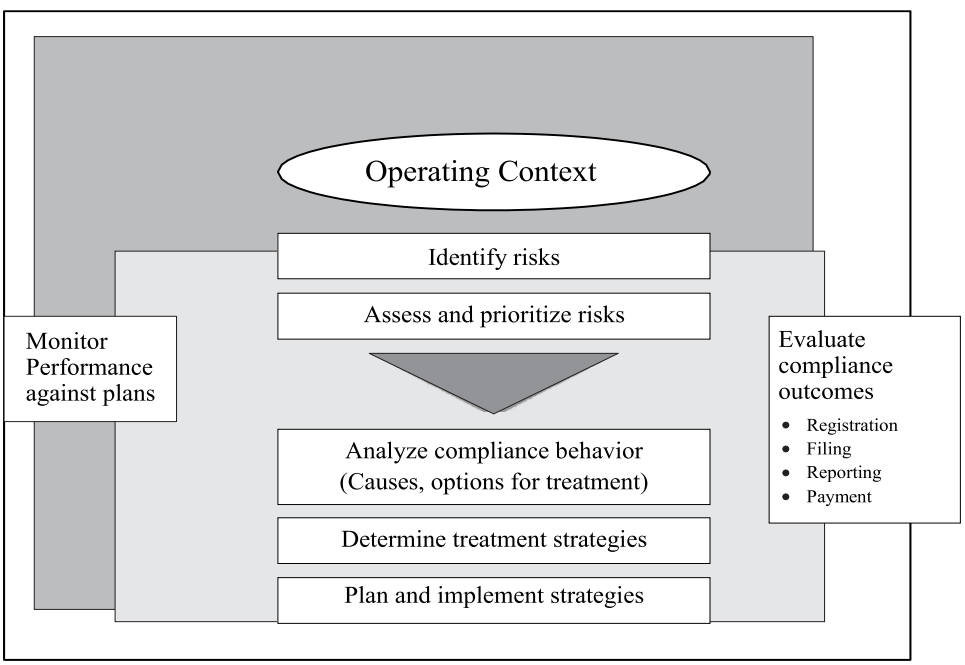
Source: World Bank and PWC (2020)

Figure 5: Time to Comply and Number of Payments Ranking



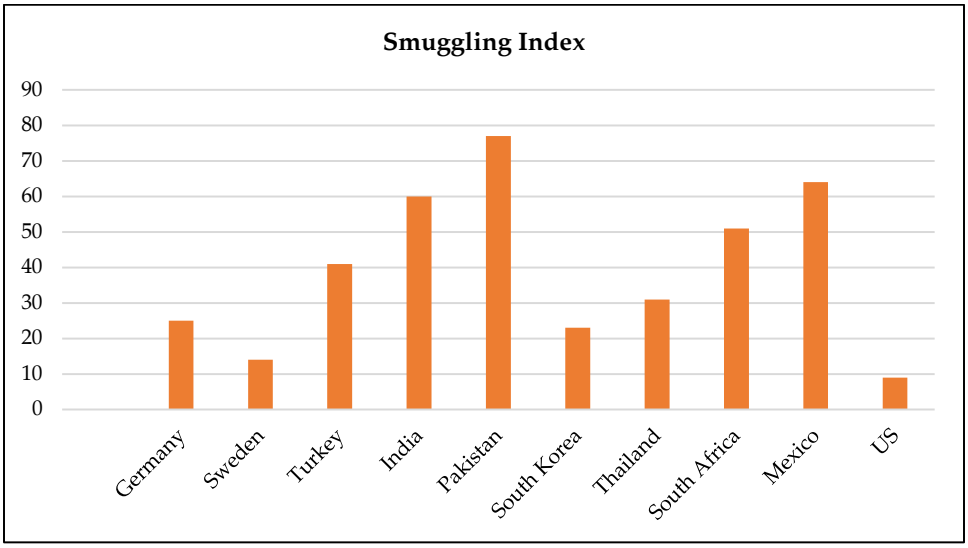
Source: World Bank and PWC (2020)

Figure 6: Compliance Risk Management Framework



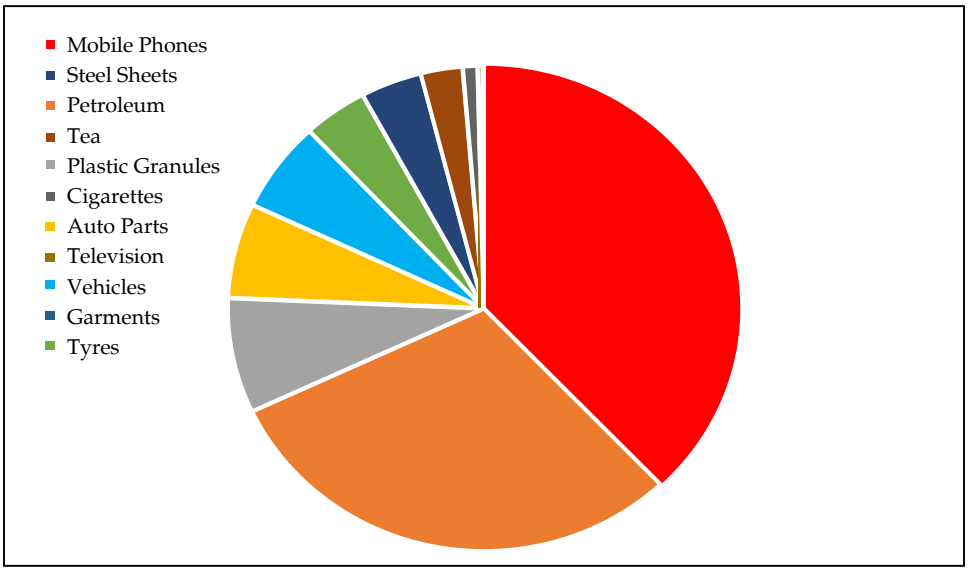
Source: Asian Development Bank (Chooi, 2020)

Figure 7: Smuggling Index



Source: Economist Intelligence Unit (2018)

Figure 8: Product-wise Breakdown of Revenue Loss



Source: Shahbaz (2016)

11

Moving on to Export-Led Growth – Some Financial and Institutional Issues for Pakistan

Jamshed Y. Uppal*

Abstract

Following Pakistan's recent Stand-By Arrangement with the International Monetary Fund (IMF) there is a growing realization that the country needs to identify and implement appropriate restructuring measures that can break the recurrent cycles of economic crisis. Several economists have advocated shifting the economic policies' emphasis to export-led growth from the traditional import-substitution. Such a reorientation would not only require economic adjustments, but also political, social, and cultural changes. The paper focuses on the implications of such a transition for the political, economic and financial institutions. I lay out the institutional changes necessary to effectively support the economy's reorientation toward export-led growth. The paper focuses on the following areas in which public policy can create a supporting and complementary environment for export growth: (1) exchange rate policy, (2) trade and long-term financing for upgrading export capacity, (3) strengthening country's competitiveness, (4) capital flows and foreign direct investment (FDI) and (5) fiscal discipline. The political and cultural dimensions of the needed policies for each area are discussed. The paper concludes that to enable export-led economic growth, Pakistan needs an integrated long-term strategy that incorporates measures to strengthen financial, political, and social institutions.

Introduction

As of today, Pakistan is under a 9-month Stand-By Arrangement (SBA) with the International Monetary Fund (IMF) for approximately USD 3 billion, to support the country's economic stabilization program. The SBA is expected to provide a "policy anchor for addressing domestic and external imbalances and a framework for financial support from bilateral and multilateral partners." It "offers Pakistan an

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opportunity to regain macroeconomic stability and address these imbalances through consistent policy implementation," (IMF, 2023). However, the program's conditionalities have imposed significant costs on the public, including exchange rates adjustment, sharp increases in fuel and power rates, and widespread price hikes.

The IMF facility being sought—the twenty-third program that the country has negotiated over its existence—is being concluded against the background of the country's dire economic conditions and a near-default experience. The current account deficit for FY 2022 was six times larger than the prior year (FY 2021), leading to another balance-of-payment crisis. By July 2022, the Pakistani Rupee had reached an all-time low against the U.S. dollar, having lost more than a third of its value in the first seven months of FY2022. The State Bank of Pakistan's (SBP) reserves plunged to less than USD 4 billion, barely adequate to cover a month's worth of imports, while the domestic inflation exceeded 30 percent.

Although it has long been acknowledged that the Pakistan's twin imbalances require a long-term fundamental restructuring of the economy, the Government of Pakistan seems to be relying on the same remedies and policies that have proved ineffective in the past. The stabilization package implemented after each round of the IMF bailout, consisting of the usual fiscal and price adjustments, offer temporary relief but, to no surprise, fail to break the vicious cycle of excessive import consumption, foreign debt, partial defaults, and IMF bailouts.

There is a growing realization that in-depth discussions are needed to identify appropriate restructuring measures that can break the cycle of bailouts. Among the suggested remedies, many economists advocate shifting to export-led growth, rather than the traditional import-substitution emphasis. Such measures would not only require economic adjustments, but also political, social, and cultural changes. In a globalized economy, understanding the culture of export markets, and the quality and service expectations of customers in global supply chains is crucial. Fostering a culture of entrepreneurship, innovation, and creativity through education and a supportive civic society is essential.

The paper focuses on the implications of transitioning to an export-led growth model for both, the public and private financial sectors, as well as political and economic institutions. We analyze the strategies and policies necessary to ensure that financial and policy-making institutions can effectively support the economy's reorientation toward export-led growth. The paper focuses on the following areas in which public policy can create a supporting and complementary environment for export growth: (1) exchange rate policy, (2) trade and long-term financing for upgrading export capacity, (3) strengthening country's competitiveness, (4) capital flows and foreign direct investment (FDI) and (5) fiscal discipline. The political and cultural dimensions of the needed policies for each area are discussed.

The Case for Export-Led Growth

Pakistan has historically been import-dependent, and this trend is likely to continue. Figures 1 and 2 (see Appendix) show the value of imports and exports in USD, and as percentage of GDP for the past 63 years. Over this observed period, imports have consistently outpaced exports, resulting in a chronic trade deficit. If we extend the data back to 1947, the year of Pakistan's independence, the observed relationship between exports and imports would remain unchanged. In 2022, the country's imports amounted to USD 82.28 billion, a 31.32 percent increase from USD 62.66 billion, in 2021, which had already increased by 19.74 percent compared to the previous year (2020).

In contrast, Pakistan's exports for 2022 were USD 39.42 billion, a 25 percent increase from USD 31.55 billion in 2021. The significant gap between the imports and exports over the two-year period, resulting in a substantial current account deficit, marked the beginning of the current foreign exchange (FX) crisis. The country's high-income propensity to import strains the balance-of-payments during periods of economic growth, resulting in recurring foreign exchange crises. This poses a constraint on the economy's overall growth.

Pakistan's dependence on imports has deep-rooted causes. Some of the underlying factors contributing to the country's high import propensity include the following:

1) Pakistan has become increasingly reliant on imports for essential goods and services. The demand for such imports, especially energy, is likely to continue to increase in the future (Mangla & Uppal, 2014). Even products seemingly produced domestically have high indirect import content. For example, the agricultural sector relies heavily on fertilizers produced from local natural gas, which is a substitute for imported gas/furnace oil. Pesticides and agricultural machinery also have a significant import component. Moreover, imported finishings are widely used in the construction industry—even brickmaking is energy-intensive.
2) Consumers have developed a strong preference for foreign products due to their perceived higher quality or brand appeal. This is primarily a byproduct of globalization, which has led to a convergence of lifestyles across countries and an insatiable demand for imported goods.
3) Foreign products often incorporate technology that is not yet available for local production. This can provide a competitive edge to local producers. Imported technological products are also essential for transitioning towards higher value-added exports.

4) Foreign Direct Investment (FDI) necessitates repatriation of profit or servicing of debt later, whether it is in the form of equity or debt—thus increasing the demand for foreign exchange in the future.

The Million Dollar Question—how do you pay for the imports? Given the inexorable demand for imported goods and services, the right way forward for the country would be to shift to an export-led growth strategy. During a similar balance-of payments-crisis in the 1960s in India, the late Prime Minister Jawaharlal Pandit Nehru, reportedly exhorted the nation to either "export or perish" (Ganguly, 1972). The slogan could not be more relevant to Pakistan today. Further, it remains to be seen what the implications of implementing such a shift in economic policies would be. We also need to be cognizant of the possible institutional impediments in implementing this strategy.

Exchange Rate Rationalization

Considering that the country will most likely remain import-dependent, foreign exchange policy needs to reflect the projected demands on hard currencies, like the U.S. dollar and euro. Maintaining a fair exchange rate, which accurately reflects its expected scarcity value, should be the first step in encouraging exports and curtailing domestic consumption of imported products.

Our Dutch Disease. Contrary to the logical implication above, there is empirical evidence that the Pakistani rupee suffers from "chronic overvaluation", (Ahmad, H. 2009). Pakistan's economy has been afflicted by Dutch Disease, caused by unrequited transfers and foreign aid.1 The country has been receiving inflows of hard currencies from sources other than exports of goods and services, such as workers' remittances and foreign aid. Figure 3 (see Appendix) shows the remittances received from Pakistani workers abroad, over the past 20 years. Remittances have nearly equaled exports, which significantly distort the foreign exchange markets. During the war in Afghanistan (2001-2021) a large portion of the funds allocated by the coalition also flowed into and through Pakistan.

Thus, under this variant of the Dutch Disease, the unrequited remittances cause an appreciation of the real exchange rate and loss of competitiveness in Pakistan's exports. Imports are encouraged while exports are penalized. Simultaneously, this phenomenon can lead to an increase in the share of the non-tradable sectors in the economy, such as real estate. When the overvaluation of local currency continues for a prolonged period, it results in the shift of capital out of the export sector and into other non-tradable sectors. Makhlouf & Mughal

[1] The term originally referred to natural resource discovery but has been used in reference to "any development that results in a large inflow of foreign currency, including a sharp surge in natural resource prices, foreign assistance, and foreign direct investment".

(2013), Javaid (2009) and Ahmed H. (2009) find empirical support for the Dutch Disease hypothesis for Pakistan.

Exchange rate policy must be consistent with the reality of the country's chronic dependence on hard currencies. This implies that the exchange rate should not only reflect its fair value notwithstanding the Dutch Disease but may also need to be adjusted in favor of the export sector. The current managed-float policy appears to focus on the overall balance of payments, to keep a stable level of foreign reserves. Yet, the country has experienced declining foreign exchange reserves over recent years. To create a level playing field for the export sector, the managed-float regime should instead focus on the current account balance minus the transfer payments. Such a policy would imply an FX rate higher than the market rate, i.e., a lower value of the rupee compared to its market value. There would be a concurrent and steady buildup of foreign exchange reserves, which may prove to be beneficial in other ways as well. First, it will positively impact the exports, and at the same time a stronger dollar will also discourage excessive import consumption and help with energy demand management. Second, a steady increase in the FX reserves will provide more confidence to the foreign investor, which may be crucial for attracting the required FDI to the country. Third, an increase in the FX reserves will help sterilize foreign exchange inflows, thereby mitigating domestic inflation. Fourth, a steady increase in FX reserves, commensurate with the growth in the country's exports and GDP, is necessary to support trade transactions.

Managing the Dutch Disease involves sterilizing the excess foreign inflows on account of transfers, purchasing the FX, and converting these into FX reserves.[2] There are examples of other countries following this strategy. Exchange rate policies followed by China and India, two countries with robust growth in exports, have led to steady increases in their foreign exchange reserves which are currently reported at USD 3.2 trillion and USD 600 billion respectively (equivalent to approximately 14 and 9 months of imports, respectively). Some evidence suggests that China manages its currency to be undervalued in pursuit of an export-led growth strategy. The steady increase in the Indian FX reserves also points out to a slight undervaluation of the INR.

Implementing the indicated foreign exchange policy would have implications for fiscal policy. It would require financial resources, which could be challenging given Pakistan's historical fiscal deficits.

[2] Faltermeier et al. (2017) conclude that FX intervention is a beneficial policy to counteract the loss of competitiveness during a Dutch disease episode. Bussolo et al. (2007) find that remittances appear to lead to a significant real exchange rate appreciation. The authors also explore policy options that may somewhat offset the observed effect.

The overvaluation of the rupee not only hurts the exporters, but it also disadvantages hardworking ex-patriate workers and their families. Conversely the beneficiaries of this policy appear to be the urban elites and upper-middle-class consumers, who enjoy cheaper gas, energy, and other imported luxuries.

Role of Finance in Export Promotion

Finance plays a central role in facilitating international trade. Due to the significant lag between production and payment receipt for exports compared to domestic sales, exporters require larger working capital financing than domestic firms. This also makes them more susceptible to credit risks and defaults from foreign customers.

According to an Asian Development Bank (ADB) survey (ADB, 2023), thirty-four percent of those surveyed, report "lack of access to finance" as the most important barrier to export (Figure 5, Appendix). The survey also estimates the global trade financial gap to be about USD 2.5 trillion, or 9.7 percent of the total world trade in 2022 (Figure 6, Appendix). According to a WTO report (WTO, 2016) up to eighty percent of trade is financed by credit or credit insurance, but coverage is not uniform. A lack of trade finance is a significant non-tariff barrier to trade, particularly (but not exclusively) in developing countries.

To expand into international markets and remain competitive, exporters must invest in physical capital and technology, especially for higher value-added products targeting more sophisticated consumers. Production processes have become increasingly capital intensive, involving large-scale automation and robotics to ensure product quality. Access to finance can severely constrain exporters' ability to invest in plant, machinery and human capital, hindering their growth and competitiveness. Recognizing the crucial role of finance, governments worldwide support exporters in various ways, such as concessionary loans, insurance and guarantee programs.

The SBP offers two such primary programs to support exporters: the Export Finance Scheme (EFS) and the Long-Term Finance Facility for Plant & Machinery (LTFF). EFS provides short-term working capital loans, while LTFF offers long-term loans for investing in machinery and equipment. These schemes involve substantial outlays, with EFS providing loans totaling USD 3.8 billion dollars per annum between 2015 and 2017.

Defever, Riaño & Varela (2020) evaluate the impact of the two SBP facilities, EFS and LTFF, on firm-level export performance and conduct a cost-benefit analysis. The study shows that the firms benefiting from these loans are substantially larger (and exporting a large share of products) than the average exporter and are concentrated in the textiles, clothing and apparel sectors. The study also finds that both, EFS and LTFF, had a significant and positive impact on

the export sales of participating firms between 2015 and 2017, (EFS increasing exports by 7 percent and LTFF increasing exports by 8.7 percent to 11.2 percent).

However, the authors note that while these schemes have helped expand exports of individual firms (*intensive margin*), neither scheme has helped in expanding the range of products being exported nor the number of destination countries (*extensive margin*). A comparison of these findings with similar studies in other developing countries show that most of the interventions have a stronger impact by way of expanding the number of exporters, products and destinations.3 A back-of-the-envelope cost-benefit analysis of both schemes reveals that from a fiscal standpoint, EFS and LTFF offer an expensive way to increase tax revenues because they offer loans to firms at negative real interest rates. However, the schemes do appear to be more effective in generating foreign exchange inflows.

A similar study by Zia (2008) investigates the impact of removing subsidized credit on exports of affected firms. The study finds that while "privately-owned firms experience a substantial fall in their exports, the performance of large, publicly listed firms is largely unaffected by the policy changes." It seems unnecessary to provide subsidized credit to financially unconstrained firms, which receive approximately half of the loans.

Pakistan reportedly has one of the most protectionist trade policies in the world. A recent report by the World Bank (2021) argues that the country's trade policy has an anti-export bias, since it incentivizes production for domestic rather than export markets, by affording greater import protection to businesses.4 There is growing evidence that trade promotion policies are driven by political considerations rather than economic merit. Several studies have also documented the extent of elite capture within Pakistani institutions. Malik and Duncan (2022) examine the drivers of trade protection in Pakistan and find that sectors with exposure to politically powerful businesses have disproportionately benefitted over the last 20 years, through a complex mix of tariff and non-tariff measures.

To expand the export sector's access to short-term and long-term finance, financial resources from both the public and the private sector would be needed. Creating enough fiscal space through prudent public financial management is essential for implementing export promotion strategies. This would also relieve the "crowding effect" on private financial sector institutions allowing them to allocate more resources to the export sector. Export financing strategies also have implications for capital controls and FDI policies.

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[3] For example, Volpe Martincus & Carballo (2008) find that export promotion actions are associated with increased exports, primarily along the extensive margin, both in terms of markets and products.

[4] Kohn et al. (2016) find that financial frictions reduce the impact of trade liberalization, suggesting that they constitute an important trade barrier. Kohn et al. (2023) find that low financial development substantially limits both the aggregate and welfare gains from tariff reductions.

Given the over-stressed state of the public finances, the question is whether the required financial resources can be channeled into the export sector.

The State of Pakistan's Competitiveness

The share of Pakistan's exports in GDP has declined from 17.2 percent in 1992 to 10.4 percent in 2022. One major factor contributing to the decline in the country's exports is its decreasing relative competitiveness. Figure 7 shows (see Appendix) the Global Competitive Index for Pakistan in comparison to a selected group of countries.

The weakness of the export sector is also evident in other indicators, such as relatively low entry rates for new exporters, who struggle to expand and scale their product or services over their life cycle. Consequently, exports remain undiversified and lack sophistication.

A World Bank (2021) report notes that the slow export growth has made the Pakistan economy increasingly inward-oriented, which has adverse implications for its foreign exchange, employment, and productivity growth. The country's weak export competitiveness is reflected in its lack of diversification into higher value-added activities. Firm-level analysis indicates that substantial barriers exist for new firms to enter the export market and to scale up their operations. According to the report, the three main causes of Pakistan's stagnant exports are: (1) a tariff policy with an anti-export bias characterized by the world's highest effective tariffs, which has led to protectionist policies aimed at import substitution and domestic market focus; (2) inadequate support services for exporters, particularly long-term finance for plant expansions and market to reduce information costs for individual firms; and (3) low productivity among Pakistani firms, hindering their ability to compete effectively in global markets.

Achieving local-market competitiveness is a pre-requisite for achieving competitiveness in the global markets. A strong local competitive advantage can then be leveraged for foreign market expansion. The local completeness fostered by productivity, innovation and efficiency is only achievable in a competitive economic environment, which contradicts protectionist policies.

Exporting in a Globalized World

In today's globalized trading environment, supply chains have become complex and interconnected across national boundaries. Expanding exports involves participating in global value chains (GVCs). Public policy, then needs to facilitate local firms in engaging with these global networks by reducing import duties and improving the ease of doing business.

A joint report of the Asian Development Bank and Islamic Development Bank Institute (ADB/IDB, 2022) notes that Pakistan has the lowest GVC participation

rates globally. However, the Pakistan economy stands to benefit enormously from adopting a more outward-oriented development strategy. The report recommends the following: (i) diversifying exports beyond textiles, which currently dominate the export sector but are often stuck in low-value-added segments and rely heavily on foreign processing; (ii) investing in human capital to maximize the economic returns from GVC opportunities, and expand service exports; (iii) providing institutional support to ensure that the wellbeing of groups adversely affected by opening up to GVC is not compromised, and; (iv) continuing to pursue new trade agreements to lower barriers to trade, exchange information, and establish mutual trust.

In the globalized trading framework, multinational corporations (MNCs) are the main agents for facilitating access to value-chains. Therefore, developing strategic alliances with MNCs is critical. MNCs can also help firms gain access to the markets, facilitate trade financing and investments, and introduce technology to enhance productivity (Lovo & Varela, 2020).

Pakistan's stagnant and narrow-base exports have hindered the development of strategic alliances with MNCs. The export pattern suggests that "Pakistan has turned more inward oriented since the turn of the century" which poses a challenge as greater integration into the global marketplace is closely linked to faster productivity growth (World Bank PUD 2021). The inward orientation and isolation are also evident in the cultural and political spheres. Government export policies appear to be focused on certain traditional items and industrial sectors, neglecting the broader cultural and political dimensions of international trade.

A study by Salinas (2021) finds that four economy-wide factors—governance, education attainment, infrastructure quality and open trade policies (horizontal policies)—foster more diverse and complex non-commodity exports. Improving these areas can create conditions conducive to diversification and boosting complex or higher-value-added exports. The study underscores the need to shorten effective geographic distance by enhancing connectivity through better transportation logistics, reducing trade policy barriers, enhancing trade facilitation, and utilizing communication technologies. Salinas (2021) also suggests that industrial policy interventions may be less effective or even detrimental.

The Salinas (2021) study expands upon the traditional "gravity model" of international trade, which explains the volume of trade between countries as a product of their economic masses but inversely related to their geographical distance. Other studies have modified the model by substituting psychic or cultural distance for geographic distance, emphasizing the role of social and cultural proximity in promoting trade between countries. Export policy makers need to ensure that the country avoids cultural and political isolation, which can hinder trade expansion.

There is promising potential for expanding exports of *knowledge-based* products and other services. To realize this export, the country must invest in human capital development to increase its pool of skilled and technical labor and promote greater participation of women in this sector. For manufactured products, technological advancements have led to large scale automation and robotics, which require substantial long-term investments in upgrading machinery and equipment.

Foreign Direct Investment

A notable feature of FDI is its inherently cyclical nature: all foreign exchange inflows now will later necessitate foreign exchange outflows. If the FDI comes as a foreign debt, there would be debt servicing obligations in the future. If the FDI comes in the form of equity, there would be corresponding repatriation of profits and initial investment in the future. The upshot is that FDI will increase the demand for FX in the coming years; therefore, the litmus test of FDI should be whether it increases the country's FX earnings through expanding exports. In many cases, FDI is not an additional foreign exchange infusion in the economy, as most of it carries a demand on the FX with it in the form of import of plant machinery and other services denominated in FX. Therefore, FDI-funded projects need to be carefully evaluated in terms of their export-building capacity.

Typically, FDI comes in as an expansion of trade between a local firm and its foreign partner. At a certain stage, the foreign entity may decide to expand its international operations by investing in physical facilities in a foreign country. This materializes as mutual trust as business relationships deepen, and as the foreign firms seek to globalize. Therefore, it is imperative to consider the factors that are paramount to the decision-making processes of foreign investors.

Primarily, foreign investors seek an "investment-friendly environment." This is not different from what a domestic investor seeks. A pertinent question, therefore, is whether domestic investors are actively investing in Pakistan? There are indicators suggesting that, conversely, domestic investors may be divesting from the country. Additionally, some evidence hints at the possibility of FDI being a form of "round-tripping" by domestic investors. That is, first, the funds flow out of the country, and then are channeled back into the country using "fronting" tactics.

The foremost consideration for all investments, foreign or domestic, is capital safety. Foreign investors seek assurances of repatriation of earnings and initial capital. The likelihood of funds being blocked and the political risks, ranging from outright expropriation to unforeseen changes in laws affecting cashflows, are primary considerations. Another major consideration is foreign exchange risk, an inherent component of foreign investment decisions. When the investors perceive the local currency as depreciating in an uncertain yet predictable manner, they will either expect a hefty risk premium or not invest at all.

Cultural factors considerably influence FDI flows. Several studies document that cultural or psychic distance between countries of origin and destination is a key determinant of FDI. Unfortunately, for Pakistan, country brand has been adversely affected from perceptions such as being the most dangerous country. To attract FDI, Pakistan must actively work on repairing its brand image.

Capital Controls and FDI. Measures to facilitate FDI are closely linked to capital control policies. There is considerable discussion regarding capital flight from the country. Besides illicit financial flows by political elites, multinational corporations can also contribute to capital flight by manipulating transfer prices and exploiting loopholes in tax codes.

However, there is a fundamental contradiction between attracting foreign capital and simultaneously imposing restrictions on its flight from the country. This trade-off can potentially negatively impact foreign direct investment by putting restrictions on capital transfers. There are innumerable ways for capital to flow out, for example, through over-invoicing, under-invoicing, smuggling, and use of cryptocurrencies. Therefore, capital controls should prioritize targeting illicit income and gains. Additionally, the country needs to actively address its tax base erosion. However, coercive measures to curb capital flows are likely to be counterproductive. A possible solution is to focus on the sources of illicit capital by implementing stricter measures against money laundering and tax evasion (Arezki et al., 2013).

Beyond illicit transfers, several legitimate reasons exist for firms and individuals to transfer capital outside the country. These reasons include transfers motivated by portfolio rebalancing, flight to safety, expanding foreign business operations, and maintaining funds abroad for business purposes. It is also important to note that there are compelling reasons for foreigners to transfer their capital to the local country, such as foreign portfolio investment motivated by optimizing risk-return positions.

Prioritizing prudent macroeconomic policies which yield a stable and market-based FX rate are likely to be more productive. Political risk affects both domestic and foreign entities, often contributing to capital flight. Therefore, ensuring long-term political stability, which fosters a stable and reliable legal environment, should be the priority.

Creating Fiscal Space – Prudent Fiscal and Debt Management

The preceding discussion on export expansion measures shares one common element, i.e., the need for "fiscal space", which refers to the government's flexibility to reallocate resources toward export promotion policies. Prudent fiscal and debt management is

essential for creating a stable macro-economic environment which is the cornerstone of any healthy economy.

On the contrary, Pakistan's persistently large and growing fiscal deficits, reaching 7.9 percent of GDP in FY 2022, severely limit the ability of the government to implement export promotion strategies. The chronic large budget deficits have led to an unsustainable accumulation of public debt, reaching 78 percent of GDP in FY 2022. Several studies and reports have highlighted the importance of rationalizing and reducing Pakistan's fiscal deficit to achieve fiscal and debt sustainability (Uppal & Mangla, 2018; Uppal & Khalid, 2019).

More recently, the World Bank Federal Public Expenditure Review (PER) analyzed the key drivers of Pakistan's fiscal deficits and provided detailed recommendations for regaining fiscal and debt sustainability. The review, however, notes that "despite the development of strategies and proclaimed intentions over the last two decades, successful outcomes remain to be attained."[5] The report revealed that "tax policy reform is at risk of being influenced by a diverse set of stakeholders whose priority is not the restoration of fiscal sustainability in Pakistan." Pakistan's current tax system provides preferential treatment to a range of economic and political interest groups through concessions, exemptions, and other policy measures. Elites exert influence and resist reform through a variety of channels, including mobilizing their political connections, threatening to obstruct businesses, or by staging public protests. In doing so, they create a system where narrow interests determine policy and public interest is undermined. Additionally, it fosters a situation where policy outcomes weigh heavily toward the wealthy than the bottom 40 percent." As argued in Dercon (2022) the World Bank review underscores the need for the country's elites to recognize that tax reform is in their own self-interest, and that "they stand to gain more from a stable and fast-growing Pakistan with an equitable and efficient tax system than under the status quo."[6]

The World Bank's (2020) Systematic Country Diagnostic Report extensively discusses elite capture in Pakistan (see Figure 8). This issue was reiterated in a World Bank (2022) report which stated that, "the elite capture has stunted the development of key markets that regulate the allocation of productive factors (markets for land, capital, and labor) in Pakistan." Over the course of the country's history, these elite groups, with their historical advantage in controlling higher endowments of land, physical and human capital, have not supported policies which could have addressed factor market failures, as this would have weakened their own economic power and their grip over state resources." Consequently, the report concludes that,

[5] World Bank 2023, Chapter V, pp. 26.
[6] Ibid.

"the effectiveness of reforms crucially depends on alleviating public governance environment constraints and ensuring incentive compatibility."

Pakistan's public debt management policies exacerbate its fiscal problems. The country's over-reliance on short-term domestic and external financing instruments leads to growing gross financing needs and increased solvency risks. The shallowness of the country's domestic debt capital market hinders efforts to lengthen the maturity structure of public debt or lower the exchange rate risk. A well-functioning domestic debt market is crucial for mobilizing long-term financing and reducing rollover and exchange-rate risks. Systematic assessment and management of contingent liabilities arising from domestic and foreign public debt can help reduce Pakistan's debt exposure through pre-emptive strategic risk management.

Currently, approximately seventy percent of all the domestic public debt is held by the domestic banking system, exposing the banking system to significant sovereign debt risk. However, the banks' funding structure reliant on deposits and other short-maturity funding sources constrains their ability to lend long term. Consequently, the under-developed state of the domestic debt capital market has become an obstacle to diversifying the investor base and realizing the potential of long-term domestic borrowing.

Conclusions

To transition to export-led development strategies, Pakistan needs an integrated and long-term strategy that incorporates measures to strengthen economic, political, and social institutions.

First, the country needs to pivot to creating and maintaining a stable macro-economic environment, which hinges on restoring fiscal balance. Fiscal policy is a key driver of macro-economic stability and can create the fiscal space necessary to implement reforms strategies for transitioning to export-led growth. Due to persistent large fiscal deficits, the private sector has been crowded out, hindering its ability to meet short and long-term financing needs or requiring it to do so at a high effective cost. These fiscal deficits are the primary cause of high inflation rates. Often referred to as "the silent killer of finance," inflation hampers the development of financial institutions and markets, particularly in dealing with long term securities.

Second, macroeconomic risks are amplified by a fiscal policy that runs persistently runs large deficits. The public debt has a high share of external borrowing and relies on short-term debt instruments. There is room to build an integrated debt management function. A systematic assessment of contingent liabilities and development of risks management strategies can help prevent financial crises. Developed financial institutions and markets offering depth and

liquidity can support fiscal and public debt management by extending the maturity profile of debt and lowering the interest rate and exchange rate risk.

A comprehensive strategy for development and implementation requires public–private dialogue. No meaningful structural change is likely to be acceptable or implementable without the involvement of all stakeholders. To develop effective export promotion policies, current and potential players in the export sectors need to be engaged, without compromising the interests of the public and the country. For this, public decision-making processes must be rooted in the people.

This raises a fundamental question regarding the development of economic policies and strategies. It needs to be assured that export-led growth aligns with the interests of the general populace. Political failure, governance issues and corruption can lead to elite-capture by vested interests. There is evidence suggesting that such elite capture lies at the heart of most of the decision-making in Pakistan.

Alavi (1972) was the first scholar to analyze the oligarchical control over the state of Pakistan, positing that, in the absence of a dominant social class the bureaucratic-military complex came to control its inner core, leading to post-partition Pakistan became an 'over-developed state.' Ahmed (2023) examines the extent of political and bureaucratic capture in public sector resource allocation in Baluchistan, providing empirical evidence on how the political and bureaucratic elite disproportionally allocate public sector funds for misappropriation and/or political patronage. A paper by Ahmed (2017) focuses on state capture and the extractive behavior of Pakistan's elite. Using the rational-actor-dilemma framework, the paper concludes that "Pakistan in its current essence and manifestation is fundamentally a captive state—beholden to elites of Pakistan."

Sound policies are likely to emerge through open and transparent processes, informed by evidence and informed discussions. Rational public policies implemented in a stable political and economic environment are essential for export growth. Export promotion policies should reflect a market orientation, reinforced by leveraging public relations, soft power, and public diplomacy tools.

Lastly, the role of cultural factors in export growth cannot be overemphasized. The core of economic progress lies in innovation, risk-taking and entrepreneurship. These three traits thrive in cultures that incentivize and cultivate them within their populace, rewarding and celebrating those who embody them. In international trade, cultural closeness plays a significant role. Unfortunately, Pakistan's society seems to be drifting in the opposite direction.

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Appendix

Figure 1: Pakistan's Imports and Exports

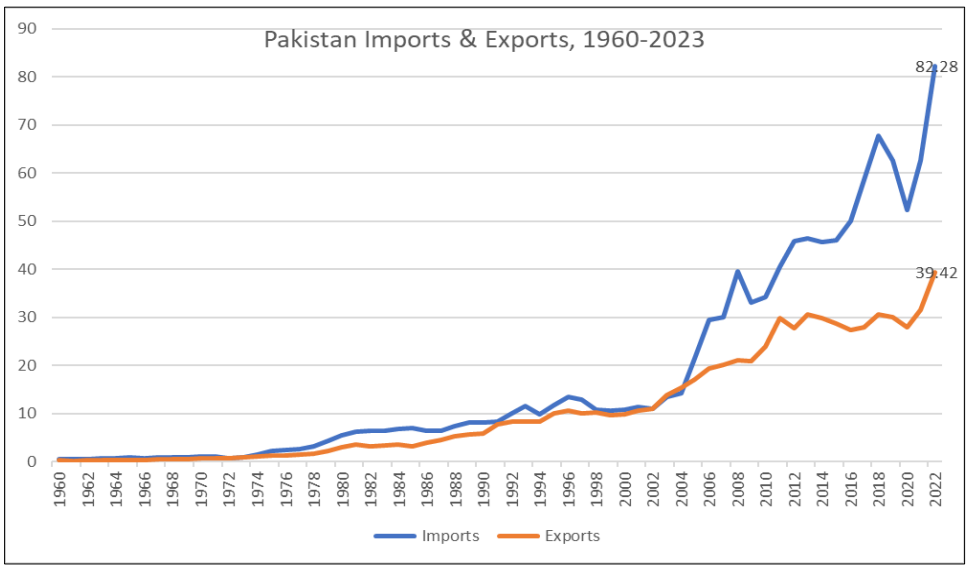


Figure 2: Pakistan's Imports and Exports-Percent of GDP

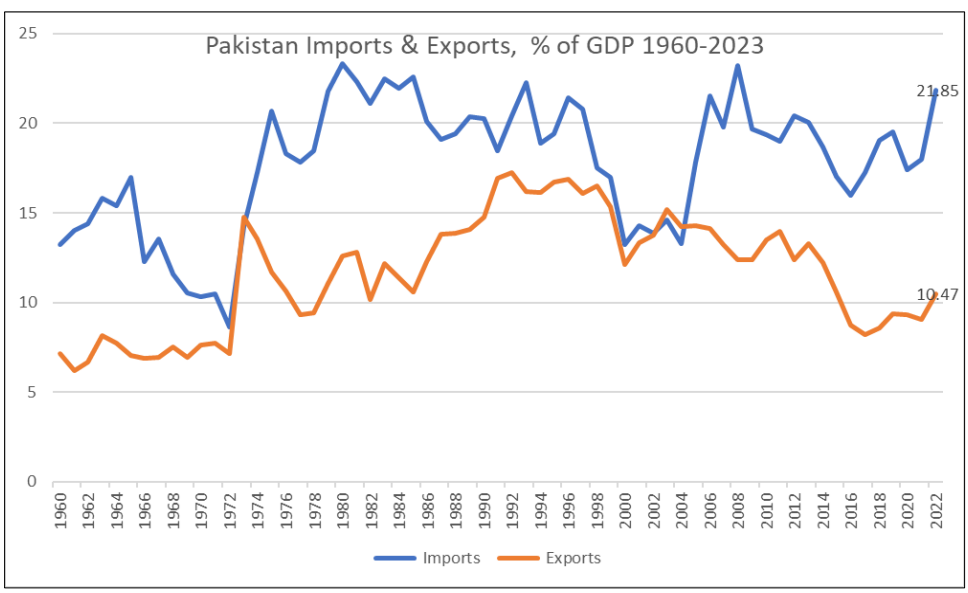


Figure 3: Exports and Workers' Remittances

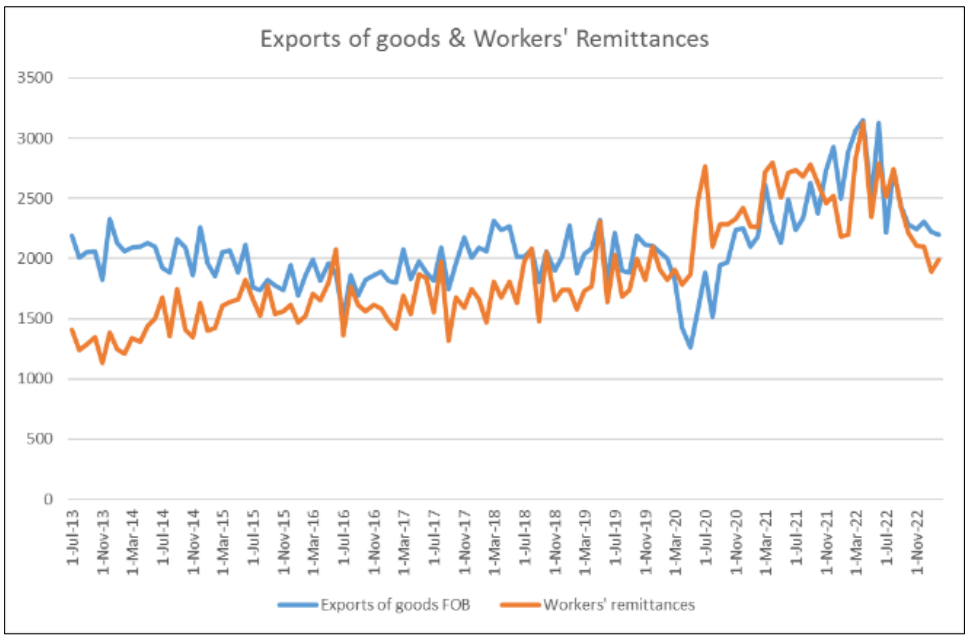
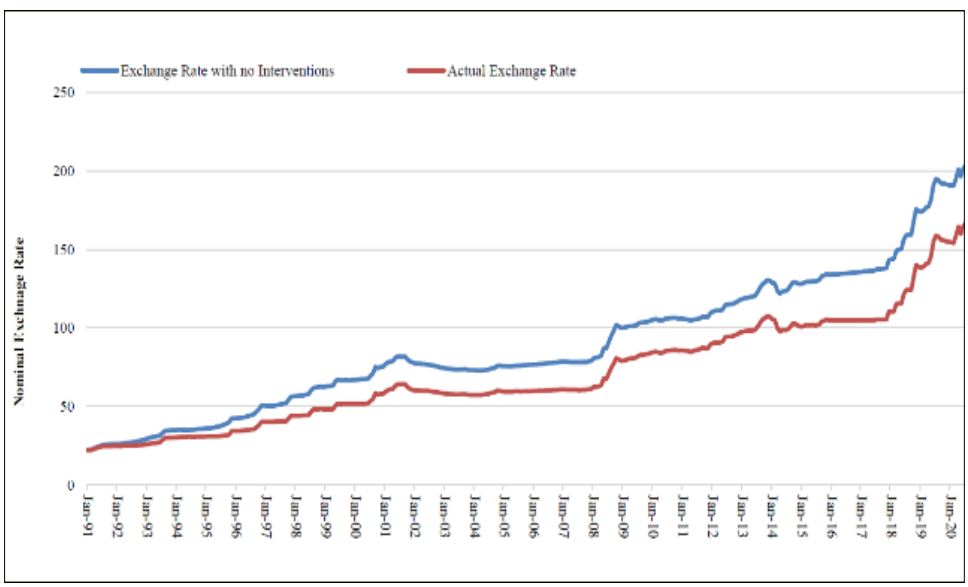
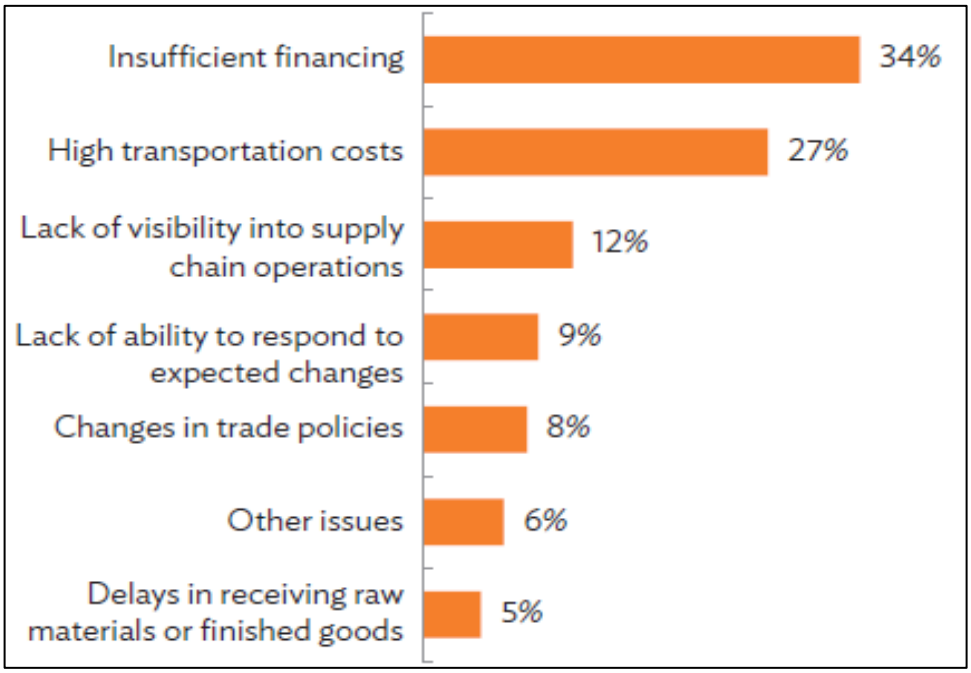


Figure 4: Exchange Rate - Nominal and Real



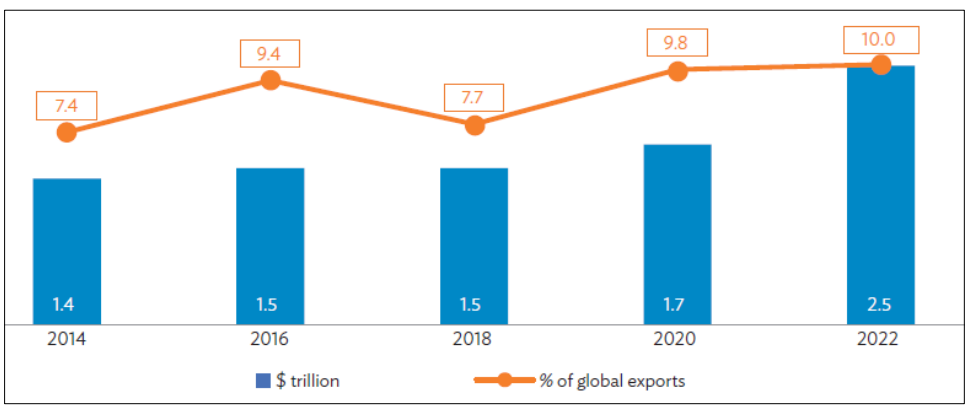
Source: Jalil, 2020

Figure 5: Significant Supply Chain Issues Faced by Firms
(% of firms' responses)



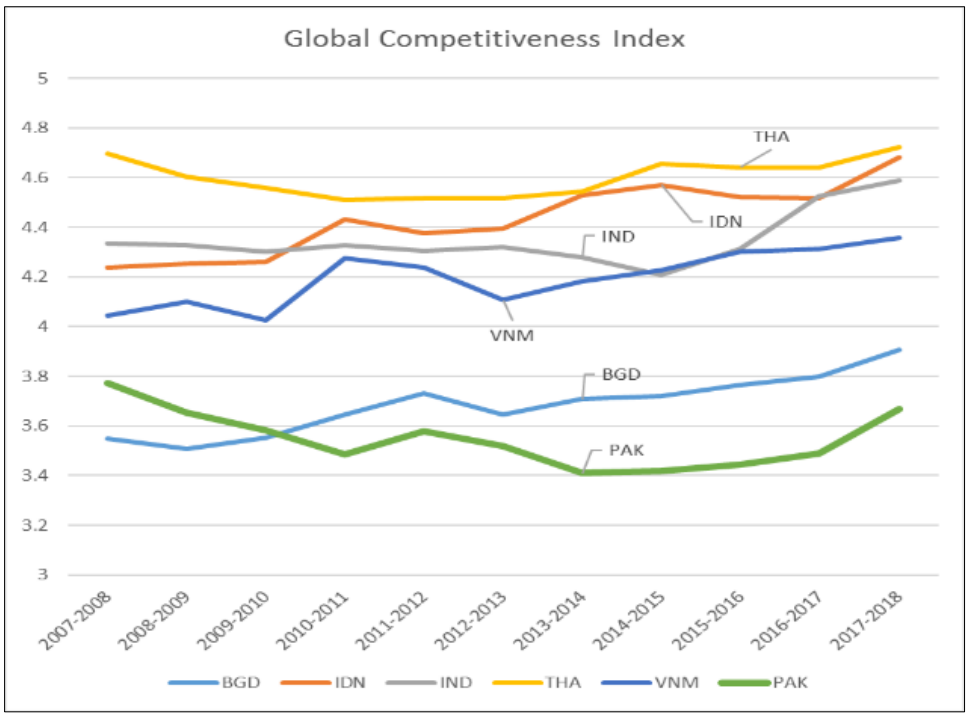
Sources: ADB. 2023 Trade Finance Gaps, Growth, and Jobs Survey

Figure 6: Global Trade Financing Gap



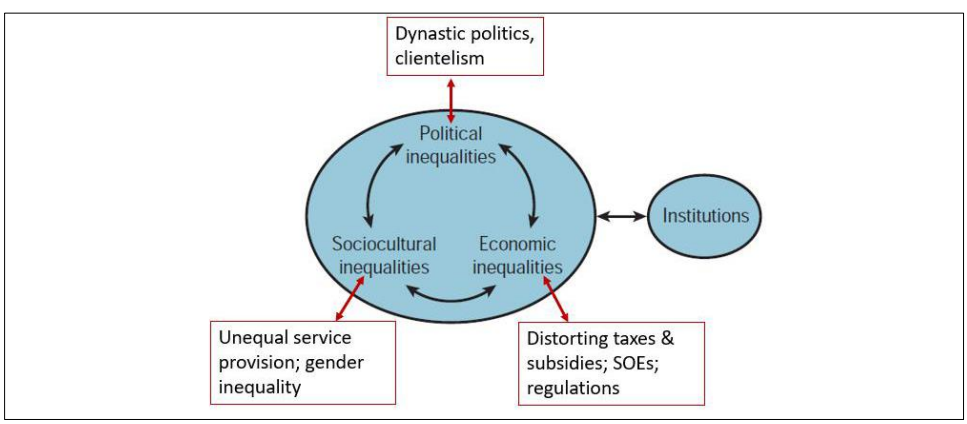
Sources: ADB. 2023 Trade Finance Gaps, Growth, and Jobs Survey

Figure 7: Global Competitiveness Index



Source: Global Competitiveness Report, World Economic Forum

Figure 8: Elite Capture



Source: World Bank, 2020

12

The Development and Regulation of the Capital Market in Pakistan

Khalid A. Mirza*

Abstract

This reflective note, drawing on the author's 40+ years relevant global and local experience, highlights the crucial role of regulation in economic governance. It emphasizes the challenging environment for regulation and capital market development in most emerging economies; including Pakistan. Specific shortcomings in Pakistan's capital market are identified: the regulator's lack of independence and ineffectiveness, the monopolistic structure of the capital market, burdensome regulations, inadequate securities financing, and the absence of robust investment banking. To address these issues, the paper proposes the following corrective measures: ensuring the SECP is appropriately led and staffed, licensing at least one additional, stock exchange and competing support institutions, rationalizing the capital market regulatory framework, re-introducing workable "Badla" financing, and promoting broad-based investment banking in Pakistan.

Keywords: capital market, regulator, imbalance of market forces, systemic risk, risk-adjusted basis, investor confidence, "badla", investment banking, margin financing, securities lending, price discovery

Introduction

This paper reflects upon an aspect of economic management in which the author has been personally involved; and in respect of which Pakistan has experienced both successes and failures. The capital market in Pakistan has clearly had its "ups" and "downs" in terms of intrinsic value addition. It will be readily appreciated that after successfully implementing a program of reforms and

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transformation over a period of three years (2000-2003), the capital market has, for the most part, deteriorated both absolutely and in comparison with regional peers.

Basic Challenges

Before examining the current shortcomings of our capital market and proposing necessary actions to achieve a well-performing and vibrant capital market that effectively mobilizes and allocates resources on a risk-adjusted basis, it is essential to outline the general challenges faced by capital markets and their regulation in developing economies, often referred to as emerging market economies. Fundamentally, establishing a robust economy and the prevention of financial instability require four key elements, which are not easily secured in the fragile environment of emerging markets. The elements are as follows.

- First, the maintenance of macroeconomic stability;
- Second, the building of efficacious financial institutions;
- Third, ensuring compliance with recognized governance norms, and
- Fourth, empowered and independent regulators.

Regarding regulation, particularly capital market regulation, the environment in most emerging markets, including Pakistan, is extremely challenging. This is due to several factors, including:

- the lack of political will to support regulation as needed;
- the constant threat to the independence of regulatory agencies;
- the lack of resources available to effectively implement regulatory programs;
- the dysfunctionality of the legal system, which weakens regulatory enforcement;
- the tendency of other government agencies to act contrary to the spirit of regulatory laws;
- the shortage of necessary technical skills.

It is important to recognize that regardless of a country's level of development, the lack of competent regulation in critical can adversely affect economic activity in those sectors and debilitate the overall economy. In this regard, capital market regulation holds paramount significance, surpassing the regulation of other economic sectors.

Any economic sector, particularly the capital market, that experiences a market force imbalance due to its peculiar structure or historical legacy requires

ongoing, adaptable measures to rectify this imbalance, prevent systemic risk, and safeguard the legitimate interests of all economic players, including vulnerable groups. Conversely, poorly designed or implemented regulation can be more harmful than no regulation. It is universally recognized that effective regulation necessitates a regulator with adequate authority, professional competence, operational independence, and a clear public perception of integrity.

It is paramount that regulation remains unbiased, free from political influence and consistently applied. The regulator serves as a monitor, enforcer, adjudicator, mentor and supporter of the market. In developing countries, fostering market development through effective regulatory measures is an especially crucial role for the regulator, particularly in the context of capital market regulation as compared to other form sectoral regulations.

Shortcomings in capital market development and regulation

When comparing Pakistan to its regional peers, India and Bangladesh, several significant shortcomings in Pakistan's capital market development become apparent, especially considering the relative economic size of these countries.

(1) A major concern is the perceived lack of independence of the Securities and Exchange Commission of Pakistan (SECP). The SECP is often seen as subservient to the government, and given the government's historical ties to certain private sector interests, particularly those with significant economic power, there is widespread belief that the SECP may be influenced either the government or undesirable private parties. This perception can negatively impact investor confidence.

(2) Second, Pakistan's capital market is characterized by a lack of competition, with monopolies in securities issuance, trading, platform, depositary, and clearinghouse functions. This lack of rivalry has hindered market growth and efficiency, resulting in poor performance indicators, demonstrating the negative consequences of monopoly.

(3) Third, the SECP as the regulator, has been ineffective and eroded investor confidence. Effective regulation involves both, making and enforcement of regulations. The SECP has largely failed in both areas, particularly since 2004. While a brief period of improvement occurred from 2018 to 2020 under the leadership of the Policy Board, despite internal resistance, the SECP has generally exhibited two detrimental characteristics for the capital market:

   a) Firstly, the imposition of onerous regulations has stifled market activity and hindered new initiatives.

   b) Enforcement, including adjudication, has been inconsistent, legally questionable and ineffective.

These issues stem from the politically motivated and unqualified unsuitable appointments at both the Commission and staff levels, leading to excessive personnel, low-quality staffing, regulatory ineptitude, and a lack of agency effectiveness.

(4) Fourth, the stock market lacks adequate financing. A well-functioning market with credible price discovery requires a robust system for financing stock trades, both for purchasing stocks and for facilitating short-selling through securities lending. Pakistan previously employed a REPO-based system called "Badla", which combined elements of financing and a futures instrument. Badla originated in the unofficial market and was often blamed, rightly or wrongly, for market disruptions. In 2000-2002, Badla was regulated and reforms were implemented to mitigate its risks. While the 2002 version of Badla was viable, it continued to be face criticism, leading to further changes were effectively eliminated it. The market now lacks an effective financing instrument to replace Badla. The elimination of Badla has adversely affected stock trades and price discovery in the Pakistan stock market. In terms of trading volume, Pakistan was once considered a leader in East Asia, but it has since lost that position.

(5) Fifth, investment banks with substantial risk-taking capacity are essential for a vibrant capital market, contributing to both supply and demand. Investment banks are thus a *sine qua non* for capital market development. Large, diversified investment banks, rather than boutique firms, represent the microcosm of the capital market. Primarily, capital markets grow through the supply of securities, not demand. In the absence of supply, demand hardly makes a dent. While this may seem counterintuitive, there is significant evidence to support this claim. Stock exchanges and investment banks promote securities issuance and expand the capital market. In Pakistan, the stock exchange is unfortunately a monopoly and remains a "mutual" club despite recent efforts to demutualize it. Maintaining the current structure benefits those in control and other vested interests for various reasons. Investment banking is virtually nonexistent in Pakistan. The few investment banks established were primarily surrogates for commercial banks, led by risk-averse commercial bankers or chartered accountants, approved by SECP. These individuals lacked the risk-taking mindset and capital market expertise required to design and market securities issuances. Such qualified professionals, whether local or foreign, would likely not be deemed "fit and proper" by SECP.

Corrective Measures

1) The preceding discussion highlights several reasons for the stagnation of Pakistan's capital market, but it is not exhaustive. Addressing these issues requires clear policy actions, as outlined in the following paragraphs.

2) To enhance the SECP's effectiveness and avoid politically motivated appointments, it is recommended that commissioners serve for a single, non-renewal term of 5-7 years. These appointments should be made only upon recommendation by an independent, professional board led by the Chairman of the Public Services Commission. In 2010, the World Bank proposed a similar measure in an unfinished paper shared with the Ministry of Finance.

3) Secondly, the SECP requires significant restructuring and reorientation. This includes reducing excess staff, eliminating unnecessary positions, and investing in substantial capacity, investigation, enforcement, and adjudication.

4) Thirdly, to increase competition, at least one more modern stock exchange should be licensed, and alternative trading networks like electronic trading networks (ECNs) should be encouraged. Additionally, establishing additional securities depositaries and clearinghouses would promote competition.

5) Fourthly, the SECP's burdensome regulations hinder market growth and innovation. Effective capital market regulation should be nuanced, disclosure-based and focus on essential aspects, allowing flexibility to market players. Excessive SECP regulations signal regulatory failure. A comprehensive review and amendment or even rescission of SECP regulations are necessary to achieve rationalization and simplification. While some progress was made during the Securities & Exchange Policy Board's efforts in 2018-2020, more work is needed.

6) Fifth, until globally accepted margin financing and securities lending modalities are implemented, the 2002 version of Badla should be reinstated to ensure adequate securities financing. This would revitalize the secondary market with consequential beneficial effects for the primary market.

7) Sixth, a comprehensive study should be conducted to understand why investment banking has not developed in Pakistan, comparing our situation to India's, where investment banking has been a significant driver of capital market growth. While various reasons exist, an objective study is necessary to identify specific steps and their sequence for promoting robust investment banking in Pakistan.