



COSTONOMICS

Unveiling the Hidden Costs of
Economic Inefficiencies
in Pakistan



Pakistan Institute of Development Economics



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COSTONOMICS

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Edited by
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Acknowledgment

Dr Nadeem ul Haque, Vice Chancellor, PIDE, deserves all the credit for conceiving this idea, offering valuable feedback, and providing unwavering encouragement that brought this report to life.

Preface

Throughout Pakistan's history, the economic landscape of the country has been plagued by inefficiencies and financial burdens. This report, "Costonomics: Unveiling the Hidden Costs of Economic Inefficiencies in Pakistan," embarks on a critical journey, not just to quantify these hidden costs but to catalyze meaningful change rooted in the context of the complexities of our nation's economy.

The Stakes Are High: Across various sectors, from electoral processes to protectionist trade measures, the financial strain on Pakistan's economy has been quite significant. Along with the drainage of public resources, these inefficiencies have stymied economic progress and stability. Further neglecting to examine these critical issues will only aggravate Pakistan's economic woes and impede progress toward stability and prosperity.

Unmasking the Causes: Systemic issues in policy execution, combined with insufficient accountability have further exacerbated these economic inefficiencies. The substantial costs associated with federal lawmakers, unchecked emigration of skilled talent, and excessive government control in agricultural markets, exemplify the areas where reforms need to be immediately implemented. Understanding these costs in the backdrop of Pakistan's unique path to development is key to driving progress.

The Path Forward: Tackling these challenges necessitates a thorough overhaul of existing policies. It is imperative to alleviate the burden of protectionist practices, induce an economic environment conducive to competitiveness, minimize government interventions, and rationalize the expenditure on lawmakers and elections. Fostering further research is crucial – by dissecting economic costs within our domestic context, policymakers can become equipped with actionable insights to address pertinent inefficiencies, thereby leveraging untapped potential and opportunities, and helping Pakistan embark on a path toward sustainable development.

A Call to Action: While the quantification of various costs in Pakistan, may prove to be quite challenging, particularly given the sheer paucity of data, it is for this very reason that such an endeavor must be undertaken. Even partial insights can illuminate the way forward. "Costonomics" is more than just a term; it's a movement – an overarching vision for reshaping Pakistan's economic destiny.

It is hoped that those in positions of authority recognize the urgency of these challenges and take decisive steps to address them.

Abbas Murtaza Maken
Research Associate, PIDE

Executive Summary

This report provides an in-depth analysis of the economic costs incurred by Pakistan due to various systemic flaws and policy inefficiencies. Drawing from extensive research and data analysis, this report captures the financial impact of these issues and outlines potential pathways for efficacious reforms.

Cost of Contesting Elections from Multiple Constituencies

- This section analyzes the financial impact of allowing candidates to contest elections from multiple constituencies.
- There has been a precipitous increase in the expenses associated with conducting elections, especially in recent years. A major contributor has been the practice of candidates, contesting and winning multiple constituencies and vacating other seats, resulting in re-election expenses for those vacated seats. In the 2024 elections, these costs amounted to PKR 1.99 billion.
- Reforms to streamline the electoral processes can significantly help cut this unnecessary expenditure and improve the efficiency of the overall electoral process.

Cost of Protectionism

- This section assesses how Pakistan's continued imposition of high tariffs and non-tariff barriers, results in substantial economic costs.
- The implementation of excessive protectionist measures, in a world moving towards greater trade liberalization, has only served to distort market dynamics, raise costs for industries and consumers, diminish competitiveness, and stymie economic growth.
- These protectionist policies resulted in substantial economic inefficiencies of approximately PKR 1.77 trillion, reflecting the inflated cost of imports for consumers and businesses alike.
- Through a shift towards more open and facilitative trade policies, the high financial burden associated with imports can be significantly lowered.

The Cost of Federal Lawmakers

- This section examines the financial burden of maintaining federal lawmakers, including their salaries, allowances, and related expenses.
- In Pakistan, the maintenance of federal lawmakers accrues a significant financial cost to the national exchequer, totaling to an annual cost of PKR 27.67 billion.
- Yet despite these high costs, the productivity of federal parliamentarians remains low, aggravated by a lack of accountability and high absenteeism. Adopting measures to boost fiscal responsibility and transparency will help ensure judicious use of public funds.
-

The Cost of Lost Talent

- Focusing on the brain drain phenomenon, this part of the report captures the economic impact of skilled professionals emigrating from Pakistan.
- Brain drain is one of the foremost economic concerns for Pakistan because it leads to disproportionately high losses in innovation and productivity.
- From 2014 to 2023, the emigration of skilled and highly qualified individuals imposed a whopping cost of PKR 8.06 trillion on the country's economy.
- Strategies to retain and attract talent urgently need to be devised and implemented to minimize the loss of human capital and harness local expertise.

The Cost of Distortions in Agricultural Markets

- Evaluating government interventions in agricultural markets, particularly in wheat, water, and storage, this section highlights the inefficiencies and financial burdens imposed by such policies.
- Throughout the country's history, substantial government intervention in agricultural markets, particularly in the wheat sector, has created considerable inefficiencies and imposed heavy financial burdens.
- The cumulative cost of such interference is estimated at PKR 2.56 trillion, reflecting the unsustainable nature of current policies.
- Market-oriented reforms are crucially needed in these markets to boost overall productivity and sustainability in the agriculture sector.

The Cost of a Non-Competitive Economy

- The deleterious effects of isolationist policies, such as high import tariffs and export subsidies, on domestic industries are probed here.
- Non-competitive economic practices, supported by these isolationist policies, come at an estimated annual cost of PKR 1.67 trillion to the economy. This underscores the high distortions and inefficiencies caused by these measures.
- Removing these barriers through a phased reduction could significantly enhance domestic production, exports, and tax revenues and foster a competitive economic environment.

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COST OF CONTESTING ELECTIONS FROM MULTIPLE CONSTITUENCIES

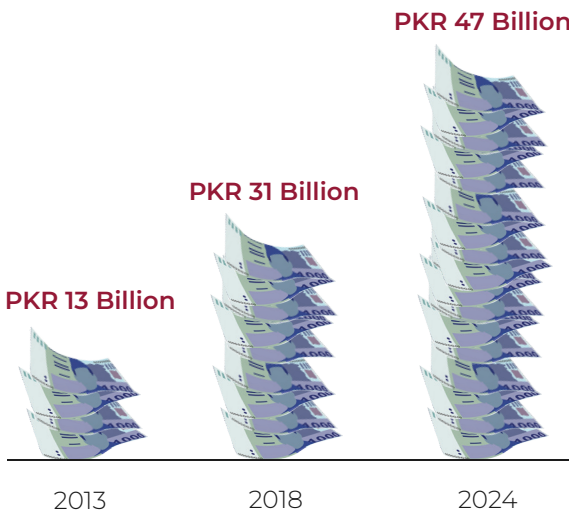
Mohammad Shaaf Najib
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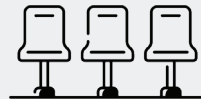
- Elections, despite their shortcomings, remain a major political activity in Pakistan.
- To date, 12 direct general elections have been conducted since 1970.
- Elections are a significant financial obligation for the country, with their costs rising exponentially over the past 3 elections. (Figure 1).

Figure 1: Total Cost of General Elections (including elections for national & provincial assemblies).

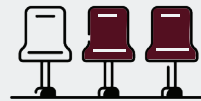


Source: THE NATION, newspaper

2 types of MPs in National and Provincial Assemblies: MPs on General Seats and MPs on Reserved seats.



MPs on General seats: Constituency-based parliamentary seats for which elections are contested.



MPs on Reserved seats (for women and minorities): Allotted to political parties based on general seats won by the party. Party nominates its members for the allotted reserved seats.

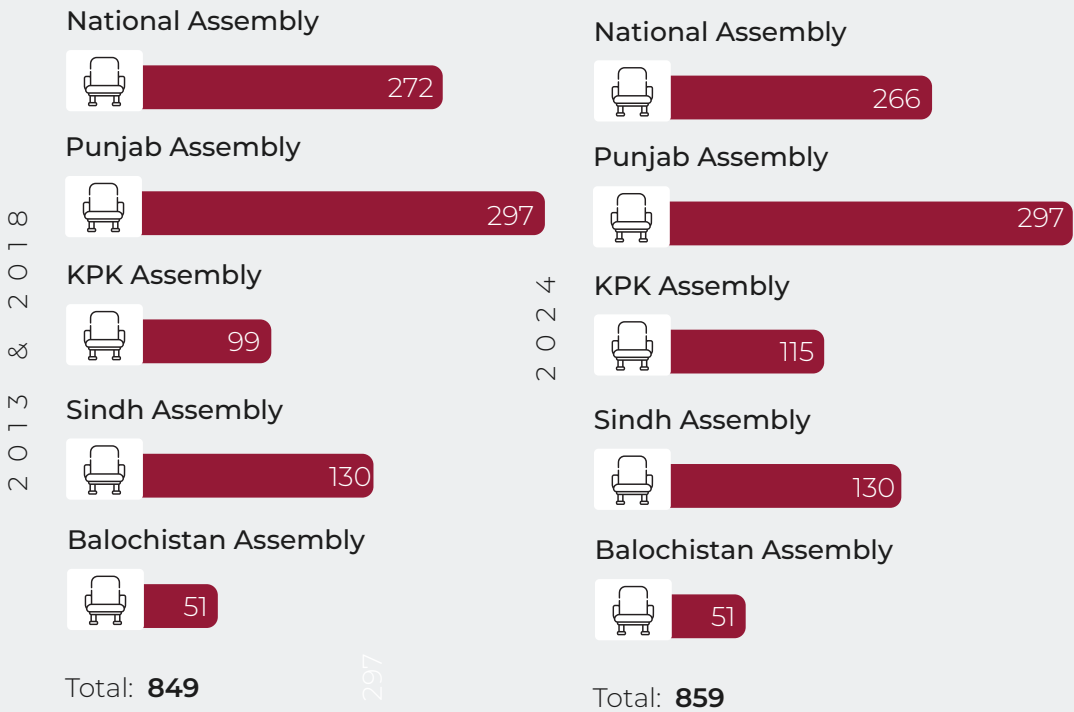


Total General Seats in Past 3 Elections



Due to new delimitations under **The Elections Act, 2017 (as modified up to 5th August 2023)** and per **Population Census 2023**, the total number of general seats in the national assembly decreased in the 2024 elections while KPK provincial assembly seats increased due to incorporation of the erstwhile FATA region.

Figure 2: General Seats in Elections



Source: Election Commission of Pakistan



Contesting Elections from Multiple Constituencies

Loopholes:

- No limit is defined in The Elections Act regarding the number of assemblies a single candidate can contest from in a single general election, nor the number of constituencies a single candidate can contest from.
- This rule is exploited primarily by party heads and senior leadership to secure entry into parliament and choose between national and provincial assembly seats to vacate or keep based on executive position or gaining better political mileage.
 - For instance, a winner might vacate their national assembly seat where their party is in opposition to become a provincial cabinet member or even chief minister.



Senior leaders often contest elections on multiple seats



upon winning more than one seat, they retain only a single seat and vacate the rest



triggering by-elections on vacated seats



imposes a cost on national exchequer and the general populace

Figure 3: Printing Costs¹ – General Elections 2024

PKR 120.24 million



National Assembly Ballot Papers
Expenditure

PKR 121.2 million



Provincial Assembly Ballot Papers
Expenditure

Total Expenditure – Ballot Papers

PKR 243.4 million

Source: Samaa TV

Figure 4: Average Cost of Election per Constituency – General Elections 2024

PKR 47 Billion



Total Cost of Elections

PKR 46.7 Billion



Total Cost of Elections
(excluding ballot paper printing costs)

PKR 0.452 Million



Average Printing Cost per NA Constituency

PKR 0.204 Million



Average Printing Cost per PA Constituency

PKR 175.79 Million



Average Cost of Elections per NA Constituency

PKR 79.9 Million



Average Cost of Elections per PA Constituency

(exclusion ballot paper printing costs)

PKR 176.242 Million



Total Cost of Election per NA Constituency

2.2 PA seats for 1 NA seat



PA to NA constituencies ration

PKR 80.104 Million



Total Cost of Election per PA Constituency

Source: Author's Calculations based on tables above

In 2024 elections, total of 22 by-elections conducted after general elections.

20
constituencies:

reelection due to seats left vacant by candidates who won multiple seats

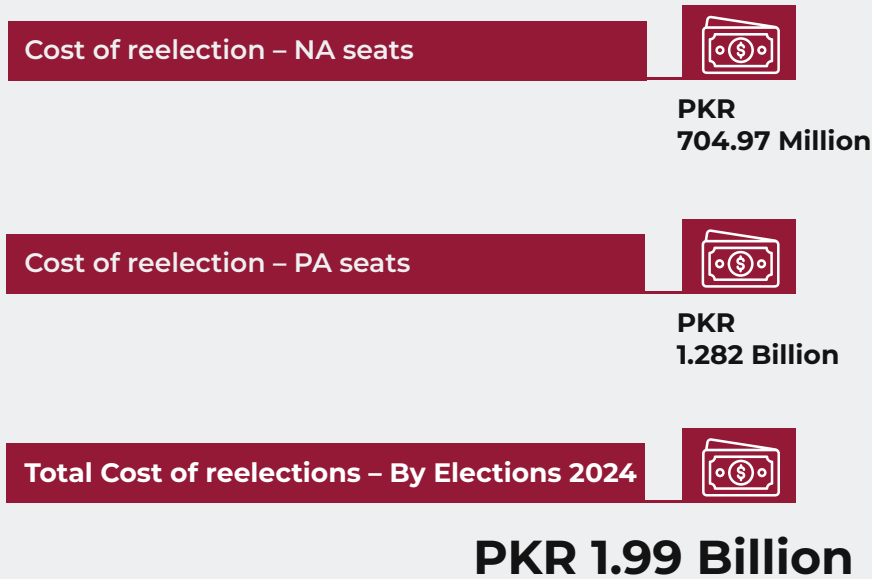
2
constituencies:

election delayed due to candidates' deaths



04 National Assembly seats & 16 Provincial Assemblies seats

Figure 5: Cost of Reelections (on vacated seats) – By Elections 2024



Source: Author's Calculations based on information presented in Figures 1-4 above

Recommendations



Contesting on multiple seats must immediately be disallowed.



Candidates should be allowed to contest only from a single constituency of only one parliamentary house in a general election.

1. As national and provincial elections are held together while all other costs in a constituency remain the same, printing ballot papers for each incurs twice costs for the same constituency, which must be separated to capture before estimating the average cost per constituency.

COSTONOMICS

Cost of Protectionism

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Tariff policies and non-tariff barriers (NTBs) are imperative for shaping economic frameworks, balancing trade dynamics, and maintaining market efficiency, which are essential for economic growth and stability. Ideally, effective tariffs and minimal NTBs should protect domestic industries, ensure affordable imports, and drive socioeconomic progress.



In stark contrast, in Pakistan, the excessive imposition of tariffs and pervasive NTBs impose significant economic burdens. The primary purpose of these measures is often overshadowed by their adverse effects, such as distorting market dynamics, raising costs for industrial importers and consumers alike, and stifling competitiveness. Consequently, economic progress is critically undermined by the prioritization of protectionism over trade facilitation. This situation stalls national development, leaving critical issues unaddressed and perpetuating economic inefficiencies and public disillusionment with the country's economic system.



US \$70.8 billion ≈ PKR 14.48 trillion

Duty-Free (MFN Applied) ² Imports:

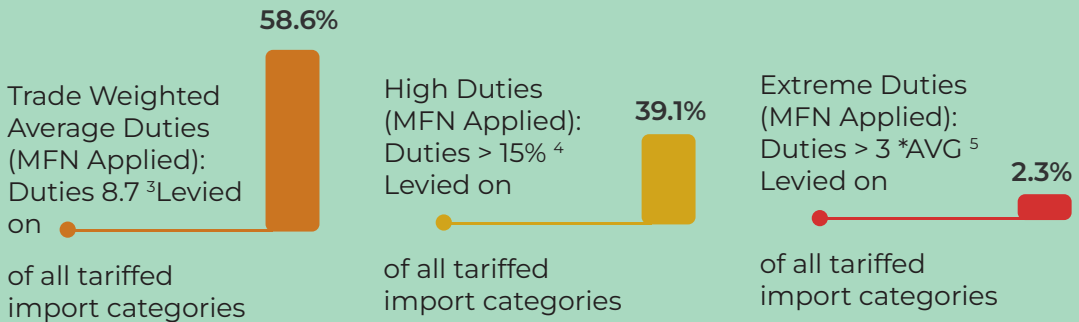
PKR 4.50 trillion **31.1%**

of all imported product categories are exempted from tariffs

Total Tariffed Imports:

PKR 9.98 trillion **68.9%**

of total imported product categories have tariffs levied on them



Source: World Tariff Profiles 2023

Figure 1: Total Cost of Tariff Barriers

Metric	Calculation	Value (in Billion PKR) ⁶
Imports	Given	14,478
Duty-free Imports	Total Imports \times Duty-Free (%) 31.1% \times 14,478.22	4,499
Total Tariffed Imports	Total Tariffed Imports: Total Imports - Duty-Free Imports 14,478 - 4,499	9,979
Average Base Cost (A)	Total Tariffed Imports \times Average Duties 9,978 \times 8.7%	869
High Tariff Adjustment (Duties > 15%) (B) ⁷	Value of High Duty Imports: Total Tariffed Imports \times High Duty Imports 39.1% \times 9,979	3,902
	Additional High Duties Cost: Value of High Duty Imports \times [Average High Duty Rate - Average Duties] 3,902 \times (20% - 8.7%)	442
Extreme Tariff Adjustment Duties > 3*AVG ⁸ (C)	Value of Extreme Duty Imports: Total Tariffed Imports \times Extreme Duty Imports 2.3% \times 9,979	230
	Additional Extreme Duties Cost: Value of Extreme Duty Imports \times [Average Extreme Duty Rate - Average Duties] 230 \times (30% - 8.7%)	49
Total Tariff Cost (D = A + B + C)	869 + 442 + 49	1,360

Source: Author's calculations using WTO data

Figure 2: Cost of Non-Tariff Barriers

Metric	Calculation Details	Value (in Billion PKR)
Coverage Ratio (%) ⁹	Given	33.1
Frequency Ratio (%) ¹⁰	Given	15.2
Adjusted Impact Factor (%)	Base Impact Factor × [1+(Frequency Ratio/2)] 0.08 ¹¹ × (1+ 0.152/2)	8.608
NTB Cost (E)	Trade Value × Coverage Ratio × Adjusted Impact Factor 14,478 × 0.331 × 0.08608	412

Source: Author’s calculations using WITS data

Figure 3: Cumulative Cost of Protectionism

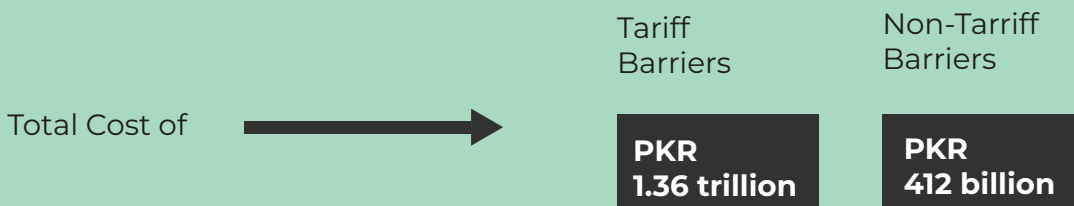
Metric	Calculation Details	Value (in Billion PKR)
Cumulative Cost of Protectionism (D + E)	1,360 + 412	1,772

Source: Author’s calculations

Cost of Duty Imports in PKR billion



869 442 49



Cumulative Cost of Protectionism:

PKR 1,772 billion ≈ 1.77 trillion

Cost of Protectionism as % of Trade Volume:
(significant impact on total trade volume)



8.52%

Total Trade Volume:

PKR 20.80 trillion



Per capita cost of Protectionism:

PKR 7,516

per person



Population of

**235.8
million**

Cost of Protectionism as % of GDP:

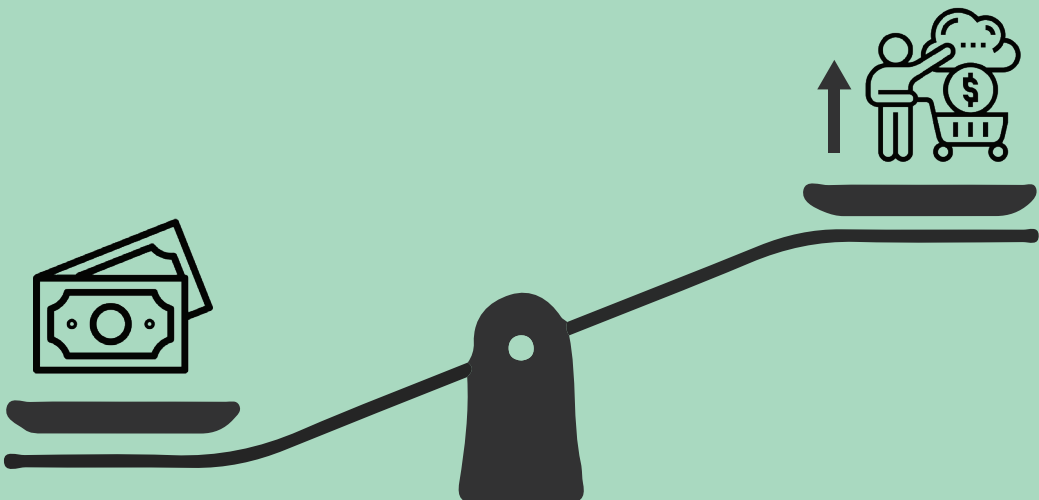


0.60%

Total GDP: PKR 294.81 trillion

Source: Author's calculations based on WDI Data

The monetary burden imposed by introducing tariff and non-tariff measures to protect local industries, leads to basic goods being out of the reach of the average Pakistani consumers and businesses.





Recommendations



Adjust Tariff Rates:

Given the cost incurred due to excessive tariffs, performing a thorough appraisal of the current tariff rates, particularly high and extreme tariffs could be pivotal in augmenting trade volumes, lower consumer prices and boost economic growth.



Boost Duty-Free Imports:

Furthermore, the range of product categories eligible for duty-free imports should be expanded to boost market access and reduce costs faced by local businesses and consumers.



Minimize Non-Tariff Barriers:

Adopt targeted policies to streamline customs procedures to minimize hidden costs associated with compliance.

-
1. Using the 2022 USD-PKR average exchange rate: 204,5162 for US \$1
 2. Share of duty-free HS six-digit subheadings in the total number of subheadings in the product group under the Most Favoured Nation (MFN) Applied status.
 3. HS six-digit MFN tariff averages weighted with HS six-digit import flows.
 4. Share of HS six-digit subheadings subject to MFN Applied ad valorem duties or AVEs greater than 15 per cent.
 5. Share of HS six-digit subheadings subject to MFN Applied ad valorem duties or AVEs greater than three times the national average.
 6. All figures have been rounded to the nearest billion PKR for clarity, except for totals and larger aggregates which are presented in trillions PKR. Percentages have not been rounded to ensure precision.
 7. Calculated assuming an average high duty rate of 20%.
 8. Calculated assuming an average extreme duty rate of 30%.
 9. Quantifies the value of imports affected by NTMs as a percentage of total imports within a commodity group.
 10. Accounts for the presence or absence of an NTB and indicates the percentage of traded products to which one or more NTMs are applied.
 11. Assuming a base impact factor of 8%, an aggregation of the 4-12% impact, as provided in Kinzius et al.'s work (2019).

COSTONOMICS

The Cost of Federal Law Makers

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Mohsin Ali

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Lawmaking is imperative for creating governance frameworks, delineating powers, and maintaining checks and balances, which are essential for public trust and stability. Ideally, efficacious lawmaking is supposed to safeguard citizens' rights and liberties, convert their demands into actionable policies, and propel socioeconomic progress.

In stark contrast, in Pakistan, the primary legislative duties of lawmakers are often relegated to the background due to their pursuit of perks, privileges, and power. Consequently, the legislative process is critically undermined due to the prioritization of political posturing over policy debate. The resultant governance void stalls national progress, leaving critical issues unaddressed and, perpetuating public disillusionment with the political system and democratic institutions.

1. Salary and Allowances ¹

Per Month (in PKR)

 Basic Pay	150,000	 Ad-hoc Relief Allowance	15,000
 Sumptuary Allowance	5,000	 Total Salary and Allowances (A)	188,000
 Telephone Allowance	10,000	 Session related allowances (B)	10,000
 Office Maintenance Allowance	8,000	 Total Monthly Withdrawal (A+B)	218,000

Source: National Assembly of Pakistan and the Senate of Pakistan

2. Office and Residence

Every MNA and Senator, is provided accommodation in parliament lodges, in Islamabad's red zone and an office space.



Minimum rental value of parliament lodge

PKR 1 Million /month



Office space valued at

PKR 0.2 million /month

3. Parliamentary Session Arrangements



The cost of holding parliament sessions is substantial ²

Each sitting incurs

PKR 66.5 million

4. Travel Expenses

Legislators receive substantial travel allowances



Air Travel

25 business class return tickets/year



Road Travel

PKR 90,000/year annually

5. Development Funds

Development funds meant to be managed by local governments, are often funneled through legislators, with each legislator receiving a significant amount

From

PKR 20 million to PKR 30 million/year

Averaging

PKR 2 million /month

6. Total Cost

Cost of Pakistan's federal legislators

PKR 27.67 billion/year

factoring average attendance of just

Breakdown

An MNA costs: **PKR 717,258.52**

A Senator costs: **PKR 1,136,176.66**

However, considering the National Assembly and Senate work 88 and 57 days a year, respectively.

On average **PKR 813,340.66** per lawmaker/day

Factoring average attendance of just

63%

The daily cost of a federal lawmaker is

PKR 12.92 lacs

Cost ³	National Assembly (PKR)	Senate (PKR)
Lawmakers and Employees Related Expenses (Pay and Allowances) ⁴	5579571000	3159052000
Operational Expenses	2062929000	1437979000
Employees Retirement Benefits	51600000	39074000
Grants, Subsidies and Write-off Loans	378300000	200852000
Physical Assets	85800000	147050000
Repairs and Maintenance	147300000	52200000
Residence and Office Opportunity Cost ⁵	4838400000	1440000000
Development Funds ⁶	8064000000	-
Total	21207900000	6476207000
Total in Billions	21.20 billion	6.47 billion
Dividing Total by average number of sittings per year (NA=88, Senate=57) ⁷	240.99 million	113.61 million
Dividing by number of parliamentarians	717258.52	1136176.66
Calculating Average Cost per Lawmaker per day ⁸	= (Average Cost per MNA x MNAs) + (Average Cost per Senator x Senators) / (MNAs + Senators)	
Cost per Lawmaker per day	PKR 813,340.66	
Factoring in the Attendance ⁹	PKR 1292997.66	

7. Conclusion

The analysis about the cost of federal legislators in Pakistan underscores the importance of accountability and productivity in the legislative process. While the financial compensation of lawmakers is crucial for their effective functioning, it must be justified through diligent legislative activity and tangible benefits to society. Ensuring that public funds are utilized efficiently to support a legislative framework that promotes development, justice, and good governance is essential for maintaining public trust and enhancing democratic governance. However, we see that the situation is quite in contrast.

-
1. Along with salaries and benefits, federal legislators entitled to various allowances to cover daily expenses
 2. Encompasses various operational expenses necessary to facilitate smooth functioning of both houses of parliament.
 3. This estimate is conservative. Costs could soar if we include session security (excluding internal Parliament security), and lawmakers using influence for job placements, with poor lawmaking further increasing the overall expense.
 4. Includes only salaries and allowances for lawmakers, and salaries, allowances and retirement benefits for their staff
 5. The figures are taken from Pink Book for the year 2023-24
 6. Author's calculations
 7. PILDAT
 8. per day refers specifically to a day of active legislative functioning
 9. Average attendance for both houses in around 63%, so the effective time of parliamentary functioning will be slashed by 37%, with the revised number of days of NA being 56 and that of the Senate being 35.

COSTONOMICS

Costs of Lost Talent in Pakistan

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Pakistan has a long history of emigration with brain drain having emerged as a major issue, as talented individuals increasingly relocate abroad, owing to economic insecurity and restricted job possibilities. While emigration has advantages, it also has drawbacks, most notably the loss of qualified workers.



By 2020
around **6.3 million**
Pakistanis lived
abroad

representing an
increase from 2000
(UNDESA, 2023)

86%

Migration from
Pakistan has been
picking up pace in
recent years, with
(BE&OE, 2024)



862,625
people

having emigrated
in 2023 alone



832,339
People

in 2022

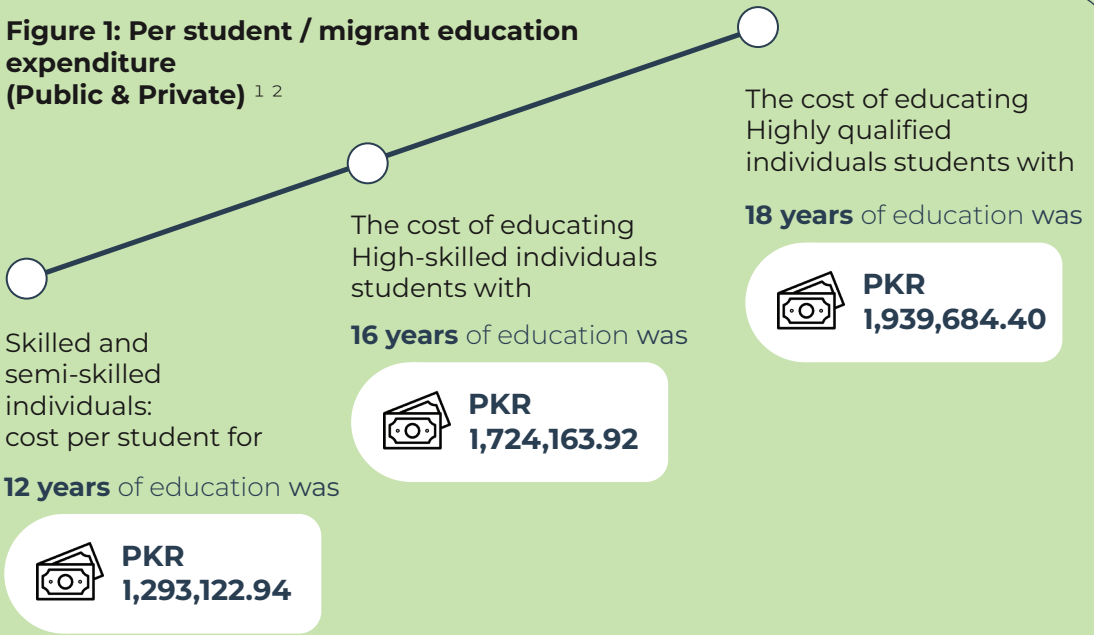
This trend is predominantly evident among highly skilled people who are pursuing education and seeking employment opportunities in countries like the United States, the United Kingdom, and Australia.

This study aims to explore the various dimensions of talent loss in Pakistan. First, it quantifies the economic impact by considering both explicit costs & implicit costs. Additionally, it examines the productivity loss in the origin country. Second, this study also provides insights on designing effective strategies to retain and utilize talented individuals within Pakistan.

Estimation Procedure

Per student expenditure, both public and household, varied dramatically across the three educational levels: 12 years of education (Intermediate), 16 years of education (Graduate), and 18 years (post-graduate).

Figure 1: Per student / migrant education expenditure (Public & Private) ^{1 2}



Explicit and Implicit Costs 4



of all emigrants, while **54%** go to the Gulf



44% were estimated to go to Western countries

per UNDESA data



Explicit cost of education:

Number of migrants × per student/migrant (public and private (household) expenditure on education)



Implicit cost of education:

Number of migrants × Cost per migrant (foregone income during schooling)

Productivity Loss

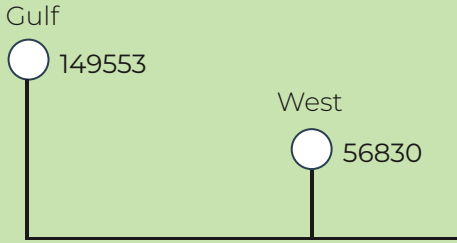
The productivity loss due to emigration from Pakistan is computed utilizing the ratio method based on the studies by Woetzel et al. (2016) and Radonjić & Bobić (2021). They argue that origin countries, on average, receive 8.7 percent of the GDP that migrants produce elsewhere, sent through remittances.

Figure 2. Cost of highly Qualified Emigrants

Source: Author calculations

Year 2014 - 2023

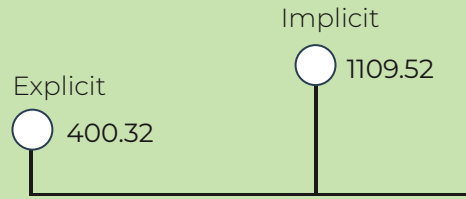
Highly Qualified Emigrants



Total: **206383**

Year 2014 - 2023

Cost in Billion (PKR)

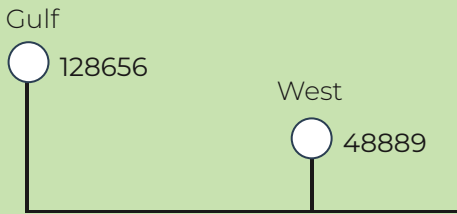


Total: **1509.83**

Figure 3. Cost of High-Skilled Emigrants

Year 2014 - 2023

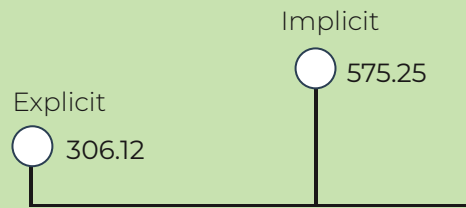
Highly Skilled Emigrants



Total: **177545**

Year 2014 - 2023

Cost in Billion (PKR)

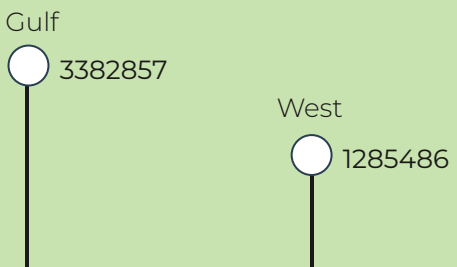


Total: **881.36**

Figure 4. Cost of skilled-semi-skilled emigrants

Year 2014 - 2023

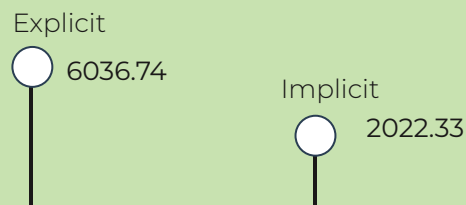
Skilled-Semi-skilled Emigrants



Total: **4668343**

Year 2014 - 2023

Cost in Billion (PKR)



Total: **8059.07**

Explicit + Implicit Cost (Total) - For Year 2023 (1499.32) billion PKR



Net effect of emigration: Accounting for 1.77 % of GDP in 2023, indicating a positive impact when considering the money emigrants send back home. Emigrants contributed approximately **8 % of GDP through remittances in 2023**



When incorporating productivity loss,⁷ the origin countries received, on average

8.7% of the GDP

that migrants produced elsewhere and sent through remittances.



Assuming a similar scenario for Pakistan, migrants' net contribution to the global GDP in 2023 is estimated at

286.49 billion USD ⁸

Subtracting remittances (27.3 billion USD in 2023) received (286.49-27.3= **259.19**)

Which accounts for

85% of Pakistan's GDP in 2023 ⁹

(303.43 billion USD) constituting a productivity loss

However, the cost to the country of origin becomes significantly high when productivity loss is considered. Immigrants often contribute to the GDP of destination countries through their work and productivity, resulting in considerable economic losses at origin countries.

Talent Retention Strategies ¹⁰

Objective: assess whether attracting Pakistani talent offers a cost advantage in comparison to hiring foreign citizens for similar roles in Pakistan.



Retaining Pakistani Experts

- ✓ Retain top-notch local talent
- ✓ Social Dividends by filling key shortages (eg. healthcare, education, etc)
- ✓ Higher innovation and productivity



Hiring Foreign Citizens

- ✗ High likelihood of attracting average talent
- ✗ Higher salaries compared to home country
- ✗ Risk premium for relocating to Pakistan

Overall, there is a net benefit to Pakistan of retaining Pakistani professionals over hiring foreign citizens for analogous positions.



Recommendation

Outflows of qualified people could impede Pakistan's economic, social, and scientific progress and development. Hence, there is an urgent need to retain, or rather incentivize talent return of qualified workforce and entrepreneurs.

A holistic strategy for managing emigration effectively such an approach should recognize the benefits of remittances while addressing potential long-term challenges, particularly concerning the loss of productivity.

1. Adjusted the per school year household expenditure on education, assuming nine months, for the number of enrolled children within a household, about 2.34 currently enrolled children per household in Pakistan
2. Using estimations being based on various editions of the Pakistan Economic Survey from 2014 to 2023
3. Household Integrated Economic Survey (HIES-2018-19) and the Global Education Monitoring Report (GEM 2021-22) by UNESCO
4. To quantify talent loss, we aggregate the number of individuals departing the country within the defined talent pool. We collectively refer to the highly qualified, highly skilled, and skilled as metrics for talent. Similarly, we also analyze distinguishing highly qualified, highly skilled, and skilled. Data for migrants was sourced from BE&OE data and UN-DESA International Migrant Stock dataset
5. Basic Pay Scale (BPS) table of 2022 to estimate the opportunity cost of education for emigrants with different qualifications or who fall in different skill set categories. Utilizing the minimum threshold of the BPS 18, 17, and 10 for highly qualified, high-skilled, and skilled / semi-skilled individuals, respectively. (As given in the BE&OE data)
6. Considering the individual's lost income for eight consecutive years, calculated as the total number of emigrants multiplied by the basic pay for grade 18 and further multiplied by 12 months and eight years (or 96 months) (see Table 2).
7. As shown in the studies by Woetzel et al. (2016) and Radonjić & Bobić (2021)
8. Assuming similar scenario for Pakistan
9. Subtracting remittances received ($286.49 - 27.3 = 259.19$) suggests that
10. Assumptions:
 - Pakistani experts match or exceed the skills of foreign citizens, particularly in fields like economics.
 - Hiring foreign citizens in Pakistan includes their standard wage (WF) and a relocation risk premium (R).
 - Social capital (SCP) reduces the overall cost of hiring Pakistani professionals by leveraging their familiarity with local conditions, customs, and networks.

COSTONOMICS

The Cost of Government Interference in Agricultural Markets

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The cost of government interference in three agricultural markets



Wheat



Water



Storage

amounts to **Rs.2558.99 billion**

equivalent to **3.08%** of GDP

Contextual

The government's interference in agricultural markets (wheat, water, and storage) has significantly made the sector inefficient. Moreover, it is posing heavy financial burdens on the government, implying that such interference is unsustainable in the long run, especially in the presence of a budget deficit. Government interference in the wheat market, such as fixing the Minimum Support Price (MSP) and giving input subsidies, failed to achieve their intended outcomes of offering low prices to consumers. Rather, fixing MSP has led to the transfer of taxpayers' money to flour mills and the middlemen without creating any benefit to producers or consumers. Offering low prices of irrigation water is another policy failure to achieve sustainability in the utilization of valuable natural resources. The low water pricing policy failed to convince farmers to adopt water-saving technologies, leading the country toward serious water crises. Inefficient storage facilities in the government sector are another source of waste of public taxpayers' money. The improved and efficient storage facilities by the private sector will save the taxpayers' money and improve food security by making more food available to consumers. The present document quantifies the monetary impact of these market distortions, examining their impacts on the economy and proposing to mitigate these costs and enhance the sector's overall productivity and sustainability.



1-Wheat Market

The government has continued to intervene in the wheat market through various means, primarily by fixing the MSP for wheat. Additional measures include subsidies on seeds, fertilizer, and water, as well as covering storage costs and providing subsidies when releasing wheat to millers. However, this approach has led to significant inefficiencies within the wheat market.

■ The intended policy objectives failed to offer low prices to consumers.

■ The late announcement of MSP (especially during the last four years) failed to attract additional acreage under wheat cultivation and thus production growth remains insufficient to meet demand, with last year's (2023) production of 28.1 million metric tons falling short of the required 32 million metric tons (124 kg per person) for a population of 241 million. The Growth performance of the area under wheat crop during the past 42 years was observed at just 0.6 percent per annum.²

■ The support price mechanism fails to stabilize the retail prices and high price volatility continues to threaten the low-income consumers particularly.

■ Implementing the MSP has created a huge circular debt, implying that government interference in the wheat market is unsustainable. Only the Punjab govt. has to pay the debt of about Rs.680 billion.³

■ Despite years of implementing support measures, there has been no substantial improvement in average wheat production in the country. Wheat crop yields have stagnated at around 28 to 31 mounds/acre over the past two decades. Although implementing support measures does not directly affect productivity, it does so indirectly by increasing acreage. However, this continuous support makes farmers less motivated to focus on improving productivity along with some other factors. Consequently, Pakistan is the 8th largest producer of wheat globally but it ranks 62nd in terms of yield.⁴

■ The government's wheat supply policy has led to multiple costs and rent-seeking opportunities for millers and retailers. This has also created excess milling capacity, particularly in Punjab, where 1,000 flour mills can produce 11.5 million 20 kg bags daily, far exceeding the 2 million daily requirement. The government can use this as an opportunity by compelling millers to procure wheat from farmers directly to run their private business because supply is limited and they have to compete with each other to procure sufficient wheat to run their business. This competitive environment will force each bidder to offer higher prices to farmers to secure a larger share of wheat.



Government Interventions in Wheat Market:

The total cost of government intervention in the wheat market is determined by considering four key areas: the procurement burden, the institutional budget involved, the circular debt, and the potential loss of gains due to reduced acreage for competing crops.



Procurement Burden in 2023:

The procurement cost is estimated based on the total quantity procured during 2023 which was almost

24% total production

1. Total Procurement Cost:



The total amount borrowed from banks
Rs. 645.48 billion (@ Rs. 3900/40kg)



Interest expense incurred on the borrowed amount
Rs. 88.80 billion



Procurement procedure expense
Rs. 46.37 billion (@ Rs. 7/kg)



Loss due to wastage: The financial loss attributed to the wastage of procured wheat @10 percent of storage amount.⁵ These losses are along the supply chain, if we assume half of the losses occurred in storage then estimated losses were about

Rs. 32.59 billion (5% of storage amount)

Total Procurement Burden: **Rs. 167.46 billion⁶**

This sum excludes the rental cost of warehouses

2. Institutional Expenditure

\$ PASSCO budget
Rs. 7 billion⁷

\$ Punjab Food Department budget
Rs. 378.86 billion⁸

This budget includes the expenditure for procuring and storing wheat, with an assumption that 50 percent of employees engaged in these activities account for

Rs. 189.43 billion

\$ Other provinces' procurement cost
Rs. 63.14 billion⁹

Combined Institutional Expenditure
Rs. 259.57 billion

3. Circular Debt attributed to Wheat Procurement

\$ Debt for Punjab
Rs. 680 billion

\$ Other provinces' debt
Rs. 226.7 billion¹⁰

Total Circular Debt
Rs. 906.7 billion

4. Market Distortions Affect the Composition of Rabi Crops

MSP for wheat distorts Rabi crop composition, making wheat more attractive than more profitable crops like rapeseed, mustard, and sunflower.

\$ Rapeseed and mustard and sunflower crops are approximately
Rs. 5036 per acre more profitable than wheat.

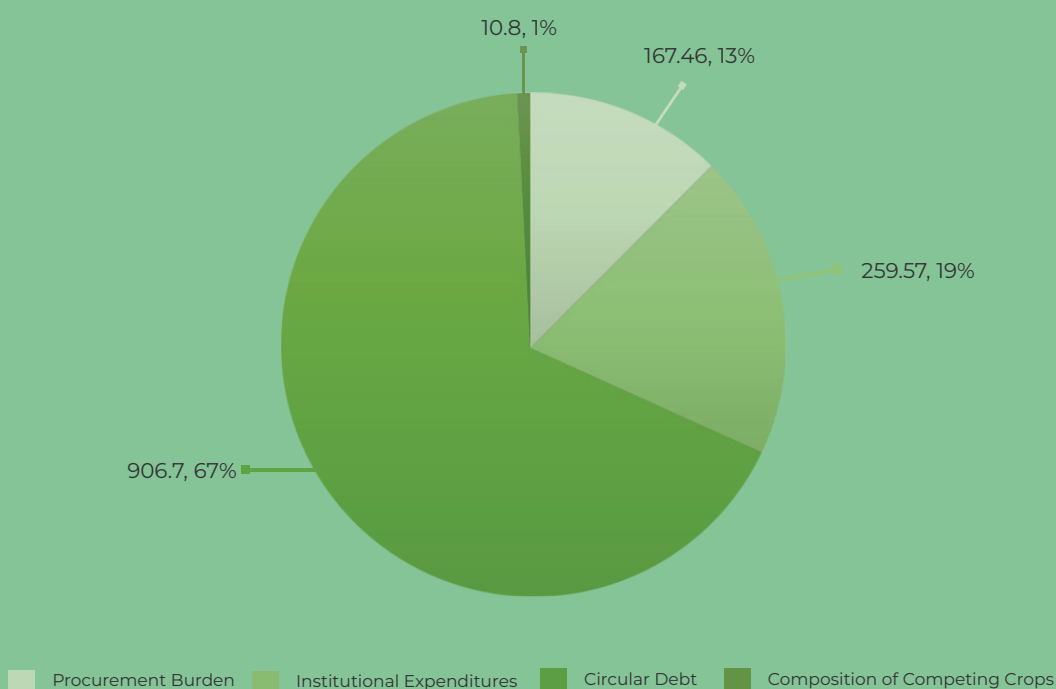


Diverting 10% (2.14 million acres) of wheat cultivation to these crops could gain

Rs. 10.8 billion

Operations	Cost (Billions)
Cost of Interest on Lending	88.8
Cost of Procurement Procedure	46.37
Value of Wastage	32.59
Total Procurement Burden	167.46
Institutional Expenditures	259.57
Circular Debt	906.7
Composition of Competing Crops	10.8
Total Cost	1344.53
Total Cost as Percentage of GDP	1.6

Government Interventions in Wheat Market





2-Water Market

Pakistan's efficiency in water resource utilization poses a critical challenge. This inefficiency stems from multifaceted issues, predominantly revolving around outdated water pricing mechanisms, incentivizing water-intensive cropping patterns, and a lack of integration of water-saving technologies into agricultural practices. Central to the dilemma is the system of Abiana, or water charges, which remains inadequately designed and enforced. The current pricing structure fails to reflect the true value of water, thereby encouraging its wasteful use. In essence, when water is perceived as inexpensive or even free, farmers have little incentive to adopt conservation measures or invest in more efficient irrigation techniques. Consequently, this perpetuates a cycle of overexploitation and depletion of water resources, exacerbating Pakistan's status as a water-stressed nation.

There is a need for comprehensive reform of water pricing mechanisms to reflect the true value of water and incentivize efficient use. This may involve restructuring Abiana's charges to account for actual water consumption and implementing economic pricing systems to discourage excessive usage. Here we are presenting an estimated economic valuation of water resources in Pakistan, specifically focusing on the opportunity cost and the associated fiscal impact on the government.



Total Surface Water Available in Pakistan:

72.7 million acre-feet of surface water was available in Pakistan during 2022-23¹¹

Potential Abiana Collection:

Abiana refers to the water tax or irrigation charges collected from farmers, covering an irrigated area of approximately 19.99 million hectares (49.48 million acres). The potential revenue from Abiana collection based on the updated Abiana charges in 2019 are



For Rabi season:
Rs. 13.61 billion (@ Rs. 275 per acre)



For Kharif season
Rs. 19.05 billion (@ Rs. 385 per acre)

Total potential Abiana collection:
Rs. 32.66 billion

Opportunity Cost of Water per Acre per Application:



The opportunity cost of water per acre for each application, based on the cost of diesel, vary from

Rs. 871 to Rs. 1143¹²

This range represents the extraction of a water volume of 100 to 120 cubic meters (m³). Therefore, the cost of water per cubic meter is Rs. 7.92 to Rs. 10.39 for an average extraction of 110 cubic meters.

Total Value of Water Based on Opportunity Cost:



Rs. 710.22 billion and Rs. 931.71 billion

excluding the water scarcity rent.



Loss to the Government as a Percentage of GDP:

The loss to the government due to the absence of economic water pricing or water charges is estimated to be between

**Rs. 677.56 billion &
Pkr 899.05 billion**

per annum

This loss is significant, representing

0.81% to 1.07%
of the country's GDP.



3-Storage Market

Storage facilities for agricultural products in Pakistan encounter numerous challenges that severely affect the efficiency and profitability of the agriculture sector. Storage facilities are of two types mainly: grain storage and cold storage. Grain storage facilities are used to store grains and pulses while cold storage facilities are used to store vegetables and fruits.

Firstly, these facilities are insufficient, almost three times less than the requirements (MoNFS&R, 2018) and the average distances to reach them are particularly large in KPK and Baluchistan. This shows that there is significant business potential in storage facilities, but government bans on private procurement, particularly in the case of wheat, often lead to decreased interest and investment from the private sector.

Secondly, the existing storage facilities are inadequate for several reasons:

- These facilities often lack proper ventilation, temperature control, and pest management systems, resulting in spoilage and reduced quantity and quality of stored produce.
- A major issue is the lack of modern infrastructure, leading to high post-harvest losses.
- There is an inadequate distribution of storage facilities across the country, with rural areas particularly underserved, forcing farmers to sell their produce immediately after harvest at lower prices.
- The limited capacity of existing storage units further exacerbates the problem, as they cannot accommodate the large volumes of produce during peak harvest seasons.



The Burden of Inefficient Storage Market:

Inefficiency means the quantity of produce lost. So, the losses, particularly in grains are about 10 percent, and for perishable produce like fruits and vegetables are 22 percent. The losses happened at the harvest/threshing, storage, and transportation stages.¹³ These losses are along the supply chain implying that need to improve all operations along the supply chain. If we assume that half of the losses occurred due to poor handling during storage, etc. Then the estimated losses for grains and vegetable and fruits are:



Grain Losses:

This calculation focuses on major crops (Wheat, Rice, Sugarcane, Maize, and Cotton). Assuming that 25 percent of the produce of 5 major crops is stored and 5 percent of losses are due to poor storage, this translates to a financial loss of **Rs. 59.81 billion.**



Fruits and Vegetable Losses:

The post-harvest losses for fruits and vegetables are even higher, at 22 percent. Assuming that 11 percent of losses are due to poor storage. This resulted in a financial loss of **Rs. 255.6 billion.**

Total Cost as Percentage of GDP:

The combined total cost of these post-harvest losses for grains, fruits, and vegetables amounts to

Rs. 315.41 billion

This figure represents

0.38%

of Pakistan's GDP.

1. Authors are Research Fellow and Chief of Research at PIDE respectively.

2. <https://pide.org.pk/research/evaluation-of-seed-industry-way-forward/>

3. <https://pide.org.pk/research/revitalising-agriculture-road-to-green-revolution/>

4. <https://api.gov.pk/PolicyDetail/MTJINjE0MTETZmRIYy00YzNlTg2YTctNDhhMWYzZDM2OGFk>

5. <https://pbit.punjab.gov.pk/system/files/National%20Food%20Security%20Policy%202018.pdf>

6. Although Punjab Govt. exit wheat market this year but still wheat procurement is continues. The Economic Coordination Committee (ECC) has approved a total financing requirement of Rs. 275 billion for the PASSCO and all other provinces except Punjab for the year 2024.

7. https://www.finance.gov.pk/budget/Budget_2022_23/Performance_Based_Budget_FY_2022_23_to_2024_25.pdf

8. <https://finance.punjab.gov.pk/system/files/ABS22-23.pdf>

9. Punjab Food Department typically procures approximately 75 percent of the total wheat. Assuming that the burden on other provinces for wheat procurement is about 25 percent compared to Punjab, this equates to roughly 63.14 billion.

10. Based on the assumption that Punjab procures about 75 percent of the wheat, the remaining 25 percent is procured by other provinces. The debt for other provinces will be about Rs. 226.7 billion.

11. https://www.finance.gov.pk/survey/chapters_23/02_Agriculture.pdf

12. 1 liter Diesel = 290.3 in April

13. <https://pbit.punjab.gov.pk/system/files/National%20Food%20Security%20Policy%202018.pdf>

COSTONOMICS

Cost of a Non-Competitive Economy

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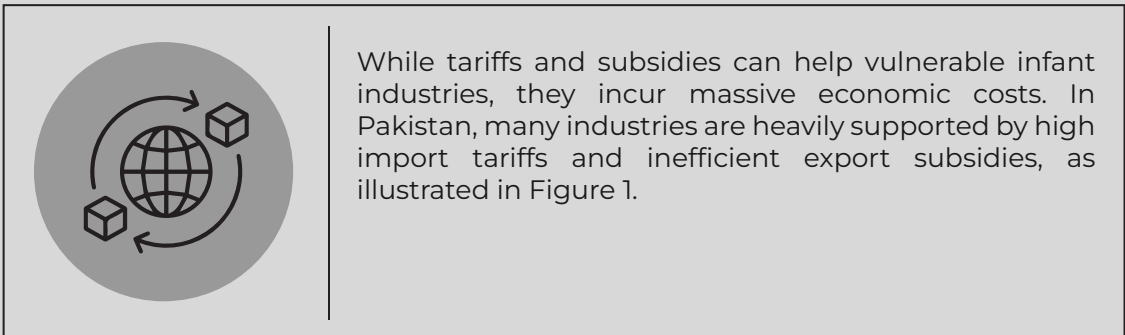
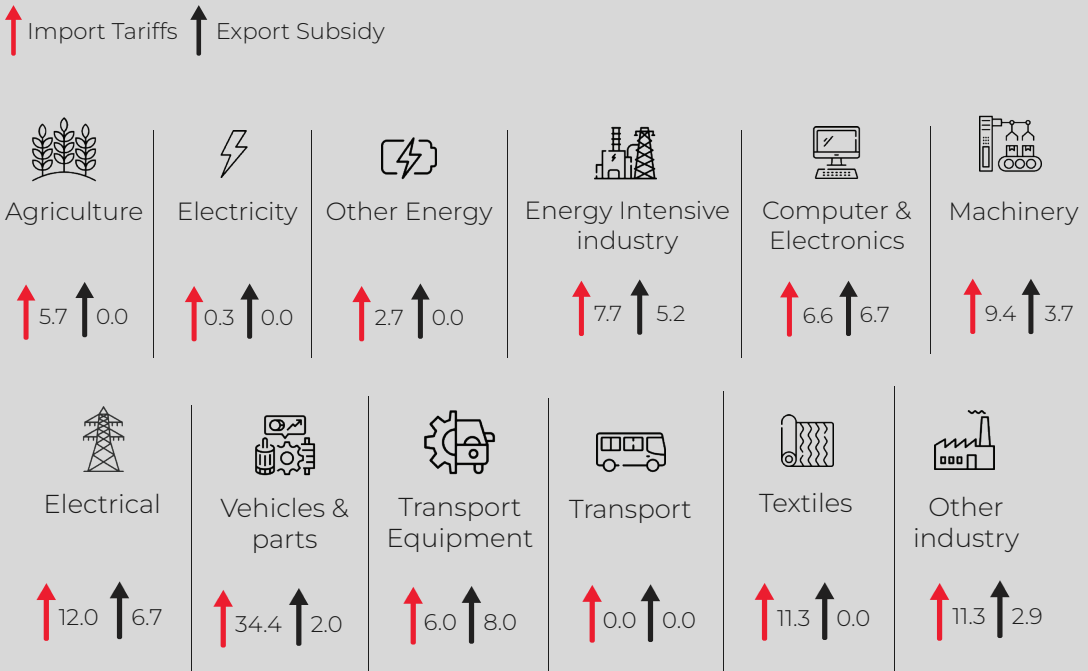


Figure 1: Import Tariffs and Export Subsidies in Pakistan (%)



Author's calculations



Import Tariffs

Import tariffs distort domestic industries more than export subsidies.

Broader analysis of trade industries in Pakistan shows that high import tariffs most negatively affect



Vehicles & Parts
PKR 240 billion



Energy Intensive Industry
PKR 230 billion

Despite zero import tariffs in other service sectors, these sectors face high costs due to the use of imported raw materials encumbered by high import tariffs.

Export Subsidies

Export subsidies heavily distort the textiles and agriculture sectors, reducing their competitiveness.

Non-competitive market structures prevent competitive firms from thriving, costing over

PKR 219 billion

Subsidies harm both exporting and domestic industries



Cost of Non-Competitive Economy

Pakistan: Approx. **PKR 1.67 trillion**¹ annual cost

Exporting industries pay most of the overall cost compared to domestic industries.

Cost of non-competitive economy (in PKR Billion) ²

		Import Tariffs	Export Subsidy
	Domestic Industry	365	155
	Domestic Industry	731	406

Author's calculations



Turbocharging Growth: The Economic Gains of Policy Reform

Removing distortions from import tariffs and export subsidies will boost productivity, increasing domestic production by **2.4%**, exports by **4.9% per annum**, and tax revenues by **PKR 278 billion** in the long run.

Annual growth of domestic industry and exports in Pakistan (%)

Removing distortions	 Domestic industry	 Exports
	2.4	4.9

Author's calculations

Recommendations

A smooth transition is essential to minimize disruption, maintain competitiveness, and support growth.

Phased Reduction Plan



Comprehensive Reform

Streamline non-tariff barriers and bureaucratic processes to enhance trade and strengthen institutions.

1. All figures which were initially calculated in US dollars were converted to Pakistani Rupees (PKR) using exchange rate $\text{PKR } 277.61 = 1 \text{ USD}$. **The total annual cost in US dollars was 6 billion.**

2. Results of 2 simulation scenarios to quantify through the CGE framework, the cost of non-competitive economic activities like export subsidies and import tariffs via utilizing a social accounting matrix incorporating the latest Pakistan input-output table (Zeshan, 2022), aggregated to 15 sectors for simplicity.

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