PAKISTAN AGRICULTURAL COALITION

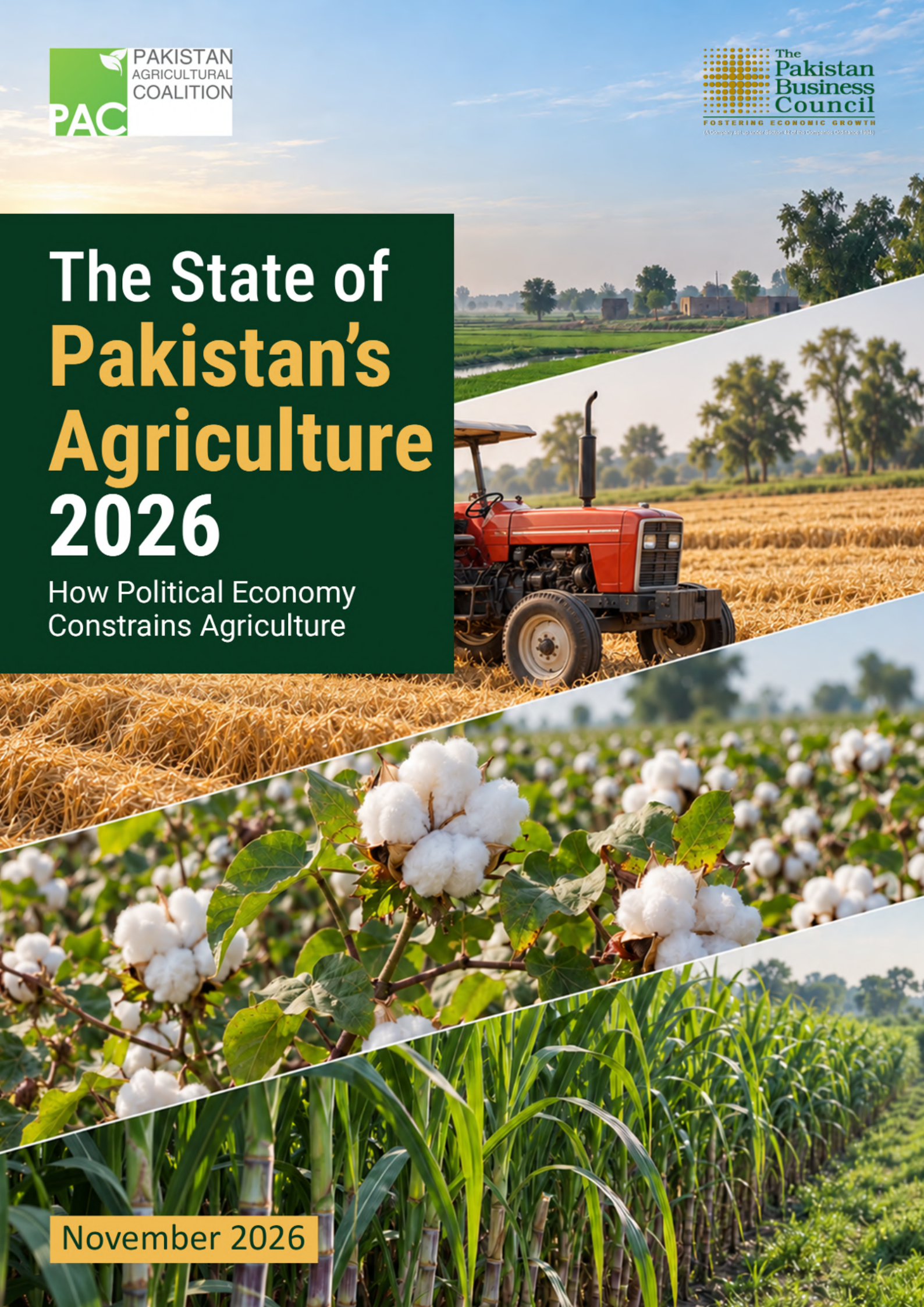
PAC

The Pakistan Business Council

FOSTERING ECONOMIC GROWTH

The State of Pakistan's Agriculture 2026

How Political Economy Constrains Agriculture



November 2026



THE STATE OF PAKISTAN'S AGRICULTURE 2026

How Political Economy Constrains Agriculture

Kazim Saeed and Rabia Zulfiqar

November 2026

The Pakistan Business Council
FOSTERING ECONOMIC GROWTH
(A Company set up under Section 42 of the Companies Ordinance 1984)

PAC PAKISTAN AGRICULTURAL COALITION

Acknowledgements

This report has been produced through a partnership of the Pakistan Agricultural Coalition (PAC) and the Pakistan Business Council (PBC). It has been authored by PAC CEO **Mr. Kazim Saeed** (kazim@pac.com.pk) and Senior Strategy Associate **Ms. Rabia Zulfiqar** (rabia@pac.com.pk) with invaluable support from Strategy Associate Ms. Saffa Imran (saffa@pac.com.pk). Ms. Qubra Anwer conducted the research and drafted the agricultural income tax chapter while Mr. Shan E Ahmed developed the agricultural income tax potential estimate for Sindh both under Mr. Kazim Saeed's guidance for which the authors would like to thank them.

The authors would like to express their gratitude to the following professionals and growers for generously giving their time for interviews: Prof. Dr. Asif Ali Khan (Chairman, National Seed Development and Regulatory Authority), Dr. Anjum Ali Buttar (Former Director General Agricultural Extension, Punjab Agriculture Department), Dr. Muhammad Asim (National Seed Development and Regulatory Authority), Mr. Syed Hassan Raza (CEO, Neelum Seeds), Mr. Zafar Masud (President, Bank of Punjab), Ms. Maria Saleem (Head of Agri Initiatives, Fatima Group), Mr. Arif Nadeem (Vice Chairman, Pakistan Agricultural Coalition), Mr. Hasan Khurram Hanif (Progressive Farmer), Mr. Khurram Shehzad (Country Head, Syngenta Seeds Pakistan), Mr. Shahid Tawawalla (CEO, Meskay & Femtee Trading), Mr. Nadir Jaffer (CEO, Jaffer Agro Services), Mr. Hamza Kamal (Head of Marketing, Syngenta Pakistan), Mr. Iqbal Lakho (Commissioner, Sindh Revenue Board), Mr. Afaq Tiwana (MD, Farmers Associates Pakistan), Mr. Khalil Sattar (CEO, K&N's), Mr. Safder Mehkri (MD, Conwill Pakistan), Dr. Ahsan Rana (LUMS), Mr. Shakaib Arif (CEO, Naymat Collateral Management Company), Mr. Raashid Anwer (Managing Partner, Khalid Anwer & Co.), Mr. Kashif Thanvi (Investment Director, Acumen Fund), Mr. Shabbar Zaidi (Former Chairman, Federal Board of Revenue), Mr. Adil Mansoor (Research and Communications Lead, NCGCL), Mr. Mahmood Nawaz Shah (President, Sindh Abadgar Board), Ms. Erum Tareen Khuhro (progressive farmer), Mr. Agha Fahad (progressive farmer), and Mr. Bilal Sidiki (Terra Crop).

The authors are extremely grateful to the experts who served as peer reviewers and gave their time to review the draft report and made valuable recommendations for improving it. These were: Dr. Ahsan Rana (Associate Professor of Practice, Suleman Dawood School of Business, Lahore University of Management Sciences), Mr. Mahmood Nawaz Shah (progressive farmer and President, Sindh Abadgar Board), Ms. Maria Saleem (General Manager Agri, Fatima Group), Mr. Abdul Wajid Rana (Senior Advisor and Consultant, Program Leader and Chief of Party IFPRI Pakistan and former Secretary Finance Pakistan), and Mr. Daniel Ticehurst (international agriculture expert). With gratitude to the peer reviewers, the authors accept full responsibility for the report's contents.

The Pakistan Business Council (PBC) is a research-based business policy advocacy platform, supported by over 100 private sector companies, local and multinational, that have significant and long-term commitment to sustainable growth of the country. They come from 17 major sectors of the formal economy, generate 40% of annual exports, contribute a third of Pakistan's total tax revenues and employ three million. Their combined sales represent every 9th Rupee of Pakistan's GDP. PBC's major thrust is "Make-in-Pakistan" with three pillars: "Grow More/Grow Better", "Make More/Make Better" and "Serve More/Serve Better," all with the objective of generating jobs, promoting exports and reducing imports. This study is under the "Grow More/Grow Better" pillar. (www.pbc.org.pk).

The Pakistan Agricultural Coalition (PAC) is Pakistan's leading source of commercially scalable business models and policy/strategy advice for growth in Pakistan's agriculture sector. PAC is supported by

Pakistan's leading business and financial groups representing a diverse range of sectors and a combined revenue of over US$ 10 billion. PAC's vision for Pakistan's agriculture sector is that it should be private sector-led, technology-driven, entrepreneurial, and globally competitive with higher grower profitability. (www.pac.com.pk).

Disclaimer

The findings, interpretations, and conclusions drawn in this Study are those of the author(s) and do not necessarily reflect the views of the management, the Board of Directors and Members of the Pakistan Business Council (PBC) and Pakistan Agricultural Coalition (PAC).

The Pakistan Business Council: An Overview

The Pakistan Business Council (PBC) is a research-based business advocacy platform established in 2005. It is now supported by over 100 private sector local and multinational businesses with significant investment in, and long-term commitment to sustainable growth of the country. They come from 14 countries, have leading roles in 17 major sectors of the formal economy, generate 40% of annual exports, contribute a third of Pakistan's total tax revenues and employ three million. Their combined sales represent every 6th Rupee of Pakistan's GDP.

PBC's major objectives are to advocate polices that lead to creation of jobs, value-added exports and reduction in import reliance through improved competitiveness of manufacturing, services and the agriculture sectors. It also promotes formalization of the economy.

PBC's over-arching theme, "Make-in-Pakistan" consists of three pillars: "Grow More/Grow Better", "Make More/Make Better" and "Serve More/Serve Better." Its evidence-based advocacy is backed by over a hundred studies to date, through its full-time research team, supplemented by collaborative research with renowned industry experts and economists. Through its Centre of Excellence in Responsible Business (CERB), PBC works to build capacity and capability of businesses beyond its membership, to adopt high environmental, social and governance standards. PBC holds conferences, seminars and webinars to facilitate the flow of relevant information to all stakeholders in order to help create an informed view on the major issues faced by Pakistan. Through its presence in Islamabad and Karachi, it works closely with relevant government departments, ministries, regulators and institutions, as well as other stakeholders including professional bodies, to develop consensus on major issues impacting the economy.

PBC is a pan-sectoral, not-for-profit, Section 42 entity. It is not a trade body; therefore, it does not advocate for any specific business sector. Rather, its key advocacy thrust is on easing barriers that thwart competitiveness of businesses in Pakistan.

Further information on the PBC is available on: www.pbc.org.pk.

The PBC's Founding Objectives

- To provide for the formation and exchange of views on any question connected with the conduct of business in and from Pakistan.
- To conduct, organize, set up, administer and manage campaigns, surveys, focus groups, workshops, seminars and fieldwork for carrying out research and raising awareness in regard to matters affecting businesses in Pakistan.
- To acquire, collect, compile, analyze, publish and provide statistics, data analysis and other information relating to businesses of any kind, nature or description and on opportunities for such businesses within and outside Pakistan.
- To promote and facilitate the integration of businesses in Pakistan into the World economy and to encourage in the development and growth of Pakistani multinationals.
- To interact with governments in the economic development of Pakistan and to facilitate, foster and further the economic, social and human resource development of Pakistan.

The PBC Member Companies




JS BANK

Jubilee
GENERAL INSURANCE

K&Ns

KE

THE STRENGTH
KOHAT
CEMENT

LIBERTY

LIPTON
Teas and Infusions

LOTTE

LUCKY
CEMENT

MACPAC
FILMS


Martin Dow

CHANGAN AUTO

MEGA
MEGA CONGLOMERATE

MAHMOOD GROUP

National
FOODS
SINCE 1970

NAVEENA
GROUP

NCC
National Clearing Company

Nestlé
Good food, Good life

NIMIR

OLP

Packages Limited

Pakistan
Oxygen

PSL
PAKISTAN SERVICES LTD.

PSX
PAKISTAN
STOCK EXCHANGE
LIMITED

PEPSICO


reckitt

MASOOD
ROOMI

Sapphire

Servis

Shan

Atlas

SICPA

SIEMENS

Soneri Bank

SOORTY

SPEL
Synthetic Products
Enterprises Limited

Standard
Chartered

SUNCROP
GROUP

systems

TAPAL

TG

TCS
WE MOVE YOU

PROTECTS
Tetra Pak
WHAT'S GOOD

Coca-Cola

TPL

TTE

Tufail

Unilever

UBL
where you come first

wafi
Shell Licensee

KHAADI

Young's

The PBC Associates







































The Pakistan Agricultural Coalition: An Overview

Pakistan Agriculture Coalition (PAC) aims to transform Pakistan's agriculture sector to make it private-sector led, technology driven, entrepreneurial and globally competitive. Established in 2013, PAC believes that this mission can only be achieved if farmers' profitability increases hence PAC's strong focus on farmer prosperity. PAC derives its strength from key industry linkages, public sector relationships with access, leading farmer organizations, and its patrons who have a cumulative turnover of over $10 billion.

To achieve its goals, PAC has focused on developing commercially scalable business models and fostering ecosystems which are conducive to the progress and growth of Pakistan's agriculture sector. It does so by assembling relevant market players, piloting various models and then developing them into commercial ventures. In addition to this core work, PAC is also sought out by government, development organizations and the private sector to advise on various matters related to Pakistan's agriculture sector. These activities are brought together in an annual international event called Pakistan Agricultural Coalition's Agri-Connections conference and expo.

PAC is a non-profit established under Section 42 of the Companies Ordinance 1984. It is not a trade association but a convener of all agri-stakeholders, and a source of intellectual leadership for positive change. Its advice is neutral and its activities are for the broader benefit of farmers and the agriculture sector.

Further information on Pakistan Agricultural Coalition is available on: www.pac.com.pk.

Patrons of Pakistan Agricultural Coalition







































Foreword

Pakistan's agriculture sector requires systemic change to start performing. But no matter how technically robust and appropriate a proposed solution is, political economy factors have challenged its successful implementation. This report aims to support the Pakistani policymaker and strategist with practical lessons on the political economy of reform in agriculture to allow reform design that has a higher chance of success. It is among the first attempts to explore why agriculture reforms succeed or fail in practice.

The effort on this report started with two prominent frameworks for the analysis of the political economy of reform. The framework of the Brookings Institution (Washington DC, USA)—which examines how ideas, interests, institutions, and implementation design interact—is typically used to help explain which policy idea gets picked by decision makers for implementation. And the Political Economy Analysis Tool of the United Nations Food & Agriculture Organization (FAO)—which identifies binding constraints in the policy space, and unpacks the actors, incentives, and power dynamics around each area—is typically used to trace the push-and-pull between various actors to define outcomes.

In the interest of providing Pakistan's policymakers and other stakeholders with a simple tool to gauge the political economy influencing their reform proposals, the authors developed an easy-to-use approach for mapping relative power of stakeholders on the political economy landscape. For each stakeholder, this approach identifies the stakeholder's goals, the main levers through which the stakeholder can exert influence on policy outcomes, and the ability to organize for impact on policy outcomes. Based on these, the approach helps gauge the level of impact the stakeholder can have if its levers are used to the maximum. Each chapter is a case study which builds up to the filling out of this tool to help policy makers.

The chapters on the over-regulation of wheat pricing, farm mechanization, and seed regulation are based on Pakistan Agricultural Coalition's direct multi-year involvement in advising the relevant government entities. On seed, Pakistan Agricultural Coalition has brought the best international and local experts to the Government of Pakistan's Ministry of National Food Security & Research and the National Seed Development and Regulatory Authority. On farm mechanization, it has advised the Government of Punjab's Agriculture Department and the Government of Sindh's Public-Private Partnership Unit. And, on the development of the wheat supply chain through the EWR regime, Pakistan Agricultural Coalition has extensively advised the Government of Punjab's Food Department and the Federal Government's Securities & Exchange Commission of Pakistan (SECP). The farm mechanization and wheat supply chain engagement also involved extensive Pakistan Agricultural Coalition engagement with the Bank of Punjab.

Over the years, The Pakistan Business Council has published a number of reports on food value chains highlighting the potential for value addition and export of food products. Given the confluence of PAC and PBC's outlook to see Pakistan's agriculture sector become aligned with the best practices to increase agriculture and livestock yields, enable access to technology, finance and quality inputs, and integrate agriculture into the organized market, both organizations have jointly started 'The State of Agriculture' report series. This report is third in the series and is intended to spark more detailed work in this space.

The purpose of this report is to educate about reform and help policymakers and stakeholders understand the political economy of agriculture reform so that greater policy success can be achieved in transforming the sector. The case studies show that government is not a single, homogeneous actor

for reforms. The interviews with various stakeholders show how each stakeholder perceived reforms. The objective is not to malign any stakeholder group or attribute blame for the lack of progress on agriculture sector reform.

Table of Contents

Acknowledgements iv
Foreword xii
Executive Summary 1

Chapter 1: The Political Economy of Taxation: Sindh's Agricultural Income Tax 05
How farmers have been taxed 06
Sindh's Agricultural Income Tax Act 2025 07
Incidence of the Agri Income Tax Among Sindh's Farmers 08
The Tax Equity Argument has been Misapplied 09
The Devil Lies in the Implementation 10
The Prospects of Success 11
Conclusions 12
Rating of Relative Stakeholder Power in Agricultural Income Tax 12

Chapter 2: The Political Economy of Agri-Investment: Farm Mechanization 15
Shift from the Old Way of Promoting Farm Mechanization 16
The Government has Many Levers to Impact Farm Mechanization 17
The Choice of Policy Depends on the Government's Goals 17
The Farm Laborer: A Critical Stakeholder 20
The Real Farm Mechanization Discussion: Restricted to Tractors 20
The Way Forward 22
Conclusions 23
Rating of Relative Stakeholder Power in Farm Mechanization 23

Chapter 3: The Political Economy of Over-Regulation: Seed Reform 25
A System Built Around Control, Not Performance 26
Two Reforms, One Decade: Truth-In-Labelling and Company Tiering 27
The Case of Maize: A Proof of Concept 28
Why it took a Decade: The Political Economy of Resistance 29
The Innovations that Never Happened 30
Conclusion: Legislation is not Implementation 30
Rating of Relative Stakeholder Power in Seed Regulation 31

Chapter 4: The Political Economy of Pakistan's Crop Mix: Cotton to Cane 33
Shrinking Cotton in South Punjab 34
A Crop Mix Determined by the Patrons 34
The Switch to Sugarcane: Baqir's Story 35
The Cotton-Wheat Economics 35
The Sugarcane Calculation 35
The Mill Relationship: What Makes it Irreversible 36
The Ginner in the Middle 36
The Power to Ignore Bans: Sugarcane and Its Patrons 37
When Off-take Creates Diversification: PepsiCo Lays' Proof-of-Concept 37
PepsiCo Lays and Potatoes 37
Conclusions 38
Rating of Relative Stakeholder Power Influencing Crop Mix 38

Chapter 5: The Political Economy of Price Control: Wheat Pricing in Punjab 39
Wheat Sector Deregulation in Punjab 41
Are the government entities coordinated? 41
The monsoon joins the debate 43
Where are the donors? 44
Conclusions 45
Rating of Relative Stakeholder Power in Wheat Pricing and Deregulation 45

References 47

Executive Summary



Executive Summary

The question 'in the air' today about Pakistan's agriculture sector is: with all the good ideas, solutions, and eco-systems for agriculture's development, why doesn't the sector take off? The theme of this report is that the answer lies in the political economy that constrains agriculture. The best ideas fall short of success—they require the right alignment of interests (who wins and who loses) and how the implementation is designed[1].

At a macro level, this report analyses how interests and implementation framing interact to determine how ideas for agriculture policy tend to get selected and executed by decision-makers in Pakistan. This framework helps explain the broader conditions under which long-blocked reforms in agriculture—e.g., reduction of over-regulation of seed, implementation of the agricultural income tax, and deregulation of wheat prices—finally gained traction. The case studies in this report illustrate that reform rarely succeeds through technical merit alone. It often requires a powerful actor leveraging a moment of crisis to push through reforms that had already been developed but remained stalled by political and institutional resistance.

- In the seed sector, sensible reforms that are an international good practice—Truth-in-Labelling and tiering of seed companies—had been stalled for nearly a decade by bureaucratic resistance and entrenched informal interests including seed companies owned by farmers. The SIFC saw food security as a real crisis which required better seed. It created a new seed regulator (which absorbed the previous regulator) with a capable leadership which pushed these regulatory reforms through all the heavy resistance convincing each stakeholder.

- On the agricultural income tax, the IMF's conditionality about taxing each major sector of the economy pressured the federal government which convinced the provincial governments to pass agricultural income tax laws. Without a doubt, passing laws is easier than implementation of the tax. And if passing the law, rather than the implementing it, is the deliverable, then protest against the law is superfluous.

- On the over-regulation of wheat pricing, the Government of Punjab's leadership deregulated the sector far ahead of the deadline set by the IMF. The key driver was a fiscal crisis: the enormous cost of borrowing for wheat procurement which ballooned to Rs. 87 billion in FY23. But the Government of Punjab leadership was also highly committed to keeping the price of roti from rising too high. So, when the astronomical rise in the price of wheat created another crisis within months of the 2025 harvest, the Government response created a wheat pricing regime for which over-regulation would be an understatement. Deregulation is easier to promulgate than to implement.

- On farm mechanization, the extreme farmer distress during the first wheat harvest after deregulation in 2024 was the crisis that drove Punjab's top leadership. The high-visibility Green Tractor Scheme (Rs. 30 billion in subsidies for 30,000 tractors plus 1,000 free tractors for wheat farmers) was one of the schemes with which the Government of Punjab responded to the crisis. Again, providing tractor subsidies is easier than creating an eco-system for mechanization.

- The shift of southern Punjab's crop-mix—sugarcane displacing cotton over the last two decades—did not involve the most powerful players like the IMF, the SIFC, or a provincial Chief Minister. But in

the context of the crisis of the cotton crop (reducing yields, low climate resilience, and depressed prices), the politically influential sugar mills brought undeniable financial gains to the area's farmers with significantly lower risk around their mills who shifted to sugarcane. The shift from cotton to sugarcane is a result of this combination.

Further to the wider theme of how policies get picked for implementation, each chapter delves deeper at the participant level for a more granular examination of how the stakeholders of these sectors interplay with one another to oppose or support the reforms. Across all chapters, a hierarchy of influence emerges:

- Ironically, smallholder farmers generally have limited power to influence policy outcomes. They are numerous but fragmented and difficult to coordinate or mobilize politically. However, when commercial interests align, farmers can become a potent force. This is visible in the success stories of hybrid maize adoption, widespread uptake of laser land leveling, and the rapid shift to sugarcane in southern Punjab despite crop zoning rules. In each case, collective behavior was driven not by organization or advocacy, but by clarity on economic gains from adoption.

- Provincial governments can do a great deal when they have clarity of purpose from the top (e.g., roti price must not rise above Rs. 16, agri-income tax must be paid). The seed sector reforms, Punjab's wheat deregulation, the enormous Green Tractor Scheme, and Sindh's transfer of agricultural income tax administration from the powerful Board of Revenue to the SRB, all demonstrate the state's ability to rapidly mobilize legislative, regulatory, and financial resources when a clear objective is established (often in response to a crisis). However, without meticulous planning with expert advice, Government actions can sometimes do more harm than good.

- Corporate and private sector players (which could be seed companies, mechanization service providers, large traders, warehousing operators) often possess the technical expertise, investment capacity, and operational capability required for reform. Yet they frequently lack the political influence needed to decisively shape policy outcomes. This dynamic is visible in the seed sector where reputable companies supported Truth-in-Labelling reforms, and in mechanization where service providers and machinery manufacturers advocated for financing, standardization, and service-provider models, but struggled to secure government support or to overcome institutional resistance and informal competitors.

- Multilateral institutions, despite their large investment programs in the agriculture sector, have been conspicuous by their absence and limited engagement in critical reform moments studied in these reports. Provincial governments today appear less dependent on them than in previous decades, often preferring domestically driven, politically convenient solutions.

- Informal actors and informal systems often wield influence disproportionate to their formal authority. Informal seed markets delayed regulatory reforms for years, undocumented mechanization service providers continue to dominate large parts of the machinery market, and agricultural income taxation struggles against cash-based transactions and weak land records. Across sectors, informal systems frequently prove more durable than formal regulations.

- Banks appear as strong influencers of agricultural policy outcomes in the case studies which involve private participation and investment. In the context of farm mechanization and wheat purchase and storage, the premier role of private parties meant that bank lending became critical for advancing the policy goals of the government in agriculture.

- A wider vision for the development of the agriculture sector is missing from the Government. In addition to the federal-provincial disconnect, there is a disconnect between the provincial agriculture departments which focus on providing support to farmers and the provincial departments that have funding to support SMEs and corporate players to invest in agriculture (e.g., the industries department or entities for public-private partnerships).

Lessons for Policy Design and Implementation

The preceding analysis shows what constrains reform. The lessons below turn it into guidance for those designing policies and interventions in Pakistan's agriculture sector as it operates today.

As always, reform needs a committed champion in the top tier of decision-making to carry it through its successive levels of approval. And the case studies in this volume indicate that Pakistan's decision-makers tend to reform in response to a crisis—as they say: never let a crisis go to waste. Therefore, in today's agriculture sector, a reform proposal also needs to survive a selection process that favors speed of implementation. A measure that can be implemented quickly typically gets picked over a multi-year transformation requiring many steps and consistent focus. The focus on votes reinforces this: solutions that ostensibly benefit smallholder farmers are likely to be chosen over broader transformative initiatives. Reformers should therefore expect to compete with quick, visible schemes.

The reality is that Pakistan's agriculture requires reform initiatives that will take multiple years to implement. So unless the approach to reform changes, reformers should design long-term reforms such that early, tangible benefits reach farmers. This way, the attention of the reform's ultimate champion may not be needed for every step.

Reforms that make the agriculture sector more investment-friendly for the private sector cannot stop at the promulgation of a law or regulation. The implementation of such reforms depends a great deal on actors outside government. The corporate and financial sectors bring expertise, implementation capacity and financial access that agriculture needs in many places, but they will not enter unaided. Government must provide a great deal of handholding and risk mitigation. Banks are a special category: agriculture can run without big corporates, but it cannot run without finance. Informal players and their systems can defeat the best-intentioned policies. So they must be understood before new formal systems are designed. The new eco-system being introduced should attract informal players and networks to join rather than force them to oppose.

Each of these lessons plays out primarily at the provincial level since agriculture is a devolved subject in Pakistan. Provincial governments are perhaps the most potent forces that can transform agriculture, and they are best placed to supply the champions, the incentives for private and financial players, and the systems that informal networks can join. But for attracting private investment to agriculture, reforms that depend on one province's champion or one moment of urgency is fragile. A national vision, coordinated with the provinces, gives provincial effort a common direction and lets reform continue beyond any one leader or crisis.

Chapter 1

The Political Economy of Taxation: Sindh's Agricultural Income Tax



The Political Economy of Taxation: Sindh's Agricultural Income Tax

Every provincial government of Pakistan passed a law on agriculture income tax in 2025 at the instance of the International Monetary Fund (IMF). What explains the passage of this law despite the political economy? Taxation of agricultural income has been a contentious issue in Pakistan's national discourse for long. And it has been debated more in Sindh than other provinces because Sindh has long had both a manufacturing base and a sizable agricultural endowment. Interestingly, it is the Government of Sindh that has taken the institutionally significant step of shifting the registration, assessment, and collection of agriculture income tax from the Board of Revenue to the Sindh Revenue Board (SRB) – a shift that has not taken place in any other province. Focusing on Sindh as a case study, this chapter explores the political economy associated with the agricultural income tax.

How farmers have been taxed

Agricultural income tax in Pakistan is a provincial subject under the Constitution of Pakistan, specifically through Entry 47 of Part I of the Fourth Schedule[1]. Unlike ordinary income tax, which the Federal Board of Revenue collects on salaries, business profits and capital gains, agricultural income tax has been collected by provincial revenue authorities such as the Sindh Revenue Board. Farmers in Sindh, like all economic actors, are also subject to sales tax on goods and services they purchase as inputs and customs duties on imported inputs. On the outputs produced by farmers, however, most agricultural produce such as wheat, rice, cotton, sugarcane, fruits and vegetables are either exempt or zero-rated under sales tax laws. Consequently, unlike manufacturers, farmers cannot claim sales tax credits on purchases of inputs even though those inputs carry embedded sales taxes.

According to the Sindh Revenue Board (SRB), approximately 40,300 tax filers who declared agricultural income to the FBR in the year before 2025. The SRB's estimate of tax potential from the agricultural income of these farmers is around Rs. 18 billion. Over the 14 years till FY25, approximately Rs. 7 billion has been collected from agricultural tax by the Federal Board of Revenue from Sindh. Meanwhile, the provinces collected mostly land-based taxes from farmers. In fiscal year 2025, Punjab collected Rs. 4.0 billion in tax from farmers.[2] The same year, Sindh collected Rs. 1.3 billion in tax by March 2025 from farmers.[3]

Historically, agricultural income tax collection across Pakistan has been minuscule due to low statutory rates, generous exemptions, weak administrative capacity and widespread informal payments at the local *mukhtiarkar or tapedar*—the revenue officers at the tehsil (smallest administrative area) and patwar (basic record) levels, respectively, in Sindh. In Sindh, until recently, the Board of Revenue administered agricultural income tax on a presumptive basis, often through informal negotiations with revenue officials rather than through formal assessment, notices or bank challans. The introduction of the Sindh Revenue Board as the collecting authority in 2025 along with a new online portal marks a shift toward formalization.

Sindh's Agricultural Income Tax Act 2025

A case study of the political economy of agricultural income tax in Pakistan unfolded in 2024 when the IMF pressurized the federal government for taxation of agricultural income.[4] The measure was included among the structural benchmarks of the IMF program: 'Implement the new AIT laws through a comprehensive plan, including the establishment of an operational platform for processing returns, taxpayer identification and registration, a communication campaign, and a compliance improvement plan'.[5] Addition as a structural benchmark means that Pakistan could face difficulty in receiving a tranche of funding from the IMF if the benchmark is not met. In a marvel of legislative alacrity, each province had passed an agriculture income tax law by the next year.[6]

This episode illustrates the role and relative power of each stakeholder. For long, the International Monetary Fund has pressed Pakistan to increase its tax-to-GDP ratio by broadening the tax base and reducing exemptions. Agricultural income has been a persistent target based on the logic that it contributes about a quarter of Pakistan's GDP but contributes a miniscule amount in taxes. The IMF explicitly called on provincial governments to raise agricultural income tax rates closer to ordinary income tax slabs and to improve collection mechanisms. The IMF's rationale is one of horizontal equity: large landowners and corporate farms generate substantial incomes that escape the progressive federal income tax net, while salaried employees and industrialists cannot avoid documentation. The IMF document stated "all provinces are committed to fully harmonizing their Agriculture Income Tax regimes through legislative changes with the federal personal and corporate income tax regimes and this will become effective from January 1, 2025."[7] The federal Ministry of Finance transmitted this pressure to the provinces.[8] The IMF has consistently argued that the same tax rates should apply across all sectors, treating agricultural income no differently than manufacturing or services income. Punjab responded first, initially passing legislation for raising agricultural income tax rates substantially, then reversing the move and reintroducing substantially lower rates.[9] As one leading farmer of Sindh noted, Punjab reversed it first, and then Sindh was forced into doing the same.[10]

On 18 February 2025, the Sindh legislature passed the Sindh Agricultural Income Tax Act 2025 and shifted agricultural income tax collection from the Board of Revenue to the Sindh Revenue Board.[11] Under the 2025 Act, agricultural income is defined to include income from cultivation and from basic

Figure 1. Personal Income Tax Table for Salaried Professionals Inspired the Tax Table for Farmers

Personal Income Tax Table: Salaried Professionals		
Annual Taxable Income (PKR)	Fixed Tax (PKR)	Rate of Tax (%)
Up to 600,000	0	0%
600,001 – 1,200,000	0	5% of amount above PKR 600,000
1,200,001 – 2,200,000	30,000	15% of amount above PKR 1,200,000
2,200,001 – 3,200,000	180,000	25% of amount above PKR 2,200,000
3,200,001 – 4,100,000	430,000	30% of amount above PKR 3,200,000
Above 4,100,000	700,000	35% of amount above PKR 4,100,000

Agricultural Income Tax Table: Farmers		
Annual Taxable Income (PKR)	Fixed Tax (PKR)	Rate of Tax (%)
Up to 600,000	0	0%
600,001 – 1,200,000	0	15% of amount above PKR 600,000
1,200,001 – 1,60,000	90,000	20% of amount above PKR 1,200,000
1,600,001 – 3,20,000	170,000	30% of amount above PKR 1,600,000
3,20,001 – 5,60,000	650,000	40% of amount above PKR 3,200,000
Above 5,60,000	1,610,000	45% of amount above PKR 5,600,000

processing of produce for market as well as rent or revenue from agricultural land. It also covers any income declared as agricultural under federal tax law. Further, allowable deductions to agricultural income include a long list of expenses such as labor for farming operations, seeds, fertilizers, pesticides, hiring animals or machinery, watercourse repairs, harvesting, marketing, ushr, local cess, abiana (charge for water supply to farms), electricity and fuel for tube-wells, land rent, agricultural loan interest, depreciation at 15% on buildings and machinery, and other purely agricultural costs (not capital or personal expenses). Losses from calamity-hit areas may be carried forward and adjusted as prescribed. The Act also imposes default surcharge for late payment at the rate of 12% per annum or KIBOR plus 3%, whichever is higher, on the overdue tax. The Act imposes penalty for failure to furnish an income tax return without reasonable cause at 0.1% of tax due per day capped between Rs. 10,000 and Rs. 100,000 depending on income level. The tax tables of the Sindh Agricultural Income Tax Act 2025 are a mix-and-match of the tax tables for salaried professionals (see figure 1) and the super tax applicable to the country's largest business groups (which has been replicated verbatim into the Sindh Agricultural Income Tax Act 2025).

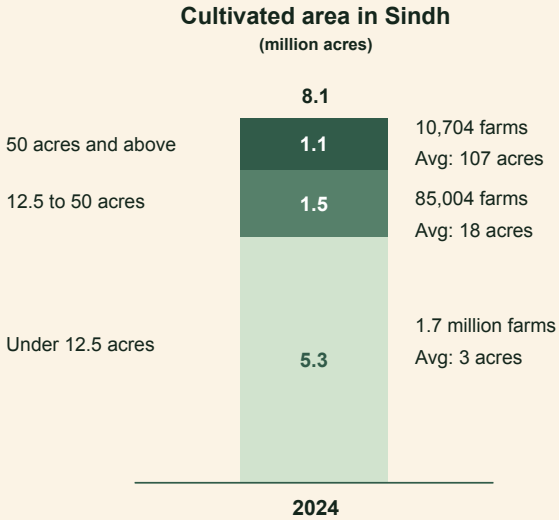
Incidence of the Agri Income Tax Among Sindh's Farmers

The incidence of the proposed Agricultural Income Tax is instructive in understanding the lack of political opposition by small farmers to its promulgation. An estimate of Sindh's tax potential based on this tax schedule conducted for this report (using FY25 crop cultivation data and the agriculture census of 2024 for farm sizes) yielded two important conclusions. First, 95% of Sindh's farmers (those who own less than 12.5 acres) would stand to pay zero agricultural income tax because their annual income would be less than the threshold of Rs. 600,000 below which no agricultural income tax needs to be paid. Second, Sindh's estimated tax potential for the four major crops—wheat, rice, cotton, and sugarcane—plus three leading horticulture crops—mango, tomato, and banana—is in the range of Rs. 32 billion. More than 82% of this tax potential is accounted for by the 10,704 farms in Sindh with more than 50 acres.

Box 1: Agricultural Income Tax Potential

In 2020, the Federal Board of Revenue (FBR) estimated Pakistan's agricultural income tax potential at Rs. 69.5 billion annually.[12] The methodology assumed a flat income of Rs. 50,000 per acre (after excluding farms below 7.5 acres as subsistence-level holdings) and applied prevailing statutory slab rates to average income per farm size category.

The present analysis estimates agricultural income tax potential for Sindh's major field and horticultural crops (wheat, rice, cotton, sugarcane, mango, tomato, and banana), using the 7th Agricultural Census (2024) for farm size distribution and FY2025 crop-specific costs of production and prevailing prices. Since wheat is grown across most of Sindh in the Rabi season, annual farm income is modelled as either a wheat-rice or wheat-cotton combination, or perennial crops like sugarcane, banana, etc. Farms are grouped into three size categories: under 12.5 acres, 12.5 to 50 acres, and above 50 acres. Farms under 12.5 acres, representing 67% of all cultivated area in Sindh, are excluded from the calculation, as their average annual income falls below the Rs. 600,000 exemption threshold under the Sindh Agricultural Income Tax Act, 2025.



The total estimated tax potential was found to be Rs. 32 billion which is 1.6% of the value of the crops of Sindh under consideration—so the tax take from these crops is 1.6% of their contribution to GDP. Farms above 50 acres account for Rs. 26 billion (82.5%) of total potential, yet number only 10,704 farms (just 0.6% of all farms in Sindh) averaging 107 acres per farm. This means that over four-fifths of the province's agricultural tax potential can theoretically be collected by administering just over ten thousand large farm accounts.

A typical large farmer in Sindh's wheat-rice belt presents a compelling case for taxation. On the wheat crop, the progressive farmer is estimated to earn around Rs. 50,000 per acre in profit and Rs. 86,000 per acre in profit on hybrid rice bringing total annual profits to approximately Rs. 14.6 million per farm across a 107-acre farm. On farms with sharecroppers or hari's a significant share of the produce goes to the sharecropper so the landowner taxable income would be lower on those farms. But without farm level data on hari's, this factor is difficult to incorporate into the estimate. With earnings of this scale, this farmer is unambiguously in the upper income bracket. There is little economic justification for exempting such income from taxation while a salaried professional earning a fraction of this amount faithfully pays income tax. The question, then, is not whether to tax, but (i) how much to tax, and (ii) whether the comparison with the salaried professional is fair.

The Tax Equity Argument has been Misapplied

An argument raised by farmers is that the most climate sensitive business cannot be taxed the same as a business producing ball point pens. And the take-home salary of a professional is not comparable to a farmer's income because a farmer runs a business with risks that are never applicable to a salaried professional. The IMF says tax has to be equitable across sectors, but farmers ask whether there is any country where the same agricultural income tax rate is applied to agriculture and manufacturing or services. In India, corporate farms pay tax, and Indian farmers are heavily subsidized particularly on inputs. In the United Kingdom, tax rates are generally high, but the government subsidizes farmers and there are still protests. The United Kingdom also allows farmers to consolidate their profits and losses over three or five years, recognizing that a season impacted by floods means lower production and a bumper crop often means prices fall. Profitability goes down in both cases.

One farmer cultivating a large farm in Sindh reported that the average wheat yield on this farm is going down approximately two percent per year due to climate change. If farmers are taxed at forty-five percent of their income, this takes away the cushion that allows farmers to absorb climate shocks. During the floods, land developments were destroyed and had to be repaired with expenditure in the following year, so a reserve is required. Before the Sindh Agriculture Income Tax Act 2025, depreciation was never included in the fifteen percent agricultural tax, and the fifteen percent tax rate used to be applied on net profit, but the definition of net profit did not always include realistic costs. A critical point is that the tax equity argument has been misapplied. Farmers are like business proprietors, not like salaried employees. Therefore, the tax table for salaried employees is the wrong template. The appropriate template is the tax table for small business, which applies a twenty percent tax on profit even according to the Sindh Agricultural Income Tax 2025.

Under the 2025 tax slabs, the typical large farmer in Sindh's wheat-rice belt would owe Rs. 5.7 million in tax which translates to an effective marginal tax rate of 39%. For context, a listed or non-listed large company earning the same profit pays corporate income tax at 29%, meaning the large farmer is being asked to pay nearly Rs. 1.5 million more than a corporation on the same quantum of income. A small company (defined as one with paid-up capital less than Rs. 50 million and total annual revenue less than Rs. 250 million) pays an even lower tax rate of 20%.

The case for taxing this farmer is clear and well-founded but the rate at which he is being taxed relative to other sectors of the economy is harder to justify. It is also worth noting that a farmer is not analogous to a salaried employee. Farming is a business which involves depreciation of machinery and equipment, working capital requirements, price volatility, and climate risk. A fairer tax regime would recognize this by either aligning agricultural tax rates with corporate rates.

Therefore, the tax potential was recalculated by treating farming as a business and applying the small company rate of 20% which is the most farmer-friendly rate available under Pakistan's corporate tax framework. Even at this reduced rate, Sindh's agricultural income tax potential comes to Rs. 27 billion–Rs. 5 billion less than under the current Agricultural Income Tax slabs and 2.4% of the GDP from these crops. But this is calculation comes with a tax equity argument that can be defended. The revenue foregone by adopting a fairer, more business-aligned rate is modest, however, the gain in equity, compliance incentive, and political legitimacy is considerable. This is why it can be argued that the new system of self-assessment based on profit and loss is fundamentally mismatched to agricultural reality. While farmers do not understand tax, the tax also does not understand farming.

The Devil Lies in the Implementation

All this legislation by provincial legislatures was happening when the fiscal year was closing around April to May 2025, creating further confusion. Multiple farmers described the pre-Sindh Revenue Board system as a hybrid of formal procedure and negotiated extortion. Before the change, there also used to be a self-assessment system. Farmers would file an annual tax return with the Board of Revenue, then go to the local Deputy Commissioner's office and obtain a challan against which they submitted the tax in the bank. The Revenue Officer in the Deputy Commissioner's office used to keep the paper record of this transaction. This formal channel existed on paper. In practice, however, the *tapedar* would come, take an informal sum and take a minimal amount as the land tax. There was no proper assessment earlier. If the tapedar had to reach his target, for example of twenty-five lakh rupees from an area, his aim was mostly just trying to achieve his target. Thus, even the self-assessment system was not genuinely enforced. The formal record kept by the Revenue Officer existed but did not reflect actual income or actual payments. The *dhal*, which was a fixed amount per acre that the *tapedar* would collect as a presumptive payment, left a record, but that record was disconnected from actual profitability. That authority structure has now shifted completely to SRB which has a self-assessment system where payments can be made electronically through all banks. Formally, it has taken away the power of the revenue officers over farmers—a power even the largest farmers used to recognize.

The shift to the Sindh Revenue Board introduced an online portal intended to modernize and standardize agricultural income tax. To facilitate tax filers, the Sindh Agricultural Income Tax 2025 lists all the revenues and expenses applicable to growers. Profit and loss data have to be submitted into the portal, and the tax bill is calculated by the portal automatically. Under the new system, farmers need only a mobile number, CNIC, address and name. A PSID (Payment Slip ID) is then generated digitally.
However, as in all fundamental changes, teething problems prevail: one farmer reported that he filed his tax return in the portal last year but it did not appear anywhere. He filed again this year, and now it is reflected in the portal. The system calculated the tax itself.

Across multiple interviews, farmers reported that they did not receive notices from SRB. There is a widespread impression that there is no implementation of the agricultural income tax. And this helps explain the relatively muted protest against the passing of the Sindh Agricultural Income Tax Act 2025 across Sindh. But the officials of the Sindh Revenue Board present their strategy for making inroads into this prickly arena. According to officials of the Sindh Revenue Board, approximately 83,000

farmers have been approached by the SRB through physical outreach, SMS campaigns, pamphlets and awareness efforts. The Sindh Revenue Board has also visited farmer groups and requested them to at least register with SRB. Data regarding farmers has been obtained by the SRB from the Board of Revenue. Around 11,000 large farmers were identified after coordination with Deputy Commissioners in their districts (large farmers that everyone is familiar with) and tax notices were issued to them. And this strategy seems to make a lot of sense given that the agricultural income tax potential estimation for this report concludes that 95% of Sindh's farmers (holding less than 12.5 acres) earn less than the lowest threshold of the tax table. This means that the SRB would be wasting it energy if it tries to pursue all of Sindh's farmers to register with the tax authority. The estimation says that the top 10,400 farmers of Sindh with more than 50 acres account for more than 82% of the tax potential.

The SRB leadership was able to make the argument that if the most influential individuals from Sindh's ruling party begin to pay taxes, others will follow. It is reported that there was a positive response from the party leadership and the Chief Minister. Hence the members of leading political families were also sent notices and many MNAs and MPAs have complied with their notices rather than challenging them. It is noticeable that there has not been major resistance regarding the agricultural income tax itself. Concerns are mainly related to the transition from the old taxation slabs of 5%, 10% and 15% to the new system. Some districts of Sindh are reported to have a better culture of tax compliance than others. The SRB is expected to collect around Rs. 380 billion in total revenue from all sectors in fiscal year 2056-26 of which approximately Rs. 2 billion is expected to be from agricultural income tax (approximately Rs. 1.5 billion had been collected till March 2026). For context, the FBR has a strength of 23,000 personnel while the SRB has only 400.

The Prospects of Success

When people are not intending to pay the tax anyway, why would they oppose imposition? When they believe there will be no implementation and no regulatory compliance and no enforceability, will they take the agriculture income tax seriously? It appears that this is why no one thought it necessary to oppose the agriculture income tax. If farmers believe the law will not be implemented and they do not intend to pay, then why oppose it? The absence of opposition is therefore not evidence of consent. Farmers seem to ignore this tax because they face no consequences for non-payment.

One leading farmer surmised that if meaningful enforcement were to begin, however, opposition will come from large farmers and nationalists. Such political figures are likely to mobilize rural constituencies against agricultural income tax.

Seen in the wider context, the Sindh Revenue Board's effectiveness in other tax domains gives an indication of how the implementation of the agricultural income tax may unfold. The Sindh Revenue Board is very active in the implementation of the provincial sales tax on services—an area assigned to SRB in 2011 amid much skepticism about their chances of success. In 2025, SRB collected 194 billion in sales tax on services.[13] But most of Sindh's revenue from the sales tax on services come from the heavily documented formal sector businesses in the telecommunications and banking sectors all based in urban areas.

The question naturally arises: how will this fare in agriculture? One interviewee suggested that the answer lies in the nature of documentary evidence. The other taxes collected by SRB are in areas which have documentary evidence about the transactions of the business based on which notices can be sent and recovery can be made. In agriculture, there is hardly any documentary trail, only cash for all purchases and sales. Farmers often do not maintain bank accounts for their agricultural operations.

This is a fundamental constraint. Sales tax on services such as telecom, banking, advertising, and hotels leaves a digital or contractual trail. Manufacturing involves invoices, supply chains and banking channels. Agriculture, particularly in Sindh, operates largely in cash. Labor is paid in cash and *hari's* are most often paid in kind. Produce is sold to mandis or middlemen against cash. Inputs such as seed, fertilizer and pesticide are often bought in cash from small retailers. Without a documentary trail, traditional audit methods fail. The Sindh Revenue Board will have to come up with enforcement mechanisms to recover in any meaningful sense.

Further, even if the Sindh Revenue Board wanted to enforce agricultural income tax, it faces a fundamental data problem. There is a big gap in the data on the ownership of land. The land may be in the name of the grandfather of the farmer cultivating the land in the land record document maintained by the provincial revenue department. In many cases, such records have not been updated for decades. Multiple heirs may cultivate undivided land. Land may be under litigation. The analogy given was that a factory is declared as a shop, indicating how severe the misclassification can be. Fixing this will take time by doing a large number of assessments. Until these records are computerized, verified and linked to current occupants or owners, many farmers consider the tax process ineffective. Correcting this is a multi-year cadastral mapping exercise, not a quick fix. One farmer suggested that it is relatively easy to get the total land holding from the Board of Revenue. The *dhal* system, which was land multiplied by a fixed rupee amount paid, left a record that is available. If a farmer has already paid that tax, he is in the system and cannot misrepresent tax. Showing lesser land is not a favor to the farmer himself because land records are independently maintained.

One farmer mentioned that there was confusion about who to pay, the Board of Revenue or the Sindh Revenue Board. Punjab reversed its agricultural income tax changes for the first six months. Farmers in Sindh asked the Government of Sindh to reverse the changes in Sindh as well. The eventual arrangement was that tax for July to December 2024 would be paid to the Federal Board of Revenue, and tax for January to June 2025 would be paid to the Sindh Revenue Board at the old rate. There remains an ambiguity regarding what the tax structure is going to look like for farmers. Last year, there was confusion about whether half the year was at the old fifteen percent tax rate and the next six months at forty-five percent, but after taxes were paid, authorities said it was fifteen percent for the second half of the year because the wheat price had fallen.

A leading farmer claims that the proposal of a forty-five percent rate was opposed, but the opposition had to be made with logic. The argument was that a corporate player may be able to pay forty-five percent of its income in tax, but farmers cannot pay forty-five percent because this agricultural economy cannot pay and the cyclical issues are extremely damaging in agriculture. Agriculture does not have consistent high returns. This transition is occurring in a period in which costs of production are higher and prices of commodities are under pressure while crop yields have not been rising. Business and industry have multiple account books, one for taxation and another for themselves, but farmers do not know these tricks. Farmers will start to evade if they are subjected to forty-five percent rates.

There is a long history of fixed rate taxation on agricultural land in Pakistan. Agricultural income tax operated on a fixed rate tax on cultivable land and non-cultivable land, with different rates for irrigated versus non-irrigated land and for various crops. Some farmers argue that this is what should be implemented now because satellite imagery is available and the canal system is well mapped. A flat rate should be imposed per acre, and farmers are much more likely to pay it. It was easy to defraud the revenue officer under the old system because in the local area, large landowners had informal control, but a properly administered fixed rate per acre using modern technology would be far harder to evade. Farmers perceive the IMF driven agricultural income tax as externally imposed, insensitive to climate risk and ignorant of the difference between a manufacturing or service business with steady margins

and significantly lower risk and an agricultural operation that can be wiped out by floods, droughts or price collapse in a single season. Farmers do not have crop insurance in Sindh either.

In the short term, it is claimed that collection will remain negligible. Most farmers will continue to ignore the SRB portal, and the Sindh Revenue Board will not pursue them. The *tapedar* system of informal payments may continue in parallel, or it may fade without being replaced.

Conclusions

The broader lesson is that tax policy cannot be transplanted from industry or services to agricultural contexts without adaptation. Agriculture income is different from the profits of industry and the salaries of professionals in ways that are not merely matters of degree but of kind. Climate vulnerability, the absence of documentary trails, the fragmentation of land records, the informality of labor and sales, the volatility of prices and yields, and the high incidence of embedded input taxes all mean that a crude application of tax equity logic will produce neither revenue nor compliance, only evasion, opposition and further erosion of trust between the state and the agricultural sector.

Further, the tax tables inspired by the personal income tax table is a misapplication of tax equity. Those tax levels ignore the fact that agriculture is primarily a business and farmers are entrepreneurs who should be taxed at flat rate of 20% of profit similar to all small enterprises. A workable agricultural income tax for Sindh will have to be simpler, more transparent, and accompanied by a genuine recognition of the input tax credit problem. As SRB officials insist, the agricultural income tax is coming. However, opposition is also likely to come if the current rates continue to apply.

Finally, the passage of the agricultural income tax laws seems to fit a wider pattern. Laws made under external demand – an IMF benchmark, an ILO convention, a WTO obligation – often get passed to satisfy the external party's process requirement, and then left unenforced because they were never aligned with domestic political incentives to begin with. Passage is the deliverable; implementation was never really the ask, or at least was never priced into anyone's expectations. Until significant implementation successes are achieved, the Agricultural Income Tax looks like a clean case of this

Rating of Relative Stakeholder Power in Agricultural Income Tax

In this arena, the IMF emerges as the stakeholder with the highest level of power, far above smallholder and medium-sized farmers. Large landowners, provincial governments, and political parties have high levels of power to shape policy outomes. The power of provincial revenue authorities depends on political support provided to them by the party in power.

	Stakeholder	Goals	Main levers	Ability to organize for impact	Level of impact if levers used to maximum
a.	**Large landowners**	Preserve tax exemptions, maintain political dominance & avoid income documentation	Influence over provincial assemblies, electoral financing, control over rural administration	High: deeply embedded in provincial politics, especially Punjab & Sindh	High: can dilute laws, delay implementation, weaken enforcement, create exemptions
b.	**Provincial governments & assemblies**	Increase revenues without alienating rural elites; satisfy IMF conditions while minimizing political backlash	legislation, administration, exemptions, enforcement discretion	High: constitutional authority over agricultural income tax	High: implementation success or failure depends almost entirely on provinces
c.	**IMF**	Increase tax-to-GDP ratio, reduce exemptions, improve fiscal sustainability	Loan conditionality, program reviews	High: during payments crises	Very high: reforms accelerated only after IMF pressure in 2024/25
d.	**Provincial revenue authorities**	Expand administrative authority & collections while minimizing political risk	Assessment powers, land records, audits, enforcement discretion	Moderate: technically capable in some provinces but politically constrained	High if politically backed; otherwise low due to weak enforcement capacity & interference
e.	**Political parties**	Balance fiscal reform with rural electoral survival; avoid alienating electable landlords	legislative control	High: parties are principal gatekeepers of reform	High: parties can either normalize agricultural taxation or hollow it out through compromises
f.	**Small and medium farmers**	Avoid excessive tax burden; protect livelihoods; ensure progressive thresholds and exemptions	Farmer associations, electoral pressure, street protests	Low: fragmented and less organized nationally	Low: governments usually protect them through exemptions

Chapter 2

The Political Economy of Agri-Investment: Farm Mechanization



The Political Economy of Agri-Investment: Farm Mechanization

Plenty has been written about the effort to attract investment in corporate farming through the Green Pakistan Initiative. But this initiative was primarily focused on cultivating new farm land that would become an addition to agriculture in Pakistan. In the mainstream farming landscape of the country, the big-ticket items for investment are: farm mechanization and agri-warehousing. From 2024 to 2026, north of Rs. 90 billion has been invested in farm machinery in Punjab through the CM Punjab Green Tractor Scheme: 30,000 tractors each costing starting at Rs. 3 million of which Rs. 30 billion was given as subsidy. The Hi-Tech Mechanization Financing Scheme focused mostly on other machines has had a different level of success. This chapter analyzes the dynamics that led to these outcomes.

Credit must be given to the Government of Punjab for conducting regular consultations to secure the views of a wide spectrum of stakeholders on this topic. These consultations provide a strong basis for analyzing the goals and relative power of various stakeholder groups to influence policy outcomes on this topic.

Shift from the Old Way of Promoting Farm Mechanization

Most of the work on farm mechanization is yet to be done in Pakistan but this field has come a long way in Pakistan. There was a time when the government used to buy machines—a few per district—and let farmers use them. This model for delivering mechanization to farmers had its own storied political economy straight from the 1980s Pakistan Television drama '*Waaris*'. The government's laser leveler would be parked at the mansion ('*haveli*' or '*dera*') of the local personality wielding political power and influence—mostly for use on his own farm or the farms of relatives and friends. Farmers would have to work with the associates of this local heavyweight to secure the machine for operation on their farm. Often the farmer would have to pay for the fuel to operate the machine on his farm plus some 'perks' to the operators. The result was an abysmally low utilization of the machine and extremely limited benefit to farmers.

In the early 2000s, the Government of Punjab introduced a revolution in farm mechanization under a World Bank project by offering a 50% subsidy on the purchase of laser land levelers from an approved panel of manufacturers. These machines sold for only Rs. 500,000 at the time and at a subsidized price of Rs. 250,000, they fell within the reach of a large number of farmers. Thousands of farmers purchased laser land levelers and after leveling their own farms, started giving this service for a fee to other farmers. By 2025, Punjab had some 17,000 laser land levelers according to the Punjab Agriculture Department with adoption of laser land levelling by small and medium-sized farmers as well. This democratization of laser land leveling was a success story subsequently replicated in Sindh under another World Bank project. According to the Sindh Agriculture Department, more than 7,300 laser land levelers are now reported in Sindh. So, the Government of Punjab pushed the frontier more than two decades ago by moving away from the old way of promoting farm mechanization. This opened up the avenue for more.

The Government has Many Levers to Impact Farm Mechanization

The Government can subsidize farm machinery through multiple avenues (grants for purchase, mark-up subsidy for purchase of machinery, grants to reduce the charges farmers pay to service providers for using the machinery, etc.). It can reduce taxes on machinery-based services provided to farmers. It can introduce regulations for the quality of machinery that is allowed to operate. If it really sets its mind to delivering mechanization to all farmers, the Government can also set targets for each district and support service providers to deliver services to farmers who cannot afford their own machines. The Government can also encourage local manufacturers of basic farm machinery and implements through capital grants, technical assistance grants, support for loans, etc. The list goes on. But these are examples of levers that each provincial government has at its disposal to encourage farm mechanization. The federal government has the ability to encourage or retard the import of scrap machinery from other countries. Further, the federal government can provide a facilitative framework for the import of advanced new machines leading to the local manufacture of farm machinery. Pakistan has a local industry producing farm machines mostly focused on land preparation. In addition to tractors, farm machinery can be manufactured domestically but this requires that the capacity of the manufacturers (mostly either small or in informal sector) is enhanced with various modes of financing, technical assistance, and government programs to support purchases by farmers and service providers.

The Choice of Policy Depends on the Government's Goals

The government's goals are always multi-pronged. Typically, in this space, one would consider the delivery of mechanization to all farmers to be the highest priority—higher profitability of farmers through use of machinery on their farms. The story becomes complicated if the Government adds a goal of farmer ownership of machines. Reason being that the grant for machine purchase model that succeeded so well for laser land levelers cannot easily be replicated to larger, much more expensive machines. Taking the example of rice: harvesters can cost upwards of Rs. 8 million, transplanters can cost upwards of Rs. 5 million, etc. And these machines typically service 8-10 acres per day. So it does not make sense for 95% of Pakistan's farmers who own less than 12.5 acres (average land holding: 3.6 acres[14]) to own such a machine. Here, the other mode of delivering farm mechanization becomes relevant if the service providers owning fleets of machines, deliver services to farmers through these machines. This can involve machine ownership by farmers but ideally, they would also be providing services to other farmers using their machines once they have used the machines on their own farms. Therefore, the mode through which farm mechanization is pursued is also critical.

Finally, there is one policy goal which can change this entire equation: food security. If the goal is only farm mechanization, it can be argued that machines can gradually become available to farmers and improve their profitability. But if food security is the goal, then the urgency for increasing farm output becomes higher for a country like Pakistan. If the harvesting losses of [10%] in the wheat crop are eliminated, Pakistan will not need to import wheat to meet the needs of its people. So how has the political economy surrounding these ideas played out in Pakistan in recent times?

We pick up the story in mid-2024 when the Government of Punjab commenced consultations with key stakeholders to seek ideas and inputs for developing an eco-system for farm mechanization. This was a time of great flux in Punjab's agriculture sector. Punjab's farmers were harvesting their first wheat crop since the Government of Punjab had announced de-regulation wheat and the cessation of support prices as well as government purchases of wheat (a decades' old policy that had intended to deliver a reasonable profit to wheat farmers).

The benefits of new machines were demonstrated using the rice crop as an example which has been harvested by old wheat harvesters in Punjab for some years now. These traditional wheat harvesters are estimated to cause grain losses (grain that falls to the farm floor during harvesting) of at least 15%. New rice harvesters reduce this loss to 3%—a benefit of 12% more grain to the farmer. Further, rice transplanters give a yield increase of at least 15%. For a rice farmer securing a yield of 40 maunds per acre of rice paddy, mechanical transplantation and harvesting would increase yield by 27% to 51 maunds per acre. In addition to the higher profitability, the quality of grain is also preserved through new machines dedicated for rice harvesting. They reduce broken grains by 50% which improves the price the farmer can command.

The large-scale farm machinery service providers invited to the consultation tabled support for service providers in addition to farmers. At the time, a federal government farm machinery loan scheme administered by the State Bank of Pakistan through all banks was coming to a close. It offered 7-year loans for new machinery to all farmers, processors, and corporates involved in crop production at 7% mark-up. The choice was among six types of machines: tractor, thresher, harvester, planter, mobile grain dryer, and solar tube wells. The grower would have to contribute 25% of the cost of the machine and the rest would be the subsidized loan from any bank. Many farmers pointed out that it was difficult for them to secure loans from banks under this scheme because banks demanded the usual forms of collateral (land, urban property, etc.) other than the machines they were lending for.

The handful of corporate providers of farm mechanization services—which include some leading names from Pakistan's corporate sector—proposed that the loan ceiling of Rs. 30 million per borrower is too low for developing fleets of 100-200 machines to address the scale of mechanization required in Punjab. They cited the estimate of more than 12,000 harvesters required only for rice to service Punjab's entire rice crop. In addition to increase in the number of machines, service providers also recommended that all kinds of machines should be included in government schemes, not just tractors. The goals of these corporate players are focused on making their services competitive with the undocumented small-scale service providers. They argue that this business clearly has economic viability with new machines (reduced grain loss, lower fuel consumption, environmental benefit—no crop burning). But it does not have financial viability compared to informal service providers using scrap machinery (imported without duty) providing service to farmers against cash and paying no taxes.

So, they lobby for elimination of the provincial sales tax on services until undocumented players are competing in this space. They also lobby for a stop to the import of old machines. While it is difficult to ban import of old machines, the federal government has applied tariffs on imports of old machines: one level of tariff on 5-year old machines and a higher level of tariff on 10-year old machines, etc. Related to this is the demand for standardization of farm machinery as is done for motor vehicles. Their goals also include policy stability and government support for the training of manpower for farm mechanization. Finally, they ask for farm machines to be treated as collateral by banks as is the case with automobiles. To achieve these goals, the levers at their command are simply to increase or restrict investment in new machines and their operators. They represent influential business groups but they are so few at this stage that their ability to impact outcomes can only be considered at a medium level.

In contrast to the handful of corporate service providers, there are thousands of small-scale service providers across the Punjab. These are often the enterprising farmers who know their own terrain better than any city folk wishing to enter this business. They generally operate partly in the documented economy and partly in the undocumented economy. The magic trick that makes this possible is that their import of machines is done through a company registered with SECP but their provision of services based on these machines to farmers is for cash. According to surveys conducted by the Asian

Development Bank, these service providers typically have scrap machines (average age of combine harvesters: 39 years) and mainly land preparation implements. But some may have 60 machines with 25 operates working round the year. The terms of service are also basic: for harvesting services, a farmer is typically asked to only pay cash for the diesel that the harvester will consume for operating on his farm. The farmer can make the remaining payment as the harvest is sold.

At the Government of Punjab's consultation, one such service provider said that he has helped farmers secure good results year after year and the demand for his services is increasing from farmers. But despite this interest, he cannot buy more machinery as finance is not available and banks only give one machine's financing under the existing scheme. This large stakeholder group has hardly any levers at its disposal for influencing the policy dialogue on farm mechanization. They are perhaps the most important group to support through financial assistance and operator training to expand mechanisation across Punjab. The ADB survey (2024) finds that 93% of them are farmers, around 77% have some formal education (some up to the intermediate level), and they have been operating for an average of 10 years. However, 95% of the owners of these businesses have no technical education. Even though it is difficult for them to organize effectively to wield influence on farm mechanization policies, policy makers have a view to this group for two reasons. First, it has voting power and second, it is responsible for large operations in agriculture: land preparation for many crops, the wheat harvest, the rice harvest, etc. Hence the impact of this critical group in the farm mechanization space can be rated to as medium to high.

To explore the policy goal of local manufacturing of modern farm machinery, the Government of Punjab had also invited the representatives of Original Equipment Manufacturers (OEMs) including some of the biggest global brand names in agriculture. The OEMs were unanimous that larger numbers of new machine sales would have to take place before their global decision makers would consider local manufacturing. Based on the experience in other markets, one global OEM cited annual sales of 1,000 machines for three years while another cited sales of 300-400 machines per year. The direction was clearly towards large machine sales each year. They also noted that with 18% GST on all machines (which cannot be adjusted against the final product since farmers' commodity sales are exempt from GST), the effective import duties and taxes make up 30% of the machine's local price. And when a provincial government subsidizes imported machinery to the tune of 30% of the machine's price, it is basically making a transfer to the federal government. The federal government, in turn, is unable to reduce these duties and taxes because of IMF conditionality. Moreover, they cited that the rules of entry into the Pakistani market are so onerous that it is discouraging for foreign manufacturers to enter Pakistan.

Among farm machinery manufacturers are Pakistan's two tractor manufacturers which often cite the country's limited foreign exchange resources as a reason for focusing on locally manufactured machines. But since there is little organized farm machinery manufacturing in Pakistan other than tractors, it is considered that global OEMs must be invited to Pakistan. Nevertheless, as the only local tractor manufacturers, these companies are tapped by Government schemes and also enjoy the strong familiarity of farmers with their products.

The goals of the representatives of OEMs are typically to maximize the sales of new machines with lower duties and taxes on their import and a reduction in the import of old farm machines. When asked about local manufacturing of their machines, they demand policy stability. But the OEMs have limited levers at their command to influence outcomes: basically, they can increase or restrict the import of new machines. Beyond this, they can dangle the prospect of investing in local manufacturing in front of policymakers but this often emerges as a distant prospect in discussions on the agriculture sector. Therefore, their influence on the policy outcomes can be rated as low-to-medium.

The Farm Laborer: A Critical Stakeholder

The farm laborer is a critical stakeholder, generally missing from policy consultations. It is the livelihoods of farm laborers—most often poor women—in their millions that would be replaced by farm machines. Ironically, the global experience shows that this group can be the most powerful driver of farm mechanization when it moves to manufacturing jobs in urban areas. Countries like China and Vietnam have generated the creation of manufacturing jobs that help farm laborers earn in three months what they would earn in a year on farms. And this pull created labor shortages on farms which led to the demand for farm machinery. But Pakistan has not been experiencing a boom in manufacturing. The evidence of this effect is visible around the large urban areas of the country: cities like Karachi, Lahore, Faisalabad, etc., draw in the excess labor from their surrounding areas and hence farm mechanization is more visible around them. On farms deep in the rural areas of Pakistan, mechanization will have to address the labor displacement. That is when the feeble power of this stakeholder group can become visible. But the levers available to this group are few and difficult to tap: they can organize locally—most often at the farm level—to oppose mechanization. But their power to influence outcomes at the policy-making level is low.

Some leaders of Punjab's associations of large farmers pointed out that if the Government is adequately ambitious bringing farm mechanization to Punjab's farmers, then the culture of giveaways to farmers must give way. It was claimed that the most likely outcome of the myriad government schemes providing hefty grants for purchase of tractors by farmers is that those tractors are sold by farmers to gain cash. Therefore, if the schemes with giveaways to farmers cannot be eliminated, they must be complemented with the service provider approach. Two sets of policies are required: one for farmers with a commensurate ceiling of support and one for service providers which can be large. Further, mechanization cannot happen in isolation and needs to be part of a wider package of support to farmers. Ideally, such packages should be delivered crop-wise to achieve widespread change in the way farmers are cultivating each crop: using quality seed, changing the soil geometry at the time of sowing to ensure the crop can be harvested smoothly by machines, applying fertilizers and crop care chemicals at the optimal time, harvesting better, etc. Typically, large farmers are well organized for impact and their power to influence policy outcomes can be rated as high. Oddly, large farmers are generally missing from consultations specific to modern farm machinery and mechanization at a wide scale. There is a likely reason for it.

The Real Farm Mechanization Discussion: Restricted to Tractors

In the aftermath of the massive dent in farmer incomes from the wheat crop (which over 80% of Pakistan's farms grow in the winter), the Government of Punjab opted for the traditional giveaway scheme that carries the highest price tag: subsidies for tractor purchases by farmers. In November 2024, the Government of Punjab rolled out the CM Punjab Green Tractor Program which provided farmers with grants for purchases of three tiers of tractors. In its first phase, for farmers with 1 to 50 acres, the scheme offered Rs. 1 million for the purchase of 10,000 tractors of 50-75 horsepower[15]. In the second phase launched in September 2025, in for farmers owning more than 7 acres of land, it offered Rs. 500,000 each for the purchase of 10,000 'high power tractors' of 50-65 horsepower and Rs. 1 million each for the purchase of 9,500 tractors with 'high power tractors' of 75-125 horsepower[16]. The third phase offered Rs. 500,000 per tractor for 10,000 tractors of 50-65 horsepower in early 2026. These offerings were 10%-30% of the price of these tractors and the documentation stated that beneficiaries must not sell their tractors for three years.

The response to this scheme was overwhelming: no less than 1.5 million farmers applied for the first phase[17]. This was 150 times the 10,000 tractors on offer. For the second phase, 734,000 farmers applied—more than 37 times the 19,500 tractors on offer. And, for the 9,500 high power tractors, 282,000 farmers were declared eligible for balloting—about 30 times the tractors on offer. For the third phase launched in January 2026, 427,000 farmers owning up to five acres of land applied for 9,500 tractors[18]. In addition to these phases, 1,000 free tractors were distributed to wheat farmers under a scheme titled the CM Punjab Wheat Farmer Incentive[19]. Of the 57,733 small farmers who applied for this scheme (more than 57 times the offered number of tractors), 21,496 were found eligible to participate in the balloting for 1,000 free tractors of 50-55 horsepower.

So, a total of 31,000 tractors have been offered in less than two years at a cost of Rs. 30 billion. Given that Punjab had 551,848 tractors (80% manufactured by the two local manufacturers at the end of June, 2024, according to Punjab Agriculture Department,[20] this is an addition of 5.6% to Punjab's tractor fleet. The point to note is that the existing 551,848 tractors meant that a tractor already existed for every 10 farms for Punjab's 5 million farms in 2024.[21] But tractors are not the only farm machine required by Punjab's farmers. In fact, tractors are far more in number in Punjab than other types of machinery.

Therefore, the CM Punjab Hi-Tech Mechanization Financing Program was launched in October 2025.[22] This was not a grant program for purchase of machines for farmers. The scheme offered interest free loans of a term of 5 years (with a six-month grace period) from the Bank of Punjab to facilitate purchase 12 types of high-tech machinery for up to Rs. 30 million—the same ceiling as the federal scheme mentioned earlier. The scheme secured a strong response from international farm machinery manufacturers: 27 companies from China, 10 from Turkey, and two each from Italy, Japan, the United States, Brazil, Spain, and Belarus partnered with the program. But this scheme invited not only farmers but service providers and entrepreneurs as well. Beneficiaries are required to put up 20% of the cost of the machine(s) they are financing.

Here, a critical stakeholder for large-scale mechanization enters this story: the bank. The goals of banks in this space are to lend safely maximizing the probability that the principal and mark-up for loans will get repaid. With the mark-up being picked up by the Government of Punjab, the smaller part of the bank's risk is taken care of. But the larger issue is the repayment of principal lent for the farm machinery. Banks are particularly concerned about two risks in case there is a default: first, the difficulty in repossessing farm machines from influential farmers (cannot easily get a machine out of a local influential's haveli), and second, the high probability that the farm machinery will fetch a fraction of its original price when the bank tries to auction it to recover its principal. To address this, the Bank of Punjab secured a 30% first loss guarantee from the Government of Punjab on a portfolio basis—which means that the Government will make the bank whole on defaults up to 30% of the loans disbursed under this scheme. To influence outcomes, banks have the levers of (i) refusing to participate in such schemes (which private banks chose to do with this scheme), and (ii) applying strong creditworthiness filters to applications under such schemes. And banks have the ability to coordinate with each other and can have high influence on outcomes. Therefore, their ability to influence policy outcomes in this space is rated high.

The response to this scheme was significantly different from the grant schemes for purchasing tractors. By end-May 2026, 5,175 applications had been received for Rs. 56 billion worth of machinery of which 1,523 applications got approval for Rs. 14.7 billion of machinery value (about 80% of which was the amount of loans approved, i.e., Rs. 11.5 billion). Farmers and small-scale service providers seem less interested in borrowing for new machines. And banks are also unlikely to find most applicants who are farmers or small-scale service providers to be creditworthy. So, this is where the traditional political economy of farm mechanization begins to run into sand.

The Way Forward

The Government has a clear preference to support small farmers and farmer-cum-service-providers. But to mount a scheme that is large enough for delivering mechanization to the majority of Punjab's farmers, bank lending with mark-up subsidies for a large variety of machines is the clear winner. So, if the Government place a higher priority on delivering mechanization services to farmers compared to farmer ownership of machines, support to larger service providers can begin to make an impact on farm mechanization in Punjab.

More broadly, there is an institutional hurdle to keep in mind. The parts of government that are experienced in dealing with large businesses are typically not coordinated with the parts of government that deal with agriculture. And this was illustrated by an initiative taken by the Public-Private Partnership (PPP) Unit of the Government of Sindh's Finance Department in 2025.

The traditional approach to farm mechanization had been seen in recent times in Sindh where the Agriculture Department purchased multi-crop harvesters which were utilized only 14% of the time during the 2024 rice harvest season. By comparison, the three leading private sector service providers operating comparable harvesters on a commercial basis in Sindh's rice areas in the same season had an aggregate utilization rate of 84%. The PPP Unit prepared a public-private partnership project with the private sector to create an eco-system for farm mechanization across Sindh province using the service provider model.

The objective was two-fold: (i) to support farmers through a voucher to pay for machinery based services so they become familiar with process and results of mechanized farming, and (ii) to support service providers in securing machines through a combination of their own equity and bank loans. This would gradually create demand for mechanization among farmers as they become familiar with mechanized farming. In parallel, the project would facilitate a number of experienced service providers across Sindh with adequate size and scale to serve farmers.

This new approach would address a political economy that demands payouts to farmers and would also support large-scale private service providers to develop this new business. But it was not to be. The institutional disconnect between the idea of public-private partnerships and the traditional approach towards supporting agriculture. Despite the PPP Unit's enthusiasm, the project was dropped at the eleventh hour by the Agriculture Department.

Nevertheless, there is hope in this direction. Senior policy makers of the Government of Punjab have noted at consultation sessions that perhaps it is important to have two parallel schemes: one micro (for farmers) and the other macro (for service providers). Where the farmer and small-scale service provider may be happy with Rs. 30 million in loans for a couple of machines, a large-scale service provider may need Rs. 300-400 million worth of financing.

In December 2025, the Government of Punjab signed a loan agreement with the Asian Development Bank for the Punjab Climate-Resilient and Low-Carbon Agriculture Mechanization Project[23] which draws on all the elements mentioned in this chapter. The project will provide liquidity support for a government scheme to provide matching grants to farm service providers to acquire advanced farm machinery such as combined harvesters and rice transplanters. The government scheme will also facilitate farm service providers to have access to finance from commercial banks to procure advanced farm machinery. The matching grant will finance up to 30% of cost (with upper ceiling of PKR 5.0 million). Equally important, for a just transition to mechanized agriculture, the project has a component for re-training of women agricultural workers displaced by mechanization.[24]

Conclusions

Pakistan's agriculture sector requires large-scale investment, particularly for farm mechanization. The simple truth is that the Government does not have sufficient funds to provide grants to farmers to purchase machines. And widespread farmer ownership of machines is neither necessary nor practicable. Therefore, some equity investment from the private sector and mostly loan capital from banks can be channelized to address this challenge. But it depends who is making the equity investment and is taking out the loan: a farmer or a corporate player. Policy makers need to understand that both are needed. Finally, the displacement of farm labor must be addressed in any farm mechanization initiative. While it is true that the choice of policy depends on the government's goals, this case study illustrates that these goals may have to do with issues outside of the topic under consideration. So, the need for mechanization for higher farmer profitability was not the primary driver for the tractor scheme. The disastrous result of the 2024 wheat harvest for farmers was the crisis that created a driver for this scheme. And it is difficult to argue with the simplicity of a giveaway scheme: shortlist a panel of manufacturers, tell farmers to apply for a subsidy, conduct balloting, and invite the winners to giveaway events across the province. The wider goal of enhancing food security with greater farmer profitability leads more towards the Hi-Tech Mechanization Financing Scheme. But there, the wider goal of giving to farmers, rather than large companies providing services to farmers, brought in a ceiling of Rs. 30 million per borrower. However, the Government of Punjab has aligned with another powerful stakeholder, the Asian Development Bank, to support service providers.

Rating of Relative Stakeholder Power in Farm Mechanization

In this arena, the provincial governments, local tractor manufacturers, and large farmers wield a high level of power to influence policy outcomes. By comparison, smallholder and medium-sized farmers have a low-to-medium level of power since political leaders of provincial governments tend to aim for a wider voting constituency by capping the farm holding level (in acres) below which farmers become eligible for government support under farm mechanization programs. Interestingly, banks emerge as stakeholders with a high level of power to influence farm mechanization outcomes since traditional tractor purchases as well as purchases of modern farm machinery (new transplanters, harvesters, etc.) require bank borrowing. Original Equipment Manufacturers (OEMs) of imported farm machinery have shown themselves to hold a low-to-medium level of power since there are few of them and the sales of new machines in Pakistan are too few to justify large investment in local production. Farm labour is expected to be impacted the most from farm machinery but their power to influence policy is low.

	Stakeholder	Goals	Main levers	Ability to organize for impact	Level of impact if levers used to maximum
a.	**Provincial Government**	Give to farmers Improve mechanization Improve food security	Subsidies to purchase machines: capital subsidies, mark-up subsidies,	High	High
b.	**Large farmers**	Timely and efficient service Reduction in losses Service providers	Political influence Access to policymakers	High	High
c.	**Small service providers/ Farmers**	Financial support from Government Training of manpower	Voting power	Very large numbers with little coordination among them	Low to Medium
d.	**Local tractor producers**	Max sales of tractors with low taxes; policy stability	More programs for tractorization	High ability to coordinate (small number)	High
e.	**Corporate service providers**	Stop import of old machines Policy stability Machine as loan collateral Train manpower No sales tax on services	Increase or restrict investment	Only a handful at this stage	Medium
f.	**OEMs**	Max sales of new machines with low Import duties No import of old machines Policy stability	Increase or restrict import of new machines Invest in local manufacturing	Only a handful at this stage	Low-to-Medium
g.	**Banks**	Lend safely Ensure repayment of principal and mark-up	No participation in mechanization schemes Tough credit-worthiness filters	High ability to coordinate	High
h.	**Farm labor**	Slow down mechanization	Organize at farm level to oppose mechanization (Migrate to urban areas)	Low (mainly at local level)	Low

Chapter 3

The Political Economy of Over-Regulation: Seed Reform



The Political Economy of Over-Regulation: Seed Reform

Seed is the foundation of Pakistan's agriculture—the variable that determines more than any other what a crop can achieve. Machinery, fertilizers, irrigation, and agronomic practices all operate as a function of the quality of the seed in the ground at time of sowing. Most of the explanation for Pakistan's low yields starts with poor quality seed. Pakistan has the climate, the land, the farming population, and in many cases the varieties to produce dramatically better results. What it has not had is a regulatory system that allows those varieties to reach every farmer. What it has instead is a system that has been gradually shaped by the incentives, constraints, and institutional interests of the actors operating within it.

The sector's dysfunction is not accidental. It is the predictable outcome of a regulatory architecture that has created strong incentives to preserve existing arrangements, reinforced by a network of influential stakeholders, each of whom has exercised varying degrees of influence over how the system evolved. To illustrate how that network operates, this chapter focuses on two specific reforms: Truth in Labelling (TiL) and seed company tiering. Both were proposed, resisted, diluted, and ultimately—after nearly a decade—legislated through the 2024 Seed Amendment. The story of why they took so long, and what finally broke the deadlock, is a representation of the political economy of Pakistan's seed sector.

A System Built Around Control, Not Performance[2]

The Seed Act of 1976[25] was designed for a world in which the government grew seed, certified seed, multiplied seed, and distributed seed. The private sector was a secondary actor, permitted to participate but required to operate mostly as a distributor of seed within a framework built entirely around managing state institutions. Every structural feature of that framework reflected these founding steps: mandatory government evaluation of all new varieties before commercial sale; mandatory seed certification after field-level inspections; mandatory company registration renewed every three to five years [26] and a single regulatory body—the Federal Seed Certification and Registration Department (FSC&RD)—that tested, certified, and then policed the same seed companies it had just evaluated.

That world no longer exists. The private sector today is Pakistan's primary source of commercial seed, with more than 98% of seed supply coming from private sector companies—the vast majority of which are outside the regulatory system. But the regulatory framework never changed to reflect this. The 2015 Seed Act amendment formally recognized private sector participation. It did not change the control philosophy.[27] The same mandatory evaluation, the same certification requirements, the same time-bound registration cycles remained—applied now to a competitive private market the law was never designed to govern.

This mattered less for large companies with deep pockets that could absorb compliance costs and navigate the bureaucratic procedures, and even less for fly-by-night operators who had little regard for reputational loss. It mattered enormously for the farmer, because the system's default result was

2. Pakistan's seed system has been described in detail in The State of Pakistan's Agriculture 2023 report. This chapter focuses on its political economy

to reward procedural compliance over product performance. The system did not select for quality. For those who were interested in securing certification from the regulator, they were more likely to be selected for the ability to manage the regulator.

Two Reforms, One Decade: Truth-In-Labelling and Company Tiering

Truth-in-Labelling (TiL) is a widely used regulatory regime in which a seed company takes responsibility for delivering what it puts on the label of the product it sells. If the seed does not perform according to the label's specifications—germination rate, varietal characteristics, yield potential—the company bears the regulatory and reputational consequences. The government's role shifts from pre-approving every variety before it reaches the market to monitoring post-sale compliance and adjudicating disputes. Farmers become quality auditors: their experience with a product, amplified through farmer networks and social media, becomes the primary accountability mechanism. But the pre-requisites for success with TiL are that the seed company cares about its reputation and has invested enough in its own research and quality control to back that reputation up, that farmers are aware that they can report sellers of spurious seed, and the regulator has the capacity to act against those who violate TiL.

Critically, TiL was not entirely absent from Pakistan's seed sector before 2024. From the early 2010s, it had been applied to hybrid varieties and most traditional crop varieties[28]. What it did not cover were the crops the seed bureaucracy designated as 'strategic': wheat, cotton, and basmati rice. These carve-outs were not technical distinctions; they were political ones. Strategic crops were precisely the crops where the informal market was largest, where the regulatory gatekeeping function was most entrenched, and where the coalition with the most to lose from accountability-based regulation was most powerful.

A structural weakness in enforcement made the carve-out argument easier to sustain. FSC&RD's total field force amounted to less than 40 staff[29] for the entire country- wholly insufficient to physically verify compliance across hundreds of seed companies and thousands of products. In practice, this constraint was compounded by a regulatory distinction most farmers never knew existed: the difference between "registered" seed and "enlisted" seed. Registration implied completion of the full evaluation process; enlistment simply meant a variety had entered the system, without implying approval had been granted. Many seed companies, aware that large-scale verification was practically impossible, routinely marketed enlisted seed using the branding and claims associated with registered varieties. When Truth-in-Labeling was recommended for the 'strategic' crops, the seed bureaucracy pointed to this systematic gap between label and content as evidence that the framework could not be trusted. Their argument was not wrong—but it was self-reinforcing. The very weakness in enforcement, which the Department was responsible for fixing, became the excuse for refusing to extend an accountability system that might have addressed the misuse.

Seed company tiering is the reform complementary to Truth-in-Labelling. Rather than treating all registered seed companies as equivalent—as the registration system of 1976 did—tiering ranks companies based on measurable criteria: research capacity, technical staff qualifications, infrastructure investment, and technology adoption. Different tiers carry different regulatory obligations and different privileges. Higher tiers would enjoy privileges such as fast-tracked variety approval, while lower-tier trading companies would face stricter oversight.

In any case, the two reforms are designed to work together. TiL without tiering allows every company, regardless of capacity, to effectively self-certify. Tiering without TiL creates a classification system without a performance incentive attached to it. Together, they were intended to shift the entire regulatory logic of the sector from input-based control to output-based accountability—making companies stand behind the actual quality of their product.

The Case of Maize: A Proof of Concept

In maize, Pakistan has an example of a value chain that—through private sector involvement—operated under the logic that TiL and tiering were later designed to formalize.

Maize production in Pakistan surged more than six-fold between FY02 and FY22 — from 1.6 million tons to 10.6 million tons.[30] Area under cultivation increased 75% over that period, but the bulk of the production increase came from yields, which more than tripled. Even smallholder farmers have chosen to spend extra on hybrid maize seed to get higher yields. The primary driver of this transformation was a single regulatory decision: the government's approval of a framework for hybrid seed in 2001. Multinational companies entered the market with imported hybrid seed. Punjab, where the poultry feed milling industry is concentrated, became the dominant maize-producing province, responsible for over 90% of Pakistan's maize production with yields more than three times those achieved in KP province, where traditional varieties persisted.

The mechanism that made this work was not government oversight. It was market accountability. Hybrid maize seed must be repurchased by farmers every season—seed saved from the recent harvest performs with significantly lower yields. This means that a company whose hybrid seed underperforms loses the next year's sales. The feedback loop between product quality and commercial survival is direct, immediate, and cannot be gamed with paperwork. In this sense, the maize market already approximated both TiL and tiering in practice—not through formal regulation but through market discipline.

The TiL pre-requisite of seed companies that care about their reputation was also met in the case of hybrid maize seed. Pakistan's commercial hybrid maize seed market has effectively been dominated by two global companies—Bayer and Pioneer—both bringing genuine research capacity, significant investment in agronomic support, and products that consistently delivered measurable yield advantage. This was, in practice, a single operational tier of quality: not designed by a regulator, but produced by the market selecting for performance. Farmers, season after season, made their purchasing decisions based on that performance. The farmer figured out what a formal tiering system would have signaled. The market did the work the regulatory system was not designed to do. And critically, the lesson ran in both directions: responsible companies, operating under the practical equivalent of TiL, demonstrated what label accountability looked like when it was commercially enforced; giving reformers a domestic proof of concept that did not depend on international comparisons.

Experts working across both public and private sectors of the seed industry consistently point to the maize model as the template for what other crops—particularly cotton, rice, and wheat — could become. The constraint is not farmer conservatism or purchasing power. When farmers are given access to quality seed that delivers measurable yield advantage, they adopt it regardless of price. This has been demonstrated not only with hybrid maize seed but also with hybrid rice seed which now dominates the rice cultivation landscape in Sindh and some parts of Punjab as well. The constraint is access—and access is a function of the regulatory environment in which seed companies decide what to invest in, what to submit to the regulator, and what to sell.

Why it took a Decade: The Political Economy of Resistance

The principle of TiL is difficult to argue against publicly when your stated purpose is farmer welfare. Opponents therefore shifted the debate: they argued that, in practice, TiL would reward dishonest actors while penalizing compliant ones. This concern was not fabricated — abuse of TiL was widespread. The failure of enforcement, which should have prompted stronger oversight, was framed as a reason to resist extending accountability. For wheat, cotton, and basmati rice- the crops where the informal market was largest and the gatekeeping function most entrenched, the carve-out held.

FSC&RD's institutional interests reinforced this position. The department's authority derived from its role as the pre-market gatekeeper. Defending this carve-out was, from the department's perspective, defending its own institutional position. It is unfortunate that the 'strategic' crops are the very examples of failure. Wheat yields have not risen fast enough to feed Pakistan which has led to wheat imports. Cotton yields have become so uncertain that farmers have begun to shift away from cotton and the textile industry is importing more and more cotton. And Basmati rice yields have not kept up with yields in competing countries which endangers Pakistan's rice exports.

On tiering, the dynamics were different and, in some ways, more revealing. From a political economy point of view, tiering made sense in a seed landscape where hundreds of seed companies were registered but only a couple of dozen met the criteria that a serious seed company must meet. A great proportion of these companies were basically farmers saving seed from the recent harvest and packaging it for sale. The original reform proposal envisioned a single elevated tier: a category of sophisticated, research-capable companies meeting stringent criteria, entitled to operate with reduced regulatory burden and longer registration cycles. This was heavily opposed by the vast majority of seed companies and farmers who felt they were losing a revenue line. Local seed companies argued that the criteria were designed to favor multinationals and would effectively exclude the domestic industry. However, what the local companies objected to was not the principle of differentiation, but the risk of being differentiated downward and bearing costs they had not planned for.

The two-tier design that eventually passed was a direct response to this political reality. It was a compromise- one that acknowledged a framework usable only by the largest and most capitalized companies would not survive the sector's practical dynamics—but also a meaningful concession, because it built into the reform a lower tier that local companies could realistically occupy and aspire to move beyond. The 2015 Amendment had absorbed much of the preceding reform energy without resolving the core question of accountability.[31] What changed in 2023 and 2024 was the entry of the Special Investment Facilitation Council (SIFC) into the reform debate.

The SIFC brought executive authority of a different order to the question of agricultural productivity, framing seed sector performance not as a regulatory matter but as a national economic concern. This reframing shifted the arena entirely. The arguments that had reliably stalled reform in parliamentary committee rooms and inter-ministerial working groups carried less weight when the question was being asked at a level where the political relationships that sustained the blocking coalition did not reach. The 2024 amendment to the Seed Act passed in that window.

The Innovations that Never Happened

The decade of resistance not only preserved the conditions under which bad seed could be sold. It also preserved the conditions under which good seed could not be developed. The most damaging consequence of this system is one that is almost entirely invisible: the innovations that never happened. Pakistan's government variety trial protocol requires a minimum 3% yield advantage over the 'check variety' (the 'control' for the experiment) for approval.[32] Multinational seed companies have reported submitting hybrid varieties showing yield gains of 20% on their own farms—improvements that could deliver tens of thousands of rupees in extra income per acre for farmers—only to see them fail in official trials conducted under FSC&RD processes. Companies challenged the results and were eventually vindicated, but only after years of delay and at the cost of relationships with regulators that, by their own account, were permanently damaged. Some private sector players describe the outcome plainly: government forgives, but it does not forget.

The government's protocol of trials compounds this through design flaws. An example serves to illustrate this. Modern hybrid varieties have precise agronomic requirements: specific planting windows, specific fertilization programs, specific irrigation schedules. Government trial plots are managed according to generalized protocols—a single planting date applied to all submitted varieties regardless of their individual requirements. A variety that must be planted on June 1st and evaluated under one fertilization regime will underperform systematically when planted on June 15th under a different one. This way, the trial is not testing the variety's yield potential. It is testing the variety's robustness to conditions it was not designed for—and using that test to determine whether it reaches Pakistan's farmers.

The public research institutions add a further layer. The Pakistan Agricultural Research Council (PARC), the National Institute for Biotechnology and Genetic Engineering (NIBGE), and their provincial counterparts such as the Central Cotton Research Institute (CCRI) and the Ayub Agricultural Research Institute (AARI) in Punjab have operated on budget allocations that cover salaries but not research materials, trial costs, or equipment. Scientists have served until retirement with seniority, not performance, as the criterion for promotion and without a mechanism through which a discovery translates into personal reward. Under such institutional structures, varieties with genuine agronomic value have often been less likely to reach commercial scale because the institutions have no commercialization capacity and no sustainable private sector partnership model. Multinational companies that have the capacity to commercialize those varieties cannot sustain partnerships with government institutions because a change of minister can terminate multi-year research commitments overnight. The varieties may exist in research station files. Meanwhile, farmers who need them plant whatever is available in the informal market.

The result is a sector in which the visible shortcoming—bad seed reaching farmers—obscures the invisible one: the superior seed that was never developed, never submitted to the regulator, never approved, and never planted. Both are products of the same system. The difference is that one shows up in germination rates. The other never shows up at all.

Conclusion: Legislation is not Implementation

The Seed (Amendment) Act 2024 is the most significant reform of the sector in decades. It has replaced a three-to-five-year registration cycle—the seed bureaucracy's primary rent-extraction mechanism—with a twenty-year validity that removes the structured occasion for regulatory leverage. It has legislated a two-tier company categorization framework that the organized industry successfully opposed in the

administrative arena for years. It has extended Truth-in-Labelling to the 'strategic' field crops, shifting the accountability for seed quality from a government that approved a variety to a company that sold it. And it has established the National Seed Development and Regulatory Authority (NSDRA) as the apex regulatory authority, absorbing FSC&RD, making room for the regulator to function as an unbiased partner of the system.

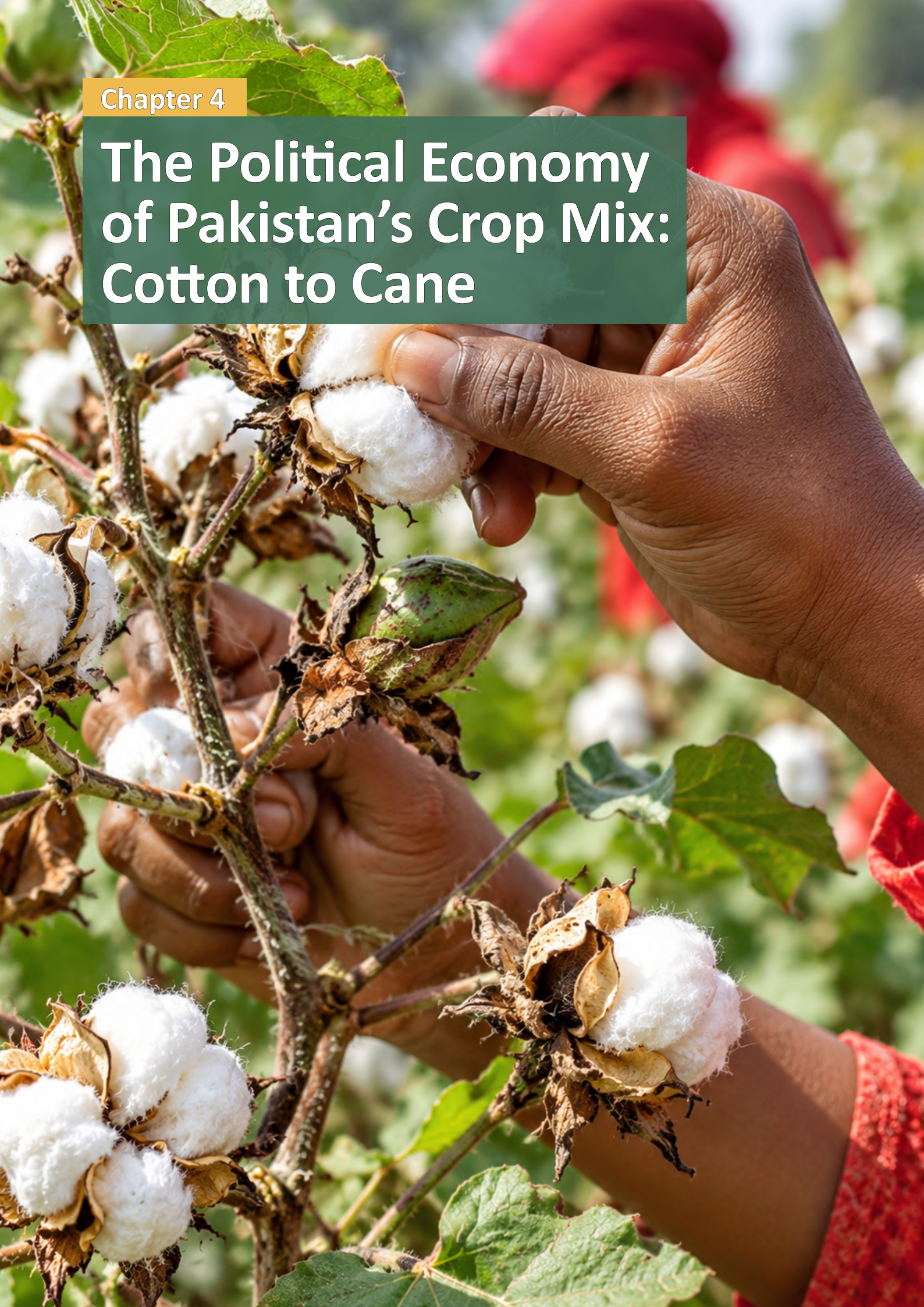
The NSDRA, headed by a seed scientist with decades of experience and credibility, subsequently tabled the tiering criteria with stakeholders and notified them in 2025. Alongside this, a Seed Academy is being established—an institution that will certify the responsible seed professionals for seed companies to be able to operate in compliance of tier eligibility criteria.[33] This is the reform's most direct institutional response to the enforcement gap that sustained a decade of resistance. Whether this resolves the enlisted-versus-registered loophole in practice, rather than merely on paper, depends on the rigor with which the Academy's certification standards are set and maintained. Closing that loophole also depends on oversight infrastructure that predates the 2024 Amendment and remains unresolved: the National Seed Council, intended to monitor implementation and flag enforcement gaps, has been largely dormant, and the registration rolls still include a number of "ghost" companies — registered entities with no real market presence—that blur the line between genuine industry participants and paper compliance.

The maize sector's experience offers a final lesson here, and it is a sobering one for those who expect rapid transformation. The market discipline that produced the maize success story was not built overnight. Companies like Bayer and Pioneer did not create farmer trust in a single season—they built it across years of consistent performance, and farmers built their knowledge of what quality seed looked like through accumulated experience. The local seed companies that are now being asked to adapt to TiL and tiering do not have that institutional history. They will need time to build it along with genuine support through the capacity-building mechanisms the reform envisions. The reform has created the conditions for that transition. It has not guaranteed it.

Rating of Relative Stakeholder Power in Seed Regulation

The involvement of the SIFC unblocked the seed reform process which had been stuck for over a decade. So its impact is rate very high. But the question remains whether SIFC can help sustain the implementation of reforms. The federal government's seed regulator is rated high in its previous and current forms. Multinational seed firms are rated to have a higher ability to impact outcomes than Pakistan's domestic seed companies given their ability to bring the best in seed developments available in globally. Unfortunately, farmers as a group emerge with a relatively lower power to influence outcomes on seed.

Player	Goal	Main Levers	Ability to Organize	Level of impact if levers used to maximum
FSC&RD (pre-2024)	Preserve institutional authority	Variety approval timelines; registration/renewal cycles	High	High
NSDRA (post-2024)	Seed that raises yields; regulatory credibility	Tiering enforcement; TiL implementation; company registration	High	High
Multinational Seed Companies	Level playing field rewarding R&D; IP & brand protection	R&D investment; truthful labelling; technical advocacy; maize proof of concept	Medium	Medium to High
Domestic seed companies; Informal / Fly-by-Night Operators	Maximize sales; Exploit enforcement gaps	Informal farmer networks	Medium Low to Medium	Medium
Public Research Institutions (CCRI, AARI, NIBGE, etc.)	R&D and varietal innovation; show relevance	Breeding programs; trial protocols; research partnerships	Medium to High	Medium to High
SIFC	Agri productivity as national priority	Executive authority above normal channels; reframing seed as national concern	High	Very high
Farmers	Affordable, high-quality, high-yielding seed	Purchasing decisions; feedback through networks and social media	Low	Low to Medium



Chapter 4

The Political Economy of Pakistan's Crop Mix: Cotton to Cane

The Political Economy of Pakistan's Crop Mix: Cotton to Cane

Pakistan's summer crop mix in Punjab is not the product of planning for crop zones, nutritional strategy, or free farmer choice. It is the outcome of which crops have organized, institutionally: connected supply chains providing farmers with guaranteed off-take, price certainty, and input support. Crops with powerful institutional patrons expand. Crops without them contract. The case of cotton's displacement over the last few years by sugarcane and even maize and rice in southern Punjab is not an anomaly: it is the system working exactly as its incentive structure dictates and its political economy requires.

Shrinking Cotton in South Punjab

In the space of roughly two decades, Rahim Yar Khan—once Pakistan's single most productive cotton district—has been transformed. Sugarcane now occupies prime land that once grew cotton. Cotton, meanwhile, held its area but shed a quarter of its production—a signal of yield degradation as well as area loss.

District Rahimyar Khan	Production (000) tons[34]		% change in production
	2019-20	2024-25	
Cotton	825	460	-44.2%
Sugarcane	11,724	17,914	52.8%

These are the numbers of a crop mix in active, accelerating transition.[35] These are not marginal shifts. Understanding why requires moving beyond agronomy, into the political economy of who controls the supply chains that farmers depend on.

A Crop Mix Determined by the Patrons

As seen in the changing trends of the crop mix in South Punjab, a crop's footprint is determined less by its seed suitability, its nutritional importance, or even its headline profitability—and more by whether it has an organized institutional patron that solves the three core problems every farmer faces: price uncertainty at harvest, marketing access, and input supply for the next crop. Crops that have patrons expand. Crops that do not, contract.

Farmer behavior is not the primary explanation for Pakistan's crop mix problem—the wider context explanation. A farmer in District Rahim Yar Khan who switches from cotton to sugarcane is not being short-sighted, ill-informed, or resistant to advice. He is making an entirely rational calculation: sugarcane has a buyer, a price, and an input chain; cotton has none of these reliably. Blaming farmer conservatism misdiagnoses the problem and leads to the wrong interventions—more extension, more training—when the actual constraint is institutional.[36]

This pattern is not unique to sugarcane. It repeats across the year-round crop palette:[37]

- Wheat is Pakistan's most grown crop because the government has historically been its guaranteed buyer—procurement centers, support price, imports to stabilize supply. This is the state as patron.

- Rice expands into non-traditional areas when export prices spike - as they did dramatically following India's 2023 export ban - because exporters become temporary patrons. The expansion is real but fragile; when India re-entered markets in late 2024, the signal weakened.

- Maize has expanded six-fold since 2001 because the poultry feed industry created a reliable off-taker, and multinational seed companies built an accessible input supply chain. This is the private sector as partial patron—functional, but without a price floor.

- Horticulture, oilseeds, and pulses remain marginal at scale because they rarely have a patron at all—no guaranteed buyer, no price floor, no organized input chain. Farmers do not grow them in quantity not because they are unaware of their value, but because the institutional infrastructure that would make growing them rational does not exist.

The Switch to Sugarcane: Baqir's Story

Consider Baqir, a small farmer in District Rahim Yar Khan with around two acres of leased land who, until recently, followed the traditional cotton-wheat rotation across the year. His shift to sugarcane was not based on ideology. It was based on arithmetic — and it was made possible by an institutional support system that the cotton value chain has never offered.

The Cotton-Wheat Economics

On the wheat side, per-acre production costs run to Rs. 80,000–100,000 — covering land rent, seed, land preparation, fuel, irrigation, fertilizer rounds, and sprays, etc. At a yield of around 50 maunds per acre and a harvest price of Rs. 3,200–3,300 per maund in 2026, gross returns reach Rs. 160,000–165,000 per acre. Net returns to the small farmer, after all costs, land in the range of Rs. 65,000–80,000 per acre in a good year — and considerably less when, as in 2025, the harvest price collapsed to around Rs. 2,300 per maund.

Cotton, the companion summer crop, was costing Baqir more than it returned. Per-acre production costs run to Rs. 150,000 or higher at the small-farmer scale — driven by the labor intensity of planting and picking, the cost of seed in a market flooded with adulterated varieties, and an aggressive input schedule demanded by pest pressure. With yields averaging around 20 maunds per acre, Baqir was sustaining a per-acre net loss of Rs. 10,000–30,000 in most seasons. The combined cotton-wheat system was barely breaking even in good years, and actively loss-making in bad ones.

The Sugarcane Calculation

The sugarcane arithmetic is different in kind, not just degree. Per-acre production cost is around Rs. 300,000 — higher in absolute terms than cotton and wheat combined — but at an average yield of 1,200 maunds per acre and a mill purchase price of Rs. 400–450 per maund, gross returns run from Rs. 480,000 to Rs. 540,000 per acre. Net returns of Rs. 180,000–240,000 per acre represent not a marginal improvement on the cotton-wheat system but a transformation of what farming in South Punjab can return.

The Mill Relationship: What Makes it Irreversible

The price differential alone does not fully explain the switch. What made it durable for farmers like Baqir was the institutional support that arrived with the mill contract—support that has no parallel in the cotton value chain. In Rahim Yar Khan, sugar mills are not passive buyers. They are active supply chain managers competing for cane. Mills supply two bags of DAP fertilizer per acre. They supply pesticides. Since 2023-24, several mills have begun supplying solar panels—delivered at the mill gate on cane receipt, effectively as an advance on the next cycle's contract. Each input received is a reason to come back.

The social signaling reinforces the economic logic. Rahim Yar Khan had three sugar mills in 2004.[38] It had four by 2008, five by 2016, and six by 2024, with four more planned along the Punjab-Sindh border.[39] When Baqir's neighbors who switched from cotton-wheat to sugarcane began upgrading motorcycles and installing solar panels on their homes—tangible, visible evidence of improved cash flows—the remaining calculation for cotton farmers became harder to sustain.

The Ginner in the Middle

The contrast between the sugar mill's farmer relationship and the textile mill's engagement with the farmer is not incidental—it is structural, and it goes to the heart of why the cotton-to-sugarcane shift is so difficult to reverse through policy alone.

A textile mill does not know Baqir exists. It buys lint cotton from a ginner, who buys seed cotton (phutti) from a local trader or directly from a farmer at a spot price set by downstream mill demand - a price that fluctuates daily and is determined long after the farmer has committed his land to the crop. The textile mill's relationship with the farm runs through at minimum one, often two, intermediaries. It has no contract with the farmer before sowing, no input supply role, no agronomic engagement, and no ability to offer a price guarantee. It is structurally incapable of replicating what the sugar mill does, not because it chooses not to, but because the cotton value chain is not designed to connect the spinner to the grower.

The ginner—the critical intermediary—cannot fill this gap. Over 800 ginning units have shuttered operations, with the sector estimated to operate at less than 50% of total production capacity in 2025-26.[40] A sector whose own units are closing does not have the balance sheet to offer farmers advance inputs, price assurance, or agronomic support. Ginners also have no commercial incentive to invest in farm-level quality: their margin lies in the conversion of seed cotton to lint and cottonseed oil, not in what happened on the farm.[41] A sugar mill's profitability is directly tied to the quality and volume of the cane it crushes—poor practices at the farm is a direct cost to the mill, which is why mills invest in field monitoring, input supply, and farmer relationships. A ginner has no equivalent alignment of interest with the farmer's yield.

The cotton value chain asks the farmer to bear all the institutional risk. The sugarcane value chain has even transferred a good portion of that risk to the mill. Until the cotton chain offers something comparable—not just an extension campaign or a new variety, but a structured institutional relationship between a buyer and a farmer that runs from before sowing to after harvest—the arithmetic will continue to favor cane. So long as a sugar mills operate in an area, even the government cannot effectively enforce crop zoning.

The Power to Ignore Bans: Sugarcane and Its Patrons

Punjab's 2006 notification[42] explicitly banning new sugar mills or capacity expansions in the cotton belt has been consistently violated, with politically connected families securing approvals through a combination of legal challenge, administrative pressure, and cross-party protection.

Mill ownership in Pakistan spans the political spectrum. Politically linked families have all established or expanded mills in the region, making enforcement politically costly for any government regardless of its coalition composition. The Pakistan Sugar Mills Association publicly defends the expansion as rational farmer choice in a free market. It has simultaneously lobbied against the re-imposition of crop-zoning rules that would limit how far mills can source their cane supply. The result is a system that is self-reinforcing: political connections protect the mills; mills create farmer dependency on sugarcane through contracts, credit and input supply; farmer dependency creates a constituency that associates sugarcane with prosperity—a constituency that, in turn, makes the political case for further sugarcane-friendly policy.

When Off-take Creates Diversification: PepsiCo Lays' Proof-of-Concept

The political economy of the patron system is most clearly illuminated not by its failures but by the cases where the off-taker logic has worked — where a private sector actor created the institutional infrastructure that the state has not built for key crops, and farmers responded immediately.

PepsiCo Lays and Potatoes[43]

When PepsiCo launched snacks operations in Pakistan in 2006, the correct crisp potato variety—Lady Rosetta—did not exist in the country. The company introduced the variety, built a local seed multiplication program over five years to achieve commercial scale, and deployed a network of agronomists and university interns to work directly with contracted farmers through each season. By the time the model was fully operational, PepsiCo was fulfilling 100% of its potato requirement locally across approximately 35,000 acres, with two-thirds of its contracted farmers having remained with the company since the beginning of operations.

The off-taker architecture is comprehensive: seeds are issued under contract, field teams monitor crop health through mobile labs and geo-mapped plots, and payment is processed within two weeks of a harvested batch clearing live quality testing at the farm gate. The farmer is bound to the supply chain from seed to delivery—and the supply chain is bound to the farmer by the consistency and speed of payment. The result is a farmer loyalty rate, sustained over nearly two decades, that the cotton value chain has never approached.

Conclusions

The farmer in District Rahim Yar Khan who stopped growing cotton and planted sugarcane is not the problem. He is the evidence. He is showing, with his planting decisions, exactly where the institutional failures are; and, by extension, exactly what would need to change for those decisions to shift.

Pakistan's crop mix problem is institutional, not technical or educational. The crops that have expanded—sugarcane, and to a lesser extent maize and rice—have done so because they have supply chains, institutional linkages and political patronage that solve the three core problems of Pakistan's farmers: price certainty, marketing access, and input supply. The crops that have contracted or stagnated, like cotton, have done so because they lack those supply chains, and because the political economy of the agriculture sector has not produced actors willing or able to build them.

Rating of Relative Stakeholder Power Influencing Crop Mix

Farmers emerge as having higher power to impact outcomes in this case (compared to the others) simply because they can choose to shift the crop mix through their sowing decisions to shift from cotton to sugarcane. But government and the sugar mills emerge as the stakeholders with higher power to impact outcomes. Interestingly, the textile industry has now shown itself to have a high ability to influence outcomes.

Player	Goal	Main Levers	Ability to Organize	Level of impact if levers used to maximum
Government (provincial + federal)	Support export (includes cotton finished goods: textiles and forex inflows	Regulatory framework: zoning laws; price-setting or dictating	Medium	High
Mills (Textile mills) APTMA + Ginners	Secure cotton for ginning and textile production and export	Textile conglomerates could be mobilized, exercise political power	Medium – High	Medium
Mills (Sugar mills) PSMA	Maximize profits, expand footprint	Political ties, off-take competency, profits	High	High
Farmers	Maximize profits, attain certain offtake and reduce CoP	Choice of planting crop	Low	Medium - High

Chapter 5

The Political Economy of Price Control: Wheat Pricing in Punjab



The Political Economy of Price Control: Wheat Pricing in Punjab

Wheat is Pakistan's food staple. It is also the largest crop by far as it is cultivated on about 80 percent of Pakistan's farms each winter to produce nearly 30 million tons (the next biggest crop's output is in the range of 10 million tons). Since the 1960s, the Government's policy goal has been to give farmers a reasonable profit on their crop while keeping the price of roti (bread) to the end-consumer at an affordable level.[44] This has been achieved through the announcement of a 'support price' at which wheat purchases have been made by the federal government (through PASSCO) and the provincial governments (through their respective food departments). This wheat was sold to flour millers by quota starting four months after harvest at a little more than the support price (to cover storage and transport costs). All these purchases were made possible through large-scale bank borrowing against sovereign guarantees. But each Government only paid the mark-up—the principal was repaid through the on-selling of wheat to flour millers in the name of cheaper flour for poor, urban consumers.

As the largest buyer of the wheat that comes into the wholesale markets (mandi's), the Government always set the price benchmark for everyone. It also controlled the import and export of wheat. This was a highly regulated system which was criticized for having been captured by middlemen and food department officials with 'ghost flour millers' benefitting from the wheat quota and most farmers locked out of direct purchases from Government at the support price. Calls for the deregulation of this over-regulated system have been made for about three decades.

In 2023, the window of opportunity for wheat sector deregulation was created by decisions that were not linked to wheat itself. The historic floods of July-September 2022 affected the province of Sindh the worst. In February 2023, the Government of Sindh announced that it will purchase wheat at a price of Rs. 4,000 per maund.[45] The Government of Punjab first balked at a corresponding price increase and only on the edge of the harvest, it announced an increase of its price of purchase to Rs. 3,900 per maund (up from the previously announced Rs. 3,000 per maund).[46] That summer, the benchmark interest rate in the country was at a historic high of 22% per annum in response to the post-COVID19 global bout of historic inflation levels. That year, the Government of Punjab's wheat purchase was made possible with its bank borrowing of Rs. 437 billion and its whopping Rs. 87 billion in mark-up.[47]

The high price of wheat and the stratospheric interest cost broke the proverbial camel's back. And an opportunity for deregulation emerged. With this context, the new government assuming office in Punjab after the February 2024 elections decided that it will neither purchase wheat at the 2024 harvest nor announce a support price for it.[48] It will deregulate the wheat sector completely. Sadly, the historically high wheat price of the previous year had encouraged farmers to produce more wheat more wheat than ever before. It produced a disaster for farmers who had to sell their wheat at prices that did not even cover the cost of production.

Wheat Sector Deregulation in Punjab

A case study of the political economy of wheat sector reform unfolded in the 2025 wheat season in Punjab with the jettisoning of the old system and the attempt to introduce a new system. And that episode illustrates the role and relative power of each stakeholder.

The most powerful player in the wheat supply chain is the provincial government. Its main goal in this period was that the wheat price must remain within a range that gives the farmer a reasonable profit but keeps price of roti within the reach of the average consumer primarily in the urban areas. It wields more levers than any other stakeholder to influence outcomes in the traditional wheat landscape: (i) purchasing wheat through the Food Department a significant portion of the wheat crop at the 'indicative price' to support the price at harvest; (ii) selling wheat through the Food Department at the 'indicative price' during the year to keep the wheat price from rising beyond the target range, (iii) conducting administrative raids on wheat stocks held by private parties impound wheat from the private sector (citing the provincial legislation on essential commodities) and force its sale at an 'indicative price', and (iv) applying restrictions to the movement of wheat beyond any district's boundaries and/or the province's boundaries. It is rare for a provincial government to import or export wheat on its own without federal government involvement. With this, the Government has a strong ability to organize itself for maximum impact on wheat sector outcomes. Hence, the Government can have high impacts if it decides to use its levers to the maximum.

From late 2024, the Government of Punjab started preparing a dispensation for a deregulated wheat sector. A market-oriented wheat supply chain requires its own soft and hard infrastructure which is very different from an over-regulated, government-driven sector. As done in most developed agri-economies, the Government of Punjab's Food Department built on the Electronic Warehouse Receipts regime which incentivizes financial inclusion for farmers and trading of standardized wheat (the soft infrastructure) but also large-scale investment in modern agri-warehousing (the hard infrastructure). The soft infrastructure was practically all in place in the form of the EWR scheme notified by the Government of Punjab. But the hard infrastructure was aimed at 1 million tons of accredited storage by new entrants to this space: major corporate players as well as mid-tier millers and warehousing players. The outlook was that the full warehousing infrastructure for wheat in Punjab would take three to five years of active work to build. The Food Department started planning for the outsourcing of its own warehousing in coordination with the EWR players. But this entire preparation could not be completed in time. The outsourcing was postponed. While, a detailed EWR scheme was notified and launched through the EWR portal of the Government of Punjab on May 26, 2025, wheat had already shifted out of farmers' hands by this time.

Are the government entities coordinated?

Here the role of the federal government merits mention. The Securities & Exchange Commission of Pakistan federal government's Ministry of Finance had spearheaded the development of the Electronic Warehouse Receipts regime over the previous six years. And there was dialogue between the SECP leadership and the Government of Punjab. But this engagement was largely disconnected from the federal government's Ministry of National Food Security & Research (MNFSR) which had the mandate to deal with wheat. MNFSR's was focused more the policy goal of a wheat price that delivers a reasonable profit to the farmer. The levers at MNFSR's disposal to influence policy outcomes in the wheat sector are: (i) convene the provincial governments to develop a common approach to wheat pricing and procurement; (ii) purchase wheat through PASSCO at the 'indicative price' to support the wheat price at harvest; (iii) sell wheat through PASSCO at the 'indicative price' during the year to keep the wheat price from rising beyond the target range, and most importantly, (iv) import/export wheat to stabilize supply and price. Traditionally, MNFSR's ability to organize and influence outcomes in the wheat sector, particularly through PASSCO,

was immense. But the episode under review was not a case of traditional wheat sector management. This was a matter of transition to a new regime. And the decisions related to the transition were more successful in killing the institutions of the old regime (PASSCO was being disbanded) than creating institutions for the new regime. So, with the lack of coordination between the SECP and MNFSR meant that the federal government's ability to organize and impact outcomes can be rated as medium.

In the run-up to the harvest, though, the Government of Punjab insisted that the wheat sector will remain deregulated.[50] But, with this, it also indicated that the price of roti must not rise above Rs. 16[51] which back-calculates to a wheat price of Rs. 3,000 per maund. So, flour millers, the primary buyers of wheat other than the erstwhile role of the Government, held their wheat buying at Rs. 2,300-2,400 per maund. The main goal of flour millers is typically to ensure that the wheat price is Rs. 600-700 below the level that gives the government its target roti price.[52] Their main levers for achieving this is their decision and timing of wheat purchasing. Their ability to organize for impact is high and their level of impact if they decide to use their levers to the maximum is also high.

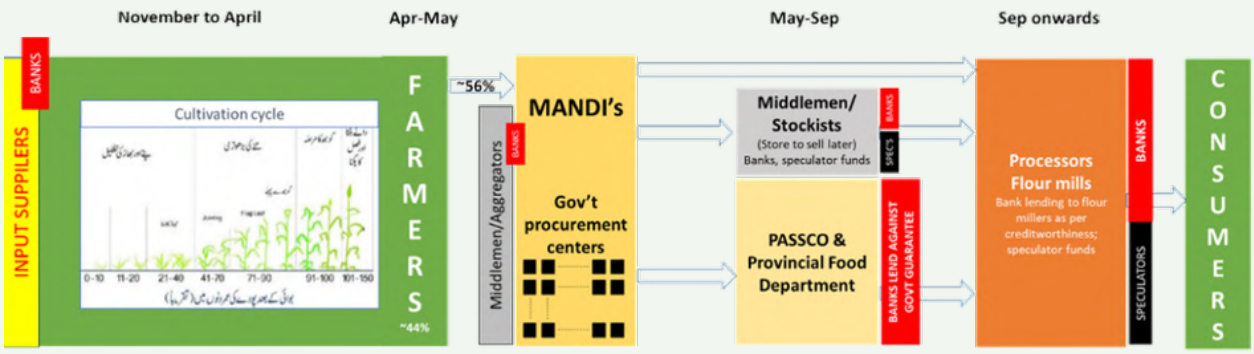
The Rs. 2,300-2,400 per maund price range was hardly acceptable for farmers. The main goal of farmers in this game is that the wheat price at harvest time must give farmers a good profit. Their main levers for achieving this goal are to: (i) hold on to their wheat after harvest for as long as possible (usually 1-2 months but a maximum of 3 months), and (ii) protest. But their ability to organize for impact can only be rated as medium to low since there are around 11 million farms in Pakistan about half of them in Punjab province.[53] With few organized farmer associations, the level of impact if farmers use these levers to the maximum is unfortunately low. Therefore, for the 2025 harvest, wheat farmers could not force the Government's hand to resume purchasing of wheat.

It was not for lack of engagement by Punjab Food Department (which had been renamed the Price Control and Commodities Management Department). The Department presented the EWR regime to small-scale wheat traders in various cities of Punjab and found a good response. The reason was that if these traders were able to get storage of their own, they would not be pushed around by large traders and flour millers on price. They are simply small links in the supply chain beholden to the large traders (aarhti's) and flour millers. Farmers consulted by the Department also had a similar response. But they were more concerned about whether the wheat price will touch a reasonable level for them.

When one politically active farmer group threatened to close a key entry point into the City of Lahore if a price was not announced by April 15, 2025, the Government's top tier swung into action. The EWR scheme which had been under preparation for months was announced.[54] The scheme offered farmers free storage of their wheat in warehouses accredited under the EWR regime and collateralize the wheat to take out interest-free loans from participating banks for up to sixty percent of the wheat's value. Both the storage charges and the mark-up on the farmer's loan would be picked up by the Government of Punjab. But an electronic portal for farmers to access the EWR scheme still took till May 26, 2026 to develop and launch. By this time, wheat had left most farmers' hands.

To farmers, Punjab's 22 million tons of wheat harvest valued at Rs. 4,000 per maund was worth about Rs. 2.2 trillion. At the prevailing price of Rs. 2,300 per maund, the crop would still be worth about half that value. But the Government as a single entity which bought Rs. 437 billion worth of wheat in 2023 had left the field. This gap could not be filled by the other players in the market: flour millers (only so many of whom had sufficient bank borrowing lines) and speculators. The shortage of buyers with sufficient liquidity did the farmers in. This illustrates the power of banks in determining outcomes in the wheat supply chain (or any agri-commodity supply chain).

Figure 2. The traditional wheat supply chain and its stakeholders



In the trade, it is often said that finance is the golden thread that links the agricultural supply chain. And the banks are typically the main formal sector players supporting the supply chain (see role of banks in figure 2). The thought process of banks regarding lending to private parties is most often not understood by government policy makers. At a basic level, the goal of banks is to secure the return of their capital. In the traditional system, this was made possible through the sovereign guarantee associated backstopping the borrowing by the Government for its wheat purchases. In the deregulated sector, the banks sought to achieve this through a guaranteed off-taker (ideally the Government) for the wheat purchased with their loans or a liquid market (e.g., a functioning wheat trade on the Pakistan Mercantile Exchange) to liquidate the wheat associated with their loans in case of default. The main lever of banks to achieve their goal is their approval or refusal to lend. And since they have a strong ability to organize and act in unison, the level of impact if their lever is used to the maximum is quite high.

Right before the harvest started, flour millers sought support from the Government of Punjab for their incremental borrowing from banks to increase purchasing. But this proposal did not materialize. So the price of wheat hovered around Rs. 2,400 per maund till the middle of August. But another 'stakeholder' of the agriculture sector had been active in the field: the monsoon.

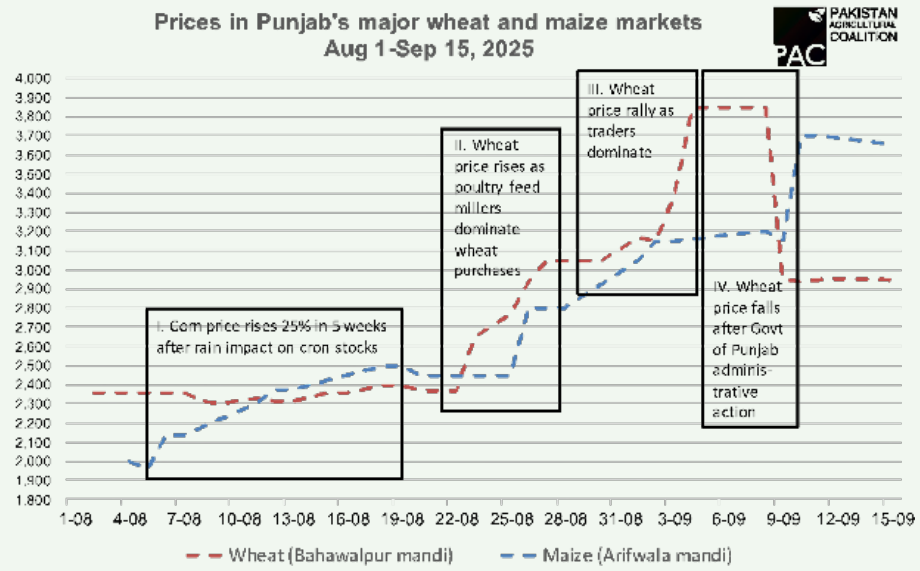
The monsoon joins the debate

Punjab had sustained multiple bouts of rain since June 15 which had significantly affected the corn harvest sitting in mandi's without modern warehousing. The price of quality corn had begun to rise (see figure 3). By the third week of August, the poultry feed millers, who had been permitted by the Government of Punjab to purchase wheat to mix into their feed mix, started buying wheat. This drove up the price of wheat to Rs. 3,000 per maund within a few days. The Government of Punjab did not react, most likely because it considered this a good sign to wheat farmers for the next crop. And seeing the Government's muted response to this rise in price, traders and speculators entered the fray.

For large traders and speculators, the goal is generally simple: maximize profits from the increase in wheat price subsequent to the wheat harvest. And their main levers to achieve this goal are to buy at harvest (often with the support of bank borrowing but also with speculative funds secured informally), store at warehouses, and sell later at a profit. While their ability to organize themselves for direct impact on wheat sector outcomes is low, their common goal is enough to give them a medium level of impact on wheat sector outcomes if their levers are used to a maximum. In certain short durations at critical times in the wheat cycle, this impact can also be rated high.

Large traders and speculators seemed to reach the same conclusion in late August: with the Government of Punjab's meager stock of less than a million tons of wheat in its own warehouses, the Government would not be able to enforce its target price of about Rs. 3,000 per maund in the market. Enforcing 'discipline' in the market price for as large a wheat market as Punjab requires much more 'gunpowder'. So traders and speculators started entering the wheat market in droves.

Figure 3. Price dynamics between wheat and maize



Their purchasing of wheat drove prices up further and alarmed genuine users of wheat. So genuine buyers—mainly flour millers—also started purchasing the wheat to ensure they have sufficient supplies for the year before the price rises even further. When the wheat price reached Rs. 4,500 per maund at the beginning of September, the Government of Punjab swung into action. The light-handed regulation of the wheat supply chain promulgated before harvest by the Government of Punjab had specified that all private parties storing wheat should register with the Government and declare their volumes to the Government. In early September, a few raids on wheat stocks held by private parties demonstrated that most parties had wheat stocks in excess of what they had declared to the Government—a clear case of hoarding.

Since wheat is intended first for humans and only then for animals, administrative action started engineering wheat sales from feed millers to flour millers at the Government's target price of Rs. 3,000 per maund.[55] This was a collapse of the deregulated market mechanism. The wheat price swiftly came down to the Government's target range by mid-September.

Where are the donors?

The donor agencies (e.g., the World Bank Group, the Asian Development Bank, etc.) were conspicuous by their absence from Punjab's wheat sector during this critical period of transition. The World Bank was engaged with the Government of Punjab on agriculture through the Strengthening Markets for Agricultural and Rural Transformation (SMART) program[56] launched in 2018 which was heavily focused on a transition of the wheat sector from a government-driven sector to one led by private players (farmers, flour millers, warehouse operators, banks, traders, etc.). Further, it was the International Finance Corporation (the private sector arm of the World Bank Group) which had provided years of technical assistance to federal

government entities (the SECP and the State Bank of Pakistan) to develop the foundations of the Electronic Warehouse Receipts eco-system in Pakistan. However, despite offers to support the Government of Punjab in managing the transition to a deregulated sector, the World Bank Group and other multilateral institutions were not engaged formally by the Government of Punjab.

In December 2025, the World Bank released a wheat sector modernization roadmap[57] recommending five priority areas: (i) closing the productivity gap, (ii) increasing investment in agricultural research and development, (iii) empowering smallholder farmers, (iv) improving institutional coordination and transparency, and (v) managing strategic grain reserves efficiently by moving away from large, costly storage facilities. The report also details the benefits of a market-led modern wheat sector over the traditional government-led sector. This indicates that the policy goals of the World Bank were largely aligned with those of the Government of Punjab. But the levers available to institutions like the World Bank Group are typically their decision to lend significant sums of foreign currency loans with associated policy advice and technical assistance. And given that such multilateral institutions are simultaneously engaged with the Government of Punjab in many economic and social sectors with large lending operations, their ability to organize for impact is strong. But the Government of Punjab has not faced insufficiency of funds over the past many years. So the question multilateral institutions have often been asked by the Government of Punjab is: why should we borrow from you—particularly in a sector like wheat where the Government is not fully convinced about relinquishing its strong footprint. Therefore, the ability of multilateral institutions to influence the provincial government's policy actions in agriculture can be rated as medium.

Conclusions

Once again we see that the driver of the government's decision on deregulation of wheat was not the goal of improving the wheat supply chain. The primary driver behind this decision was the combination of the IMF deadline for a departure from the government's system of wheat purchases (which had more than a year to go) brought forward by the historic high in wheat prices and the historic high in interest rates. This sent the Government of Punjab's cost of wheat purchases to an astronomical Rs. 87 billion.

In the push-and-pull among the stakeholders of the wheat supply chain, the banks emerge as critical players who can facilitate an agricultural reform or block it. The flour millers and farmers are the primary stakeholders of wheat with the government a close third. But, unfortunately, farmers can be seen to possess a feeble influence on outcomes regarding the wheat supply chain. By contrast, flour millers are far fewer in number than farmers and can organize better to have a high influence on outcomes. But the hero of this piece, by far and way, is the government which can make or break the wheat supply chain with its inordinate powers.

Rating of Relative Stakeholder Power in Wheat Pricing and Deregulation

The power of the Government of Punjab to influence outcomes is rated very high with its ability to make policy, regulate, and intervene in the wheat trade to enforce its pricing targets. The flour millers are rated to have a high level of power because of their purchasing of wheat from farmers with which they can influence pricing and government policy by acting in a coordinated way. An interesting addition to this matrix is the high power of the banks to influence deregulation and therefore pricing outcomes with their decisions on whether or not to lend. Once again, farmers emerge with a low rating of power to influence outcomes in this space. Relative to farmers, large traders of wheat and speculators have a stronger influence on price outcomes with the sheer volume of funding they bring to the wheat trade.

Urban consumers of wheat-based products are rated to have a lower power to influence outcomes by themselves but the provincial government's ability to influence pricing outcomes in the name of urban consumers remains very high. Finally, donors have had a low power to influence the wheat developments in Punjab despite their large funding volumes—this may be a sign of the times.

	Stakeholder	Goals	Main Levers	Ability to Organize for Impact	Level of Impact if Levers Used to Maximum
a.	Government of Punjab	Wheat price remains within a range that gives farmers a reasonable profit while keeping roti affordable	Purchase wheat at indicative price; sell wheat at indicative price; administrative raids; compel sale of wheat stocks	High	Very high
b.	Federal Government	Wheat price remains within a range that gives farmers a reasonable profit	Convene provinces; PASSCO purchses; PASSCO releases; import/ export wheat	Medium	Medium
c.	Flour Millers	Maintain wheat price roughly Rs. 700 below level corresponding to target roti price	Purchasing decisions and timing of purchases	High	High
d.	Large Traders / Speculators	Maximize profit from post-harvest wheat price increases	Buy at harvest; store wheat; sell later at higher prices	Low to Medium	Medium
e.	Small-scale Traders	Maximize profit from post-harvest wheat price increases	Act as intermediaries within larger trading networks	Low	Low
f.	Farmers	Secure a wheat price that gives a good profit	Hold wheat after harvest; protest	Low	Low
g.	Banks	Finance wheat purchases with a guaranteed off-taker or liquid market	Approval or refusal to lend	High	High
h.	Urban consumers	Affordable wheat and roti prices	Protest	Low	Low
i.	New Warehouse Operators	High warehouse utilization without fear of administrative intervention	Invest or withhold investment	Low	Low (under traditional system)
j.	Donors / Development Partners	Promote a market-oriented agriculture sector	Lending decisions; technical assistance; policy advice	Medium	Medium

References



References

1. https://na.gov.pk/uploads/documents/6926e060076ed_467.pdf

2. https://finance.punjab.gov.pk/system/files/WP25-26N.pdf

3. https://finance.gos.pk/Receipts/ProvincialTax

4. https://www.brecorder.com/news/40312730/taxing-pakistans-agriculture-sector-imf-push-a-move-in-the-right-direction

5. IMF (2025). First Review Under the Extended Arrangement Under the Extended Fund Facility, Table 2: Structural Conditionality, page 121. IMF Country Report No. 25/109, May 2025.

6. https://www.brecorder.com/news/40346866

7. Ibid 2.

8. https://www.brecorder.com/news/40312556/taxing-agriculture-income-understanding-with-provinces-reached-claims-aurangzeb

9. https://www.thenews.com.pk/latest/1354517-punjab-sindh-cut-agriculture-tax-rates-they-had-raised-on-imf-condition

10. Ibid.

11. https://www.pas.gov.pk/uploads/acts/Sindh_Act_No.II_of_2025.pdf

12. Government of Pakistan (2020). Tax Expenditure Report 2020. Federal Board of Revenue, Ministry of Finance. https://download1.fbr.gov.pk/Docs/2020622186353342TaxExpenditureReport2020.pdf

13. https://finance.gos.pk/Receipts/ProvincialTax

14. Pakistan Bureau of Statistics (2025). 7th Agricultural Census of Pakistan 2024, Annex I, page 78.

15. Daily Business Recorder (2025). Punjab launches country's largest tractor scheme. 31 December 2025. https://www.brecorder.com/news/40399920

16. Daily Business Recorder (2025). CM Punjab launches Green Tractor Programme Phase II, 21 September 21, 2025. https://www.brecorder.com/news/amp/40383784

17. Daily Ausaf (2024). Punjab's Green Tractor Scheme: over 1.5 million farmers apply for subsidized tractors. 20 October 2024. https://dailyausaf.com/en/pakistan/punjabs-green-tractor-scheme-over-1-5-million-farmers-apply-for-subsidized-tractors/

18. Daily Express Tribune (2026). 427,000 small farmers apply for Green Tractor scheme. 23 February 2026. https://tribune.com.pk/story/2594046/427000-small-farmers-apply-for-green-tractors-scheme

19. Associated Press of Pakistan (2025). CM to give 1000 free tractors to farmers under Punjab Wheat Incentive Program, https://www.app.com.pk/domestic/cm-to-give-1000-free-tractors-to-farmers-under-punjab-wheat-incentive-program/

20. Punjab Agriculture Department (2025). https://agripunjab.gov.pk/system/files/No%20of%20Tractors.pdf

21. Pakistan Bureau of Statistics (2025). 7th Agricultural Census of Pakistan 2024, Annex I, page 78.

22. Government of Punjab (2025). https://cmhightech.punjab.gov.pk/#how_to_apply_sec

23. Asian Development Bank (2025). Project Agreement for Loan 4715-PAK, Grant 1089-PAK (EF), and Grant 1090 (EF): Punjab Climate-Resilient and Low-Carbon Agriculture Mechanization Project. December 2025. https://www.adb.org/projects/documents/pak-57196-001-pra

24. Asian Development Bank (2025). Project Administrative Manual for Punjab Climate-Resilient and Low-Carbon Agriculture Mechanization Project. November 2025. https://www.adb.org/sites/default/files/project-documents/57196/57196-001-pam-en.pdf

25. Seed Act 1976 http://www.federalseed.gov.pk/SiteImage/Misc/files/Seed%20Act%201976.pdf

26. Seed Rules 2016 https://nsdra.gov.pk/assets/legislation/8.%20Seed%2(Business%2Regulation)%20Rules,%202016.pdf

27. Seed Amendment Act 2015 http://www.federalseed.gov.pk/SiteImage/Misc/files/The%20Seed%20(Amendment)%20Act%202015%20.pdf

28. The Seed industry in Pakistan: Regulation, politics, and entrepreneurship (https://cgspace.cgiar.org/items/a1041f32-195e-4fde-868a-ea38e1fc4e90)

29. Author interviews

30. PAC: State of Pakistan's Agriculture Report, previous editions

31. USDA GAIN Report (2015)

32. Seed Rules 2016 https://nsdra.gov.pk/assets/legislation/8.%20Seed%20(Business%20Regulation)%20Rules,%202016.pdf

33. Author interviews

34. Government of Punjab. Punjab Agriculture Statistics 2019-20 and 2024-25 (https://bos.punjab.gov.pk/sites/bos.punjab.gov.pk/files/PAS2020.pdf) (https://bos.punjab.gov.pk/sites/bos.punjab.gov.pk/files/PAS%202025.pdf)

35. A Phenomenological Inquiry into Farmers' Experiences Growing Cotton in Punjab, Pakistan https://www.nature.com/articles/s41598-024-62950-y

36. Determinants of Decline in Cotton Cultivation and its Replacement with Alternative Crops in Punjab, Pakistan https://ijssbulletin.com/index.php/IJSSB/article/view/1963/1764

37. Current Situation and Prospects of Cotton Production in Pakistan https://bbasr.org/index.php/home/article/view/27/121

38. PSMA Annual Reports (http://www.psmacentre.com/statistics.php?stid=1&type=national&status=1&link=24&page=retail_sugarprices)

39. Sugarcane's long shadow (https://www.brecorder.com/news/amp/40393078)

40. https://www.dawn.com/news/1542560

41. Pakistan's Cotton Sector Faces Imminent Collapse as Government Scrambles for Solutions (https://texfash.com/special/pakistan-s-cotton-sector-faces-imminent-collapse-as-government-scrambles-for-solutions)

42. Sugar Mill Ban: Policy Note

43. The PepsiCo case has been described in detail in The State of Pakistan's Agriculture 2024 report. This section focuses on its offtake function

44. Pakistan's wheat sector is well researched. Its traditional dynamics (primarily the government's setting of wheat support prices and wheat procurement) are well-documented in reports such as Rana, Abdul Wajid. 2020. Rationalization of wheat markets in Pakistan: Policy options. PACE Policy Research Paper March 2020. Washington, DC: International Food Policy Research Institute (IFPRI). https://doi.org/10.2499/p15738coll2.133728

45. https://www.thenews.com.pk/print/1039106-sindh-notifies-wheat-support-price-at-rs4-000-40kg

46. https://www.brecorder.com/news/40227313/pbf-wants-wheat-support-price-in-punjab-to-be-increased-to-rs3900-per-maund , https://profit.pakistantoday.com.pk/2024/04/03/punjab-govt-fixes-wheat-support-price-at-rs-3900-per-40kg

47. Government of Punjab (2025). Punjab Food Department. https://finance.punjab.gov.pk/system/files/BER23-24.pdf

48. https://www.nation.com.pk/09-May-2024/farmers-have-sold-almost-all-their-wheat-crop-punjab-minister

49. https://www.brecorder.com/news/40393548

50. https://profit.pakistantoday.com.pk/2025/04/10/punjab-government-directs-deregulation-of-wheat-market , https://www.thenews.com.pk/print/1304625-punjab-cabinet-approves-deregulation-of-wheat-sector, https://dgpr.punjab.gov.pk/node/42578

51. https://www.dawn.com/news/1827501 , https://dgpr.punjab.gov.pk/node/25449

52. Author interviews with flour millers in Lahore.

53. Pakistan Bureau of Statistics (2025). 7th Agricultural Census of Pakistan 2024, Annex I, page 78.

54. https://www.dawn.com/news/1904755 , https://punjab.gov.pk/node/6416

55. https://www.nation.com.pk/19-Sep-2025/338-000-tonnes-of-wheat-recovered-in-punjab-crackdown-on-hoarders , https://www.grainjournal.com/article/1106551/punjab-pakistan-bans-use-of-wheat-in-feed-mills-to-avert-flour-shortage

56. The World Bank (2018). Strengthening Markets for Agricultural and Rural Transformation (SMART) program. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/244841513566044794

57. The World Bank (2025). Pakistan Wheat Sector Modernization Roadmap. © World Bank. http://hdl.handle.net/10986/44565 License: CC BY-NC 3.0 IGO https://creativecommons.org/licenses/by-nc/3.0/igo



The Pakistan Business Council
FOSTERING ECONOMIC GROWTH
(A Company set up under Section 42 of the Companies Ordinance 1984)

8th Floor, Dawood Centre, M.T.
Khan Road, Karachi, Pakistan

+92 21 3563 0528-29
+92 21 3563 0530

2nd Floor, 1-E (South) Jinnah Avenue,
Blue Area, Islamabad, Pakistan

+92 51 8444 008
+92 51 8444 009

www.pbc.org.pk

PAC PAKISTAN AGRICULTURAL COALITION

Office 301, Third Floor, 42-C,
Khe Bukhari, Karachi, Pakistan

+92 303 511 3287

21 Dr. Maheen Fatima Road,
Block H, Gulberg 2, Lahore, Pakistan

+92 301 407 3232

www.pac.com.pk