PUNJAB

GROWTH STRATEGY 2023

PLANNING & DEVELOPMENT BOARD

PUNJAB GROWTH STRATEGY
2023

PREAMBLE

Punjab has a strong economic record and contributes about 54.2 percent to the national GDP, and employs approximately 37.6 million people. This makes the national economic performance highly dependent on Punjab's economy.

To sustain growth, Government of the Punjab has been investing heavily in infrastructure such as roads, energy, mass-transit and the provision of social services such as education and health. These investments were made in view of the government's priorities set under the previous Growth Strategy, "Accelerating Economic Growth and Improving Social Outcomes." But what the province lacked over the period of the previous strategy was a focus on building human capital and attaining regional equalization across the province.

This strategy for "**sustainable economic growth and attaining regional equalization"** is an attempt to do this. It highlights the key performance drivers of the province; takes stock of the current situation and the constraints faced both at the national and provincial levels; and presents a clear set of strategic priorities and plans to generate economic growth that is both inclusive and sustainable. The strategy realises the macroeconomic pressures at the national level and the squeezing of development budget in the province with certain looming liabilities. Therefore, it proposes that over the next five years, the government spends the first two focusing on stabilisation and then target for rapid higher growth.

The strategy draws its strength from the significant amount of data and evidence used for the analysis and drawing out key growth drivers. It draws on detailed profiling of Punjab and its sectors, as done in the Punjab Economic Report 2017 over a period of 10 years, and has estimated the Gross Provincial Product (GPP) of Punjab with all sub-components. The strategy going forward requires the government to make a strategic shift in its development priorities by moving away from mega structures to investing more in human capital, water, SMEs and on attaining regional balance. In addition to providing the strategic priority setting of the government, the strategy provides key set of actions to be taken within each of the major sectors of the economy. These actions have been developed through an inclusive approach of consultation and use of evidence led by the sectoral departments and supported by the Planning & Development Board.

While the strategy provides a comprehensive economic plan for the government to bring positive and sustainable change, this will not happen by itself; it will require a major change in attitude and seriousness of the implementers. And the first requirement for such a change is to recognise that a change in necessary and required – as the Holy Quran says: **"Allah never changes the favour He has bestowed on any people until they first change that which is in their hearts."** It is in the spirit of this injunction that the government aims to deliver the promise of change made to its citizens.

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LIST OF ACRONYMS

ADP	Annual Development Program
ADR	Alternative Dispute Resolution
ADRM	Alternative Dispute Resolution Mechanisms
ASEAN	The Association of Southeast Asian Nations
BCC	Behaviour Change Communication
BERF	Business Environment Reform Facility
BHU	Basic Health Unit
BOP	Bank of Punjab
BOT	Build, Operate, Transfer
CBOs	Community Based Organizations
CCA	Culturable Command Area
CCPP	Community Colleges Pilot Program
CCU	Critical Care Units
CDU	Community Development Unit
CHWs	Community Health Workers
COMSATS	Commission on Science and Technology for Sustainable Development in the South
CPEC	China Pakistan Economic Corridor
CPR	Contraceptive Prevalence Rate
CRVS	Civil Registration and Vital Statistics
CSA	Climate Smart Agriculture
CYII	Crop Yield Insurance Index
DGHS	Directorate General Health Services
DHMT	District Health Management Team
DHQ	District Head Quarter
DISCOs	Distribution Companies
DoH	Department of Health
EB	Entrepreneurship Bootcamp
ECBC	Energy Conservation Building Codes
ECD	Early Childhood Development
EOBI	Employees Oldage Benefits Institution
EPA	Environmental Protection Agency
EPD	Environmental Protection Department
ESCOs	Energy Servicing Companies
ESMAP	Energy Sector Management Assistance Program
FBR	Federal Board of Revenue
FDI	Foreign Direct Investment
FHC	Family Health Clinic
FIEDMC	Faisalabad Industrial Estate Development and Management Company
FIFA	Fédération Internationale de Football Association
FMD	Foot-and-mouth disease
FP	Family Planning
FTA	Free Trade Agreement
GDP	Gross Domestic Product

GER	Gross Enrolment Rate
GHG	Greenhouse Gases
GIS	Geographic Information System
GP	General Practitioner
GPP	Gross Provincial Product
GRP	Gross Regional Product
GSMA	Groupe Spéciale Mobile Association
GVC	Global Value Chain
HDI	Human Development Index
HED	Higher Education Department
HEIs	Higher Education Institutes
HR	Human Resource
HUD&PHED	Housing, Urban Development and Public Health Engineering Department
HVA	High Value Agriculture
IBTS	Institute of Blood Transfusion Services
ICRU	Investment Climate Reform Unit
ICSA	Institute for Climate Smart Agriculture
ICT	Information and Communications Technology
IMR	Infant Mortality Rate
IRMNCH&N	Integrated Reproductive Maternal Newborn, Child Health and Nutrition Program
IT	Information Technology
ITES	Information Technology Enabled Service
IWRM	Integrated Water Resources Management
JMP	Joint Monitoring Program
KE	Knowledge Economy
KLM	Karachi Lahore Motorway
LDA	Lahore Development Authority
LGCDD	Local Government and Community Development Department
LHWs	Lady Health Workers
LMIS	Logistics Management Information System
LUMS	Lahore University of Management Sciences
LWMC	Lahore Waste Management Company
MACs	Men Advisory Centers
MAF	Million Acre-Feet
MCL	Metropolitan Corporation Lahore
MDGs	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MNC	Multinational Corporation
MNCH	Maternal, Neonatal and Child Health
MoU	Memorandum of Understanding
MSME	Micro Small and Medium Enterprises
MSW	Municipal Solid Waste
MTDF	Medium Term Development Framework

MW	Mega Watt
MWRA	Married Women of Reproductive Age
NAVTTC	National Vocational & Technical Training Commission
NCD	Non-Communicable Disease
NEPRA	National Electric Power Regulatory Authority
NER	Net Enrolment Rate
NGOs	Non-Governmental Organizations
NNS	National Nutritional Survey
NOC	No Objection Certificate
NTDC	National Transmission and Dispatch Company
NUST	National University of Sciences and Technology
OECD	Organization for Economic Co-operation and Development
OFM	Online Feedback Mechanism
OICCI	Overseas Investors Chamber of Commerce & Industry
OOSC	Out of School Children
P&SH	Primary and Secondary Health Care Departments
PARB	Punjab Agriculture Research Board
PATS	Pakistan Approach to Total Sanitation
PBIT	Punjab Board of Investment and Trade
PBTE	Punjab Board of Technical Education
PCRWR	Pakistan Council of Research in Water Resources
PCSW	Punjab Commission on the Status of Women
PDHS	Pakistan Demographic and Health Survey
PERI	Punjab Economic Research Institute
PESSI	Punjab Employees Social Security Institution
PFA	Punjab Food Authority
PGS	Punjab Growth Strategy
PHC	Punjab Healthcare Commission
PHEC	Punjab Higher Education Commission
PIEDMC	Punjab Industrial Estates Development and Management Company
PIFRA	Project for the Improvement of Financial Reporting & Auditing
PITB	Punjab Information Technology Board
PKR	Pakistani Rupee
PLGA	Punjab Local Government Act
PLRA	Punjab Land Records Authority
PMDC	Pakistan Medical and Dental Council
PPD	Public-Private Dialogue
PPDB	Punjab Power Development Board
PPIB	Private Power Infrastructure Board
PPP	Public–Private Partnership
PPRA	Public Procurement Regulatory Authority
PRA	Punjab Revenue Authority
PRU	Police Response Unit

PRU	Police Response Unit
PSDA	Punjab Skills Development Authority
PSDF	Punjab Skills Development Fund
PSIC	Punjab Small Industries Corporation
PSPU	Policy & Strategic Planning Unit
PSTA	Punjab Skills Testing Agency
PTA	Pakistan Telecommunication Authority
P-TEVTA	Punjab-Technical Education & Vocational Training Authority
PVTC	Punjab Vocational Training Council
PWD	Public Works Department
R&D	Research and Development
RHCs	Rural Health Centres
SBIC	Small Business Investment Company
SCFs	Small Commercial Farmers
SDGs	Sustainable Development Goals
SECP	Securities and Exchange Commission of Pakistan
SH&ME	Specialized Healthcare & Medical Education
SMART	Strengthening Markets for Agriculture and Rural Transformation
SME	Small and Medium Enterprises
SMEA	Small and Medium Enterprise Activity
SMEDA	Small and Medium Enterprises Development Authority
SPS	Sanitary and Phytosanitary
SRO	Statutory Regulatory Order
TDAP	Trade Development Authority of Pakistan
TEPA	Traffic Engineering and Planning Agency
TEVTA	Technical Education & Vocational Training Authority
TFP	Total Factor Productivity
TFR	Total Fertility Rate
THQ	Tehsil Head Quarters
TTB	Trade Testing Board
TVET	Technical and Vocational Education and Training
UAE	United Arab Emirates
UN	United Nations
UNDP	United Nations Development Program
USAID	United States Agency for International Development
USD	United States Dollar
VOSS	Virtual One Stop Shop
WASA	Water and Sanitation Agency
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WTO	World Trade Organization

MESSAGE FROM CHIEF MINISTER

Punjab has tremendous potential; its large population, extensive agricultural resources, vibrant SME sector, sound manufacturing base and rapidly growing service industries form the foundation of future growth and prosperity. Our challenge, now, is to streamline our priorities, strengthen governance, and ensure transparency in order to realise this potential.

The vision of our government is clear. We will work day and night to deliver rapid, sustainable and regionally equitable growth. We will focus on the provision of employment opportunities to empower our youth. It is my primary responsibility to ensure that no one must be left behind in the push for development and prosperity: the benefits of a strong economy must be felt by all.

The plans to achieve this are laid out in the Punjab Growth Strategy 2023. It has prepared recommendations based on a thorough analysis of existing constraints and strengths by utilizing regional and international data. It is a strategy that supports the private sector, and places this onus on our institutions as facilitators. What delights me the most is that it is, above all, a people-centric strategy.

In the face of existing fiscal and economic challenges, this strategy will guide us in our work towards achieving increased levels of economic growth and human capital development, in order to realize our goal of a developed and prosperous Punjab, where every citizen can enjoy a decent quality of life. I look forward to delivering against the promise of a Naya Punjab and Naya Pakistan.

SARDAR USMAN AHMED KHAN BUZDAR
CHIEF MINISTER OF PUNJAB

MESSAGE FROM MINISTER FOR FINANCE

In order to address the socio-economic issues facing the province, the immediate task for the Government of Punjab was, to draw up a strategy with a pragmatic and viable framework for restructuring development, ensuring equitable socio-economic progress, reforming the public finance management system, and improving public service delivery. To avoid a whimsical decision-making process prevalent in the past, Punjab Growth Strategy 2023 has been formulated using a macroeconomic model with time series data as an effective policy tool for evidence-based strategic planning and policy making.

The primary focus of the Strategy is to attain a 7% per annum growth of the provincial GDP by the terminal year 2023, using key drivers of development through a bottom-up approach. The Strategy also emphasizes on the need to focus on social sector and human development by allocating resources in an outcome-oriented model rather than an input model.

The strategy takes cognizance of the fact that government in the current year and possibly in the next has a very limited fiscal space hence it is focused on rationalizing spending while developing an equitable development and growth model. With an aim to bring parity in the level of development across the province, the strategy outlines a balanced spending approach with problem driven targeted investments that reduce segmentation in the province.

The Punjab Growth Strategy 2023 is the result of collaboration between many agencies, government departments, academia, and private sector which have worked along with the Planning & Development Board in rethinking the development process that will guide Punjab's reforms till 2023. The task is challenging but with our strong will and commitment, we will Insha'Allah bring Punjab on road to economic growth and prosperity.

MAKHDUM HASHIM JAWAN BAKHT
MINISTER OF FINANCE

MESSAGE FROM CHAIRMAN

PLANNING AND DEVELOPMENT BOARD

Economic management of the largest and the most populous province of Pakistan is an exceptionally challenging task. Planning & Development Board is at the forefront of managing the provincial economy effectively. A key responsibility of the Board is to provide the political government with an overarching plan that is grounded in both evidence and addresses contextual problems faced by the province. To this accord, Government of Punjab has formulated Punjab Growth Strategy 2023 which provides a comprehensive strategic roadmap that the government will follow over the next five-years for attaining its committed development and growth targets.

The strategy is targeting to attain a 7% growth rate of GDP (provincial) by 2023 with the aim of creating over 6 million jobs, and 3 million housing units. The strategy correctly emphasizes the need for doing much more in public private partnerships to address the fiscal constraints and leverage effectively the private capital. The strategy is built on the approach of regional equalization which is the top priority for Government of Punjab. The strategy apart from industrial and agricultural development also focuses on SMEs support which is an essential component for spurring economic growth and discusses options for export of digital services.

Given the importance of human capital in development and economic growth, the strategy focuses on building skills through improved education systems, vocational training, and robust healthcare. Women empowerment and its dividends for economic growth have also been recognized and included in the strategy.

This comprehensive and inclusive growth strategy has been formulated in-house under the mentorship of Senior Economist, and Professor Emeritus Dr. Hafiz A. Pasha, and the overall coordination and support of Chief Economist, Dr. M. Aman Ullah, and Mr. Usman Khan. The Planning & Development Board also acknowledges the support and assistance of the research team at Punjab Economic Research Institute (PERI) for the Punjab Growth Strategy 2023.

HABIB-UR-REHMAN GILANI

CHAIRMAN, PLANNING AND DEVELOPMENT BOARD

ACKNOWLEDGEMENTS

Development of Punjab Growth Strategy 2023 is the result of collaborative efforts of government departments, academia, private sector, and sector specialists. The government would like to thank Dr. Hafiz A. Pasha (Senior Economist and Ex-Federal Finance and Planning Minister) for overall guidance, development of Punjab's Growth Model and quality assurance to the process and Dr. M. Aman Ullah (Jt. Chief Economist, P&D Board/ Director PERI) and Mr. Usman Khan (Policy & Planning Expert, DFID, UK Support to GoPb) for providing technical support to model, strategy development and authoring and supporting our researchers at PERI. The strategy also acknowledges the support provided by PERI researchers especially Muhammad Imran and Imtiaz Ahmad for doing considerable data work on the growth model. The government owe a great debt to numerous representatives of the private sector for their time and support in various discussions and consultations for the development of private sector development strategy. The strategy would not have reached its successful conclusion without the guidance and strategic insights provided by Mr. Habib-ur-Rehman Gilani (Chairman P&D Board) and valuable inputs and encouragement extended by Mr. Hashim Jawan Bakht (Minister for Finance).

The critical role played by the line departments with full support of their Secretaries' and various Sections of P&D Board, in the development of Punjab Growth Strategy 2023 is what makes it unique and inclusive. Sector specific strategic priorities shared by the departments, that are consequential in developing meaningful and action oriented interventions is admirable.

Lastly, I would like to thank the following PGS team members from P&D Board and PERI, for their tireless efforts in supporting the strategy development process.

Gulalai Khan, Ayesha Ghazanfar, Mian Nabeel Ashraf, Dr. Avais Tahir, Dr. Ayesha Ashraf, Dr. Shahzada Naeem, Dr. Sobia Rose, Ahmed Chaudhry, Annus Azhar, Asima Ihsan, Bushra Fatima, Irfan Malik, Mannan Hassan Khan, Muhammad Nadeem, Rashid Hussain, Sitara Gill, Hassan Hameed Khan, Muhammad Shahzad and Uzooba Hareem.

IFTIKHAR ALI SAHOO
SECRETARY, PLANNING AND DEVELOPMENT BOARD

EXECUTIVE SUMMARY

Government of Punjab has set out to create a dynamic and a regionally equitable economy for the province. Reaching this goal will not be easy, and is made more difficult due to a fragile national macroeconomic situation. Mounting fiscal and external deficits, a rapid depreciation of the currency and rising cost of capital have made the achievement of this goal more challenging. The Punjab will thus need to strategically leverage its opportunities and address its short and medium-term challenges. To this end, the government has developed a people-centric growth strategy to address the fundamental issues that the province faces, in order to move towards sustained and equitable economic growth and development over the next five years.

The strategy has been developed after a considerable amount of research and strong engagement with the responsible departments over the last five months. The engagement with the departments has ensured that sector interventions are fully owned by the implementing departments. One of the main features of the research is the estimation of the Gross Regional Product (GRP) of the province by sector and by expenditure component. A time series of the GRP of Punjab has been constructed from 1999-2018, which made it possible to identify key drivers of growth and areas of competitive advantage for the province.

This has helped in building the first ever Punjab Growth Model which makes this strategy different from any work on growth done in Punjab before. Further, the Human Development Index (HDI) has been estimated for each division and district of the province. The strategy also draws upon the recently published Punjab Economic Report 2017, which captures the entire socio-economic dynamics of the province over a period of ten years and has performed an assessment of the previous growth strategy against its stated targets.

Finally, the strategy has integrated key elements of the Punjab Spatial Strategy, 2018 to develop actions that fully exploit Punjab's location advantage. The Punjab Growth Strategy 2018-2023 is based on an extensive set of evidence explaining the dynamics of the Punjab's economy and aiming to achieve 7 percent per annum growth in the province by 2023 and creating almost 6.0 million jobs.

The Strategy has identified five main pillars of growth in the Punjab. Firstly, the strategy requires increased focus on agriculture and the SME sectors, as Punjab has a clear significant comparative advantage in these sector as compared to the national economy. Secondly, it emphasises private sector development as main engine of growth and provides a detailed road map for horizontal and vertical interventions to address key constraints.

Thirdly, formation of human capital takes the place of the central pillar in the strategy due to its significant direct and indirect impact on growth. Fourthly, the strategy using the growth model has presented the most optimal allocation of public investment (ADP) for the province in terms of growth outcomes. Finally, the strategy identified the key national policy variables on which Punjab should strongly advocate with the federal government. To ensure effective implementation, the strategy identifies the resource requirement over the five-year period and highlights the sources of these finances and supports regional equalization as a precondition to attain sustainable growth.

1.0 Punjab's Economic Profile

The provincial economy of the Punjab contributes a major part of Pakistan's GDP. Growth in the economy of Punjab, therefore, plays a significant role in determination of the overall growth rate of the national economy. In terms of population, Punjab houses 110 million people, equivalent to 52.95 percent of the national population, down from 57.58 percent in 1972. This is attributable to Punjab's population growing slower (2.1%) than the national population (2.4%). Moreover, Punjab is blessed with a young population which offers a conditional advantage as the dividends from this demographic advantage can only be reaped if enough productive jobs can be found for the youth entrants into the labour force.

In terms of its economic size, Punjab's share in national economy was at 54.2 percent in 2017-18. Given the share in population is just under 53 percent, the per capita income of Punjab is 2 percent higher than the national average. The performance of Punjab's economy has moved in tandem to national economy, and over the last five years the average annual provincial GDP growth rate was 4.9 percent. The economic structure of Punjab now comprises 62.4 percent of services, 20 percent of agriculture, and 17.6 percent of industry. The industrial share at the national level is 20.9 percent showing a structure difference between Punjab and the national economy. Furthermore, the Punjab's economy has a higher share in private and public investment and in net factor income from abroad. Punjab also has a significantly higher savings rate; however, the net trade deficit of Punjab is somewhat higher than that at the national level.

The labour force participation rate in Punjab is higher than the national average. This difference is primarily due to the higher labour force participation rates of females in Punjab. The employment level is also slightly higher in Punjab. The unemployment rate of Degree/Post-graduate holders, in particular, is as high as 18.9 percent, suggesting a sub-optimal use of Punjab's human capital.

2.0 Punjab Growth Strategy 2023

2.1 The Vision

The Punjab Growth Strategy 2018-2023 presents the five-year socio-economic plan of the government to address some of the fundamental issues and structural anomalies faced by the provincial economy as well as the set of strategic actions required to trigger the main growth drivers of the economy. The Vision 2023 set by the government is:

> "A globally connected and competitive, equitable, culturally vibrant and technologically advanced Punjab with sustainable economic growth driven through a dynamic private sector, an efficient public sector, rich and productive human capital and, a regionally equalized development footprint by 2023"

2.2 Targets & Outcomes

The Punjab Growth Strategy 2023 sets ambitious targets for the government over the next five-years. However, all these targets are consistent with the national targets set by the government. Implementing the PGS is expected to result in:

- Attainment of a sustainable economic growth of 7 percent annual growth of the provincial GDP by terminal year 2023.
- Create on average 1.20 million new jobs annually over the next five years, thereby contributing 60 percent to the national target of 10 million jobs.
  Reducing the idle youth in Punjab from 10.3 percent in 2017-18 to 8.8 percent by 2023.
- Reducing the Multi-dimensional poverty in the Punjab from 26.2 percent in 2017-18 to

19.5 percent by 2023.

- Increase the average number of new housing units to 640,000 annually over the next five years, thereby contributing 64 percent to the national target of 5 million new houses.

2.3 Key Pillars of the Strategy

The strategy is based on a dynamic sub-national growth model powered by provincial GDP data over last 20 years and 142 national and provincial policy variables. The key pillars of the strategy include:

(i) Enhancing the focus on sectors in which Punjab has comparative advantage in the national context and harness their potential

The strategy identifies that Punjab has a comparative advantage in 11 out of the 18 national sub-sectors of the economy. The top-4 sectors that have the highest comparative advantage include major crops, small-scale manufacturing, cotton ginning and livestock. The strategy therefore emphasis a significant focus on the development of these sectors which are captured under agriculture and small-scale manufacturing.

It is a striking finding that 1 percent growth in the agriculture sector leads directly plus indirectly to over 0.4 percent growth in the overall economy of the Punjab. Therefore, a corner stone of the growth strategy is to **accelerate the growth rate of agriculture from about 2 percent in the last five years to between 3.5 percent – 4 percent in the next five years.** The strategy contains specific initiatives for augmenting the agriculture growth rate, however, the emphasis is on augmenting and achieving greater efficiency in the utilization of water resources and other inputs, enhancing the quality and access of agriculture research and transforming the cropping pattern based on changed climatic profile and productivity yields of main agricultural zones. Within livestock the focus is on export markets by ensuring disease free zone and improving the quality of milk. **The strategy also requires an average of 14 percent per annum growth to agriculture credit over the five years.**

Punjab hosts almost 68 percent of the SMEs in the national economy. This sector is important both because of its contribution to employment and foreign exchange. Therefore, the strategy places significant emphasis on the growth of the SME sector by suggesting interventions to enhance credit to SMEs, create space for entrepreneurship and innovation and ensure provision of key business development services and support for technology upgradation. **The strategy finds that doubling SME credit will almost double SME employment in Punjab and thus requires an average annual growth of at least 11 percent in SME credit over the five-year period.**

(ii) Creating an enabling environment for private sector led investment and growth

The private sector in Punjab produces more than 90 percent of the goods and services in the economy. The strategy thus places private sector development as the main pillar of its growth strategy. The main focus of the interventions is on reducing the cost and burden of doing business, facilitating investment in the province and promoting Punjab as a hub for business and investment. **The strategy envisages an average growth of 16 percent per annum in private investment in Punjab.**

The interventions include both soft and hard measures. A key intervention to be taken by the government is the full implementation of the **"Regulatory Guillotine".** This will significantly reduce the regulatory burden for new and existing businesses in the Punjab. The strategy suggests measures to be taken to address the time and cost of **"contract enforcement"** and recommends easing out **"public procurement"** especially for development of SME businesses.

The strategy puts a strong emphasis on improving investment facilitation in the Punjab and increase efforts to market Punjab internationally competitive.

The government will soon approve the first **"investment policy"** for the province and launch the **"Punjab Investor Forum".** The government will also look at adopting the Limited Liability Partnership Act 2017 at the provincial level to reduce the risk exposure of investors and will advocate with SECP more suitable regulations for innovative and high powered equity such as venture capital and crowd funding.

The strategy maintains an **"export focus"** and has identified key sectors of Punjab that are internationally competitive or present areas of future growth. The government will expand its cluster development initiatives to enhance exports from the province. Finally, the strategy also identifies key sectors for **"Public Private Partnerships" and shows a strong commitment by setting itself the task of increasing PPPs to 10 percent of the provincial ADP by 2023.**

(iii) Investing more in quality formation of Human Capital and its Utilization

Development of human capital has the most significant impact on growth and performance of all sectors across the Punjab. The most significant impact is realised in the finance and insurance sector, large-scale manufacturing and construction. The strategy therefore takes a holistic approach to forming strong human capital in the Punjab.

The strategy builds on the previous achievements made by the skills sector of training 2 million youth by enhancing this target to **2.5 million in the next five years,** and by allocating the resources strategically. The skills training agenda over the next five years will have a balanced focus on skills developed through strong **industry partnerships, growth skills** by considering future demand especially in light of CPEC, affirmative action for **self-employment skills and exportable human capital.**

The human capital formation approach includes a strong focus on improving the education, healthcare, water and sanitation, gender equality and population welfare outcomes. The strategy provides separate treatment to all these key areas of development. Moreover, the strategy has integrated the performance against the key **SDG targets** and provides an estimate of progress based on the implementation of the strategy.

(iv) Making public investment and ADP sectoral priorities so as to maximize the impact on growth

Public sector investment has a major catalytic impact on growth of the economy. The case of Punjab is not any different, however, unfortunately the historic process of setting ADP priorities have been a result of abstract planning rather based on net growth impact on the economy. The strategy identifies the growth impact of capital investments made by the government in a number of sectors.

It also identifies that a single percent increase in ADP results in almost 0.6 percent increase in current expenditures. Using this evidence, the strategy presents **the optimal investment allocation strategy for Punjab to maximise the return on investment in attaining maximum impact on growth.**

(v) Advocating and coordinating with the federal government on managing key macroeconomic policy variables that have a significant impact on Punjab's Economy

The strategy identifies key national policy variables such as, the federal PSDP on water, crop procurement and support prices and subsidies on agriculture inputs to have significant growth consequences in the agriculture sector of Punjab. The national export incentives, quantum of electricity generation and distribution, power outages and credit to SMEs all have a high bearing on performance of both large-scale manufacturing and SMEs in Punjab. The level of nominal interest rates has an impact on private investment in agriculture, industry and services and growth of financial and insurance sector. **The provincial government will strengthen the coordination and advocacy on these key variables with the federal government to voice Punjab's interest.**

Additionally, the strategy requires a correction of the capital city centric approach and diversification of urbanization by **upgrading the secondary cities of Punjab. The Punjab Spatial Strategy, 2018 will be the key tool used to shape up the future urban map of Punjab.**

2.4 Conditions for Successful Implementation

The implementation of the strategy is based on certain conditions and inputs that the government will have to ensure over the period of five years to achieve its strategic targets.

Firstly, the PGS requires the provincial government to launch a vigorous fiscal effort to raise its own source revenues. The government will aim in the next five years to increase the provincial revenue to **GRP ratio from 1.4 percent in 2017-18 to almost 2 percent by 2023.** This will be achieved by further expansion of the sales tax base and on development of other taxes like the Urban Immoveable Property Tax and the Agriculture Income Tax. The government will soon launch its Revenue Mobilization Strategy for the next five years.

Secondly, the PGS is based on the assumption that Punjab's share in the NFC Transfers will at least remain unchanged. The 9th NFC has recently been constituted and the PGS strongly argues that case **the Punjab's share should not fall below the current level of 51.74 percent.** This will need a strong push from the province's financial managers and the NFC team.

Thirdly, the PGS takes cognisance of the current macroeconomic and fiscal situation and therefore has divided the five-year period into two segments; **stabilization for the first two years and then rapid economic growth.** To follow this trajectory, a certain amount of development spending will be required. The PGS requires the **total ADP (including foreign aid and PPPs) should cross PKR 800 billion by the fifth year,** with lower values in the first two years and then greater jumps from year three onwards. Moreover, the strategy also requires stronger planning and governance of the public investment portfolio and recommends the **use of spatial maps and GIS** as an integrated planning tool for P&D to approve projects.

Finally, the PGS requires greater **regional equalization** within the province. The strategy makes recommendations to reduce disparities by increasing public investments, taking an targeted approach and establishing stronger public sector administration and implementation units in South Punjab.

3.0 Sectoral Priorities in Key Sectors

The PGS has a strong bottom-up approach supported by strong evidence and analysis of the provincial economy. The strategy therefore provides guidance and strategic direction of sectoral priorities that have been identified by the line departments. This approach ensures better understanding and effective implementation of the sectoral plans required under the strategy. The key sectoral priorities are summarised below:

3.1 Health Sector

The government intends to increase focus on preventive healthcare and attainment of SDGs. The government plans to expand programmes such as; (i) stunting reduction programme; (ii) prevention and control of hepatitis; (iii) immunization; (iv) integrated reproductive maternal, new-born and child health; (v) TB control programme; (vi) HIV/AIDs control programme and; (vii) infection control and non-communicable diseases (NCDs) control programme. In terms of infrastructure, the government plans to invest in improving the basic facilities, use of new technology, strengthening drug testing laboratories and establishing bio-medical workshops. On tertiary sector, the focus will be expanding the health insurance programme, enhancing the quality and coverage of medical education, build international partnerships to improve quality of services and hospital facilties and their management.

3.2 Education Sector

A continuous investment is required to improve the school infrastructure. In term of infrastructural needs, over 4,000 schools need to be reconstructed, over 4,200 schools are still with missing facilities, over 3,000 schools do not have access to grid power and a solar solution is required to power these premises while over 27,000 school need to be equipped with science labs and electronic libraries.

On the quality side, over 70,000 new classrooms require increased enrolments and many poorly performing schools are in need of partnerships and outsourcing. Additionally, teacher training needs to be sustained. Finally, for affirmative action, the education sector will be investing in creation of government degree colleges of special education, special education centres and shelter workshops for the visually impaired. The government also intends to initiate joint education and skills programmes for developing a more productive workforce.

3.3 WASH Sector

A large number of villages and citizens have been provided with better drinking water and improved sanitation facilities, but there still remain large uncovered areas especially in southern districts. The government will be focusing on provision of these facilities as per the recently approved policy and action plan.

3.4 Irrigation & Water Resources

Irrigation and water are the lifeline of Punjab's agriculture and industry. The province has targeted to increase water availability to at least 71 Million Acre Feet from the existing value of 62 Million Acre Feet. This will require significant investment in improving water course, introducing water conservation and management and building smaller dams to store water. This will involve upgrading agriculture practices to move towards more advanced water efficient irrigation technologies.

3.5 Productive Sectors: Industry & Agriculture

The government has developed a comprehensive industrial policy that has shaped up the contours of the strategy. The strategy looks to focus on reducing the cost of doing business, improving environmental compliance, adherence to labour standards and development of stronger clusters. There will be an increased focus on SMEs, especially on ensuring adequate and suitable credit and business development services. Similarly, in agriculture, the focus is going to be on improving productivity and enhancing agri-credit and expanding the scope of SMART agriculture. The focus in livestock will be on improving quality and targeting high value export markets for meat and dairy.

4.0 Structure of the Strategy

The strategy is presented in nine chapters, the brief details and structure is as follows:

Chapter 1: Review of 2018 PGS Targets: This chapter provides a comprehensive review of the performance of Punjab against the targets of the previous growth strategy. The chapter uses the evidence developed under the new growth strategy to trace results achieved.

The Structure & Performance of the Punjab's Economy: This chapter provides detailed data and analysis on the structure and performance of the Punjab's economy, labour force and unemployment dynamics and the estimates the district HDI performance of Punjab.

Chapter 2: Salient Features of the Punjab Growth Strategy & The Recommended Growth Path: This chapter provides the evidence and analysis from the Punjab Growth Model on setting the strategic targets of growth, employment, poverty, SDGs, housing and presents the key growth triggers for the economy and the conditions required pto implement the growth strategy.

Chapter 3: Growth through Private Sector Development: This chapter provides a comprehensive review of the key issues faced by the private sector and states the response by the government to address these.

Industrialising Punjab & Unleashing its SME Potential: This chapter cover the dynamics of Punjab's industrial sector and provides an implementable set of actions required to achieve the objective of the recently approved Punjab Industrial Policy.

Enhancing Value in Agriculture and Livestock: This chapter provides the strategic response of the government to achieve higher and sustained growth in the agriculture and livestock sector of the economy.

Realising the Potential of the Services Sector: The services sector contributes more that 62 percent to the provincial economy. This chapter provides the key institutional, taxation and facilitative actions that the government will take to ensure sustained growth from the sector.

Chapter 4: Growth Infrastructure: Water Resource Management & Energy Efficiency & Conservation: Availability of water is seen as an immediate threat to Punjab's prosperity and energy sector continues to be a key input for growth sectors in the Punjab. This chapter presents the response of Punjab Government to address the key constraints in these sectors.

Chapter 5: Formation of Human Capital: The strategy realizes that formation of human capital is not linked to education or skills but requires a much broader approach. The human capital domain covers seven specific areas:

Skilling the Punjab's Labour Force

Launching Punjab's Knowledge Economy & Digital Dividends

Reforming Education to Harness Punjab's Human Capital

Ensuring a Healthy Punjab

Focus on Water, Sanitation and Hygiene

Women Development-Striving Towards Gender Equality

Population Welfare

Chapter 6: Urban Development and Housing: This chapter presents the key interventions based on the Punjab Spatial Strategy 2018 that will enable a more organized and diversified urban development in the Punjab.

Chapter 7: Regional Equalization: This chapter provides stark disparities that prevail with the province and presents the government's commitment in addressing these over the next five years.

Chapter 8: Aligning Priorities with International Committments: This chapter captures the existing efforts of the Punjab Government to attain compliance with SDGs and to exploit the potential presented by CPEC. It also covers the furture response of the government in making meaningful porgress towards these international committments.

Chapter 9: Monitoring & Implementation Framework : This chapter provides the framework for monitoring the implementation and the results of the growth strategy along with the responsibility matrix.

REVIEW OF PGS 2018 AND STRUCTURE & PERFORMANCE OF PUNJAB'S ECONOMY

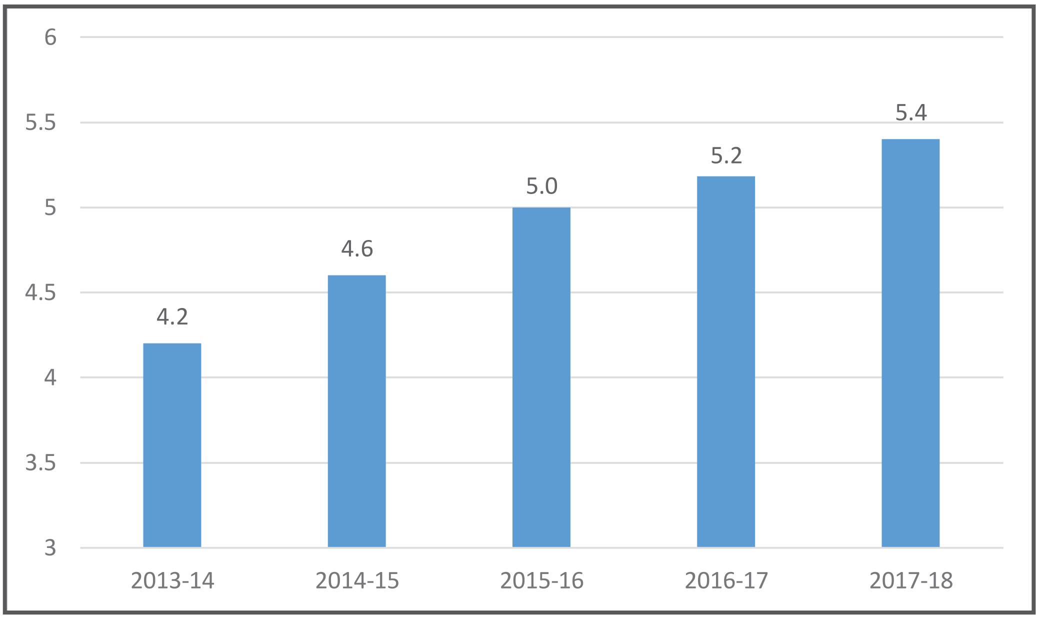
Review of the Punjab Growth Strategy 2018

The Growth Strategy 2018 envisioned Punjab as **"a secured, economically vibrant, industrialised and knowledge-based province, which is prosperous and where every citizen can expect to lead a fulfilling life."** The strategy focused on the private sector as the main driver of provincial growth. The strategy rightly placed a strong emphasis on equitable growth, given the intra-provincial disparities, particularly between districts in southern Punjab and the rest of the province. The Growth Strategy 2018 identified certain key challenges to achieving its vision of secured and sustainable economic growth. The challenges included an underutilised manufacturing capacity and stagnant exports; low productivity of physical and human capital; unemployment, under-employment and skills shortage; failure to meet the Millennium Development Goals (MDGs) and slow progress towards the SDGs; and a precarious security situation. However, the performance against the major targets was lacklustre. There was a strong disconnect between the strategy which was set at a very "high level" and implementing departments that were not able to take ownership or develop initiative inline with the strategy.

This chapter provides quick performance review against the key targets.

Target 1: The Growth Strategy had set up an ambitious target that economic growth will reach 8 percent by the year 2018. Figure 1.1 below provides the GPP growth rates in Punjab over the last five years.

Figure 1.1: Economic Growth in Punjab, 2014-18(%)



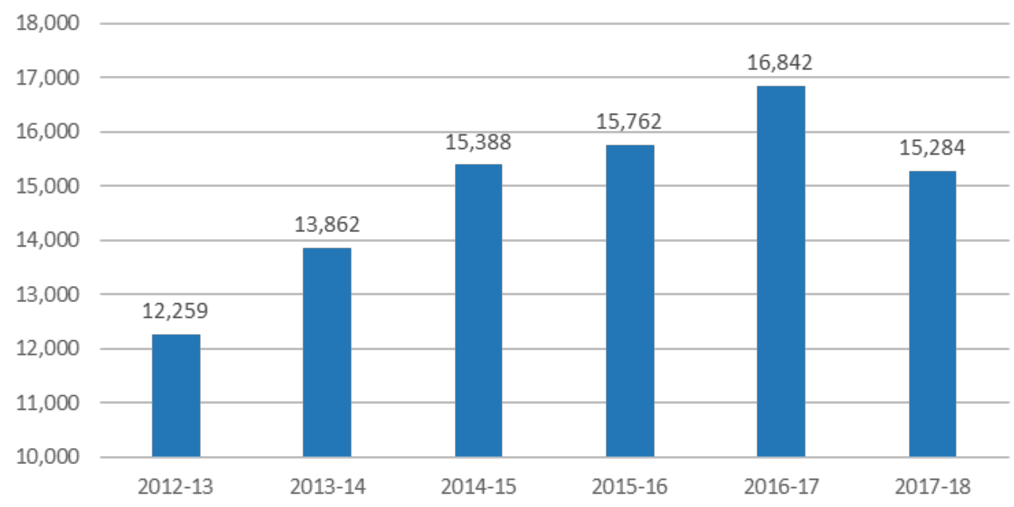
Source: Punjab Growth Strategy Team

Punjab's economy grew at a rate of 5.4 percent in the terminal year of the Growth Strategy, 2.6 percent **lower than the target** of 8 percent, but 1.2 percent higher than the growth rate in 2013-14. The provincial economy started showing improvement from 2016 onwards on the back of improved electricity situation in the province and reduced activities of extremism against the state, and an enhanced public expenditure accruing of trade deficits due to high imports. The consequences of which are left to be handeld by the present government.

Target 2: Increasing annual private sector investment in Punjab to USD 17.5 billion by 2018

Against a target of USD 17.5 billion, the investment in the terminal year of the Growth Strategy reached USD 15.3 billion (See Figure 1.2). The private investment increased from USD 13.6 billion in 2013-14 to USD 16.8 billion in 2016-17: part of this growth came from private sector investments in energy projects. However, no major reforms were implemented to enhance private sector investments and the PPP portfolio remained non-operational.

Figure 1.2: Private Investment in Punjab, 2013-18(USD, Millions)



Note: Private Investment is converted into USD using end of period exchange rate.

Source: Punjab Growth Strategy Team

Target 3: Creating 1 million quality jobs every year in Punjab

Against the target of 1 million jobs, the economy of Punjab was able to produce 830,000 jobs per annum on average. The average improved in the last two years, as the growth rate increased, creating more employment opportunities. However, this number is still a fraction of the over 11 million idle youth in Punjab and the increasing labour force entrants due to the increasing young population.

Target 4: Training 2 million skills graduates in Punjab by 2018

The Skills Sector Plan under the Growth Strategy provided specific targets to P-TEVTA, PVTC, PSDF and the private sector to train 2 million skilled graduates over a period of 4 years. Major contributors were P-TEVTA at 70,000 per annum, PVTC at 54,000 per annum and PSDF at 20,000 per annum, in addition to 20,000 trained by the private sector. The government spent significant resources to train the 2 million, however, most trainings (more than 50%) were in very short-term courses (3 months or less) not oriented to growth.

Target 5: Increasing Punjab's exports by 15% every year until 2018

Pakistan's and thus Punjab's exports have performed badly over the Growth Strategy period. Exports in 2014 amounted to USD 24.7 billion, and were down to USD 21.9 billion in 2017. The government failed to enhance exports resulting in huge trade deficit.

Target 6: Achieving all Millennium Development Goals and targeted Sustainable Development Goals

Pakistan only met 9 out of the 38 MDGs targets, and Punjab's performance was the same. The strategy lacked in bringing any priortization or focus towards SDGs despite commitment.

Target 7: Narrowing security gap with regional neighbours such as India and Bangladesh by reducing crime rate and improving law and order in Punjab

Whereas little success was achieved on improving relations with India and Bangladesh, Pakistan and Punjab made progress in improving the situation of law and order. The National Action Plan agreed by all political parties was the key behind the success.

Structure & Performance of Punjab's Economy

The economy of Punjab contributes a major part to the GDP of Pakistan. Growth in the economy of Punjab, therefore, plays a key role in determination of the overall growth rate of the national economy. The objective of this chapter is to describe the salient features of the economy of Punjab. Emphasis is placed on identifying the key characteristics, which play a major role in determining the growth rate of the regional economy. A comparison is made wherever possible with the national economy.

1. Population

According to the latest Population Census of 2017, Punjab has a population of 110 million, equivalent to 52.95 percent of the national population. As shown in Table 1.1, the share has declined from 57.58 percent in 1972. This is attributable to a lower rate of population growth between 1998 and 2017. The population growth in the province was 2.1 percent. This is significantly lower than the national population growth rate of 2.4 percent. Punjab has had some success in controlling the rate of population growth. The extent of urbanisation in Punjab is at 36.7 percent. This is only marginally higher than the total rate of 36.4 percent for Pakistan. However, the rate of urbanisation is in proportion to the growth rate of urban population of 3 percent.

Table 1.1: Population Trends, Punjab & Pakistan, 1972 to 2017

	Population (Million)					Growth Rates (%)			
	1972	1981	1998	2017		1972	1981	1998	2017
Punjab	37.6	47.3	73.6	110.0		3.6	2.6	2.6	2.1
% Urban	24.4	27.6	31.3	36.7		4.8	4.0	3.4	3.0
% Rural	75.6	72.4	68.7	63.3		3.3	2.1	2.3	1.7
Pakistan	65.3	84.2	132.3	207.8		3.9	2.9	2.7	2.4
% Urban	25.4	28.3	32.5	36.4		5.0	4.1	3.5	3.0
% Rural	74.6	71.7	67.5	63.6		3.5	2.4	2.3	2.1

Source: Population Censuses, Pakistan Bureau of Statistics, Government of Pakistan

Punjab is blessed with a young population. Although information on the age distribution of the provincial population has not been made available from the Population Census 2017. As far back as 1998, the share of young (up to the age of 24 years) population has risen to almost 63 percent. This is certainly a favourable position, but only if enough productive jobs can be found for the youth entering the labour force.

The growth of urban population is leading to a more imbalanced hierarchy of cities in the province. The primate city, Lahore, has grown rapidly in the intercensal period, 1998 to 2017, and the growth rate has exceeded 4 percent. Over the next five years, efforts will have to be made to develop the major secondary cities of Punjab so as to reduce the pressure of migration into Lahore.

2. Size and Growth of Punjab's Economy

The estimated share of the economy of Punjab in the national GDP was 54.2 percent in 2017-18. This implies that given the share in population of just below 53 percent, the per capita income of Punjab is 2 percent higher than the national average. This indicates that in terms of USD, it is $1,673. The growth rate of Punjab's economy has been close to the national growth rate. During the last five years, the average annual provincial GDP growth rate has been 4.9 percent.

3. Composition of the Economy

The sectoral composition of Punjab's economy is given in Table 1.2. The share of agriculture in 2017-18 was 20 percent. Over the last five years, the share has declined from 23 percent in 2012-13. Simultaneously, the shares of the industrial and service sectors have increased. A comparison with the share of different sectors in the national economy reveals that agriculture and services in Punjab have a comparatively larger share, while the industrial share is smaller.

Table 1.2: Sectoral Share (%), Punjab & Pakistan, 2012-13 to 2017-18

Sector	2012-13	2015-16	2017-18
Punjab			
Agriculture	23.0	20.8	20.2
Industry	17.2	17.4	17.5
Services	59.8	61.8	62.4
Pakistan			
Agriculture	21.4	19.8	19.0
Industry	20.4	20.9	20.8
Services	58.2	59.3	60.2

Source: PERI, Government of Punjab and PBS, Government of Pakistan

The sectoral growth rates during the period between 2012-13 and 2017-18 are presented in Table 1.3. There is very little variation in these growth rates of Punjab and the country as a whole. The overall average rate during the last five years is just under 5 percent. The main factor contributing to lower growth is the poor performance of the agriculture sector, with a growth rate of only 2.0 percent. One of the primary objectives of the Punjab Growth Strategy will be to boost the growth rate of the agriculture sector of the province.

Table 1.3: Average Sectoral Growth Rates (%), Punjab & Pakistan, 2012-13 to 2017-18

Sector	Punjab	Pakistan
Agriculture	2.0	2.1
Industry	5.2	4.7
Services	5.7	5.4
GDP	4.9	4.7

Source: PERI, Government of Punjab and PBS, Government of Pakistan

The decomposition by expenditure of the provincial and national GDP is given in Table 1.4.

Table 1.4: GDP by Expenditure*, Punjab & Pakistan, 2015-16**

Indicators	Punjab		Pakistan		Punjab's Share of Pakistan (%)
	Level (Rs in Billion)	Share of GDP (%)	Level (Rs in Billion)	Share of GDP (%)	
Household Consumption Expenditure	4,987	78.2	9,196	78.3	54.2
Government Consumption Expenditure	699	11.0	1,321	11.3	52.9
Private Investment	729	11.4	1,278	10.9	57.0
Public Investment	241	3.8	421	3.6	57.2
Change in Inventories	102	1.6	188	1.6	54.2
Net Imports	-383	-6.0	-650	-5.5	58.9
GDP at Market Prices	6,375	100.0	11,755	100.0	54.2
Total Domestic Savings	689		1,238		55.6
Net Factor Income from Abroad	418		675		61.9
Total Savings	17.4		16.3		
***at constant prices of 2005-06 **more recent data is not available**					

Source: PERI, Government of Punjab and PBS, Government of Pakistan

Overall, Punjab's economy has a higher share in private and public investment, as well as in Net Foreign Factor Income (NFFI). Also, Punjab has a significantly higher saving rate. The net trade deficit of Punjab is somewhat higher at 6 percent of the provincial GDP.

4. Level of Investment

Table 1.5 highlights the trend of investment, both in private and public, in Punjab and in Pakistan for the years 2013-14 to 2017-18. There is evidence that the overall level of investment in Punjab is higher.

Table 1.5: Level of Investment, Public and Private, 2013-14 to 2017-18 (% of GDP)

Investment Type	2013-14	2014-15	2015-16	2016-17	2017-18
Private Investment					
Punjab	11.7	12.5	13.0	12.6	12.1
Pakistan	11.4	12.0	12.5	11.6	11.4
Public Investment					
Punjab	3.3	4.1	3.8	5.1	5.6
Pakistan	3.2	3.7	3.6	4.5	5.0
Total Investment					
Punjab	15.0	16.7	16.6	17.7	17.7
Pakistan	14.6	15.7	16.1	16.1	16.4

Source: PERI, Government of Punjab and PBS, Government of Pakistan

5. Labour Force & Employment

The labour force participation rate is higher in Punjab than the national average. From 2013-14 to 2017-18: it averaged at 48.4 percent as compared to 44.9 percent of Pakistan's. The difference is largely due to the higher labour force participation rates of females in Punjab. The growth rate of labour force and employment is given in Table 1.6. The labour force growth rate is the same in Punjab and the country as a whole. Employment growth has been slightly faster in Punjab. However, the unemployment rate in Punjab during 2017-18 at 6 percent is somewhat higher than 5.8 percent in Pakistan.

Table 1.6: Labor Force, Employment and Unemployment Rate, Punjab and Pakistan, 2012-13 to 2017-18 (Million)

Indicators	2012-13	2017-18	Annual Growth Rate (%)
Punjab			
Labor Force	36.0	40.0	2.1
Employment	33.7	37.6	2.2
Unemployment Rate	**6.4**	**6.0**	
Pakistan			
Labor Force	59.1	65.5	2.1
Employment	55.6	61.7	2.0
Unemployment Rate	**6.0**	**5.8**	

Source: Pakistan Labour Force Survey, PBS, Government of Pakistan

A critical area with regard to the conditions in the labour market is the extent of utilisation of the human capital in the labour force. This is indicated by the variation in the unemployment rate of workers with different levels of education. The critical area is the unemployment rate of workers who completed their post-graduation. It is as high as 18.9 percent in Punjab as compared to 16.3 percent in Pakistan.

Table 1.7: Unemployment Rate of Workers with Different Level of Education (2017-18) (%)

Indicators	Punjab	Pakistan
Illiterate	3.6	3.2
Literate	7.7	7.5
Pre-Matric	5.1	4.6
Matric	6.0	6.5
Intermediate	11.2	12.0
Degree/Post-graduate	18.9	16.3
Overall	**6.0**	**5.8**
Youth Workers	11.6	11.1

Source: Pakistan Labour Force Survey, PBS, GoP

Productive absorption of highly educated workers will represent a big challenge in the formulation of the Punjab Growth Strategy. Table 1.7 indicates that youth unemployment rate is also high at more than 11 percent. There will also have to be a focus on providing enough jobs in the presence of the 'youth bulge'. The sectoral distribution of employment is given in Table 1.8 for 2017-18. Punjab has a higher share of employment in both agriculture and manufacturing. The latter is due to the stronger and more pervasive presence of small-scale manufacturing units in the province, with strong export orientation.

Table 1.8: Sectoral Distribution of Employment, Punjab & Pakistan 2012-13 and 2017-18 (%)

Sector	Punjab		Pakistan	
	2012-13	2017-18	2012-13	2017-18
Agriculture, Forestry and Fishing	44.7	40.0	43.7	38.5
Manufacturing	15.4	17.7	14.1	16.1
Construction	7.4	7.0	7.4	7.6
Wholesale and Retail Trade	15.3	14.2	14.4	14.9
Transport and Communications	4.4	4.9	5.5	6.2
Community, Social and Personal Services	10.8	10.8	13.3	14.7
Others	2.0	5.4	1.6	2.0
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: Pakistan Labour Force Survey, PBS, Government of Pakistan

The general expectation is that as development proceeds, the share of employment in agriculture will decline. This is also visible in Punjab and elsewhere in the country. In Punjab, the share has fallen relatively fast from almost 45 percent in 2012-13 to 40 percent in 2017-18. Employment has been diverted to the manufacturing and other sectors.

6. Regional Disparities

The level of Human Development Index (HDI) has been derived for each district of Pakistan in the latest Human Development Report for Pakistan by the UNDP. The HDI estimates for the districts of Punjab are given in Table 1.9.

Table 1.9: HDI of the Districts of Punjab

National HDI Rank**	District	Human Development Index
High level of Human Development		
1	Lahore	0.877
3	Rawalpindi	0.834
5	Sialkot	0.834
6	Jhelum	0.829
High-Medium Human Development		
7	Gujrat	0.795
8	Chakwal	0.792
9	Attock	0.786
10	Faisalabad	0.782
11	Gujranwala	0.769
12	Toba Tek Singh	0.763
15	Narowal	0.748
16	Nankana Sahib	0.740
17	Sheikhupura	0.738
19	Layyah	0.729
20	Sargodha	0.728
21	Multan	0.718
23	Mandi Bahauddin	0.716
24	Kasur	0.714
25	Sahiwal	0.710
26	Khushab	0.706
27	Okara	0.705
28	Hafizabad	0.705
Medium Human Development		
30	Khanewal	0.699
33	Jhang	0.682
39	Pakpattan	0.66
41	Lodhran	0.659

42	Chiniot	0.657
43	Vehari	0.655
46	Bahawalpur	0.645
47	Mianwali	0.645
49	Bahawalnagar	0.63
50	Bhakkar	0.628
51	Rahim Yar Khan	0.625
Low Medium Human Development		
58	Muzaffargarh	0.584
64	Dera Ghazi Khan	0.535
69	Rajanpur	0.506
Low Human Development		
	No District fall in this category	

*Source: Human Development Report 2017, UNDP Pakistan

There are four districts, namely, Lahore, Rawalpindi, Sialkot and Jhelum, which have achieved a high level of human development. The medium level of HDI has been attained by 29 districts. Only three districts, namely Muzaffargarh, Dera Ghazi Khan and Rajanpur, have been identified at the low level of human development. All of these districts are located in southern Punjab.

Salient Features of The Punjab Growth Strategy & Recommended Growth Path

Salient Features of the Punjab Growth Strategy & the Recommended Growth Path

The Punjab Growth Strategy (PGS) represents a unique combination of the national macroeconomic framework with the regional dimension of the economy of Punjab. This represents the process of decentralization following the 18th Amendment whereby provincial regional planning can be made consistent with a national plan prepared by the Federal Planning Commission for a period of five years.

The development of the PGS has become possible only after extensive research. This has included estimates of the Gross Provincial Product (GPP) by sector and by expenditure component. A time series of the GPP of Punjab has been constructed from 1999-2000 to 2017-18. Further, the Human Development Index (HDI) has been estimated for each division and district of the province. This quantifies the extent of regional disparities in Punjab, particularly with regard to South Punjab. Today, the HDI of South Punjab is 32 percent lower than the rest of Punjab. Also, the incidence of poverty is two and half times that of the rest of the Punjab.

1. Key Features

The salient features of the PGS are highlighted below. The second part of the chapter presents the magnitudes which describe the key elements of the strategy for the period, 2018-19 to 2022-23.

1.1 PGS reflects the close link between regional economy of Punjab and the national economy

The majority of variables in the PGS are influenced by national macroeconomic variables as highlighted in Table 2.1. In particular, the production and investment in different sectors of Punjab are impacted by a large number of macroeconomic variables.

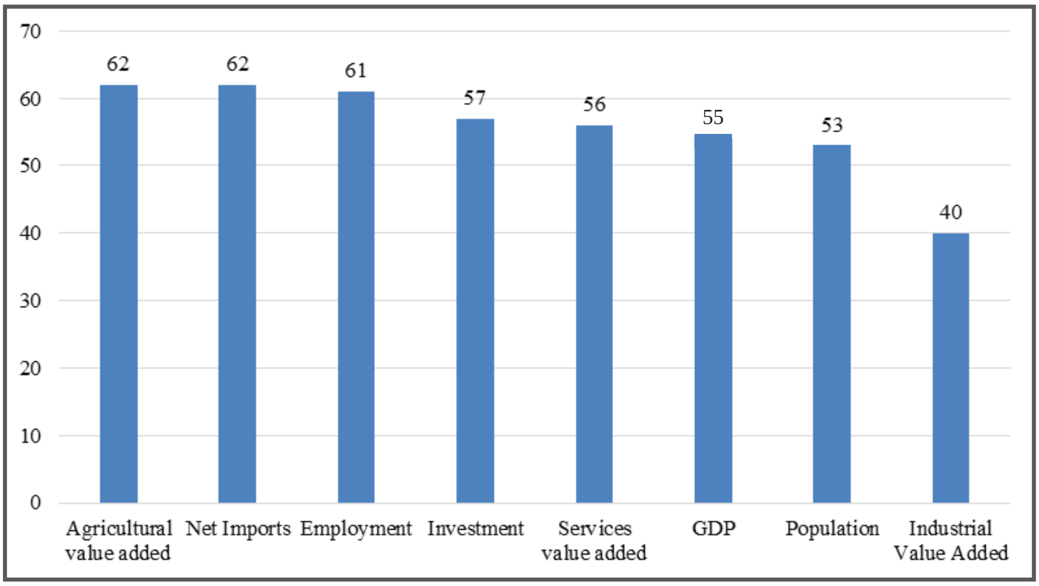
Table 2.1: Impact on Provincial Economic Magnitudes of National Macroeconomic Variables

Provincial Variable	Dependence on which National Variables
Production by	
Crop Sector	Federal PSDP on Water; Crop Procurement/Support Prices; Subsidies/ Taxes on Agricultural Inputs
Large Scale Manufacturing	National Export Incentives and Policies; Quantum of Electricity Generation and Incidence of Power Outages
Small-Scale Manufacturing	All policy variables for LSM & Total Credit to SMEs
Construction	Size of Federal PSDP; Taxation of Building Materials
Finance and Insurance	Level of Interest Rates
Wholesale and Retail Trade	Volume of Imports
Transport and Communication	Prices of Petroleum Products
Social, Community Services	Level of Home Remittances
Investment in	
Agriculture, Industry and Services	Level of Interest Rates

The crop sector of Punjab, for example, is impacted by the size of Federal PSDP on water, level of procurement, support prices and subsidies/taxes on agricultural inputs like fertilizer, light diesel oil, electricity, etc. The other side of the two-way relationship is from the regional to the national economy. Clearly, if Punjab's economy performs better it raises the growth rate of Pakistan's GDP significantly.

As shown in Figure 2.1, Punjab has a higher share in relation to its population share in the national value added in agriculture, net imports of goods and services, employment, total investment, services value added and the national GDP. The only relatively low share is in industrial value added. The province has relatively underdeveloped mining and quarrying, and electricity and gas sectors. However, the share in small scale manufacturing is large at over 68 percent.

Figure 2.1: Punjab's Share in Key National Magnitudes (%)



Source: Punjab Bureau of Statistics, Pakistan Labour Force Survey and Pakistan Economic Survey

1.2 PGS is based on first Stabilization of the National Economy and its implications thereof on the economy of Punjab followed by the move to higher Growth

Pakistan needs to go through a period of stabilization given the extremely large national current account and budget deficits. The likelihood is that Pakistan will go into an IMF Program through access to the Extended Fund Facility (EFF) for three years. The federal government has already moved on the path of stabilization soon after its induction into power. Contractionary fiscal, monetary and trade policies have been adopted to control the level of aggregate demand and reduce the level of imports. Simultaneously, measures have been taken to promote exports.

Table 2.2 shows the path that is likely to be followed by the various policy instruments from 2018-19 to 2022-23. Initially during the first two years, big adjustments are likely to be made with a quantum depreciation of the rupee, hike in interest rates, big increases in gas, electricity and petrol prices and sizable cut back in the Federal PSDP. The Government of Punjab has also opted for a big reduction in ADP so as to generate a relatively large cash surplus and thereby make a significant contribution to reduction of the consolidated fiscal deficit in 2018-19.

Table 2.2: Projected Magnitudes of Policy Instruments, 2018-19 to 2022-23

Indicator	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Depreciation of the Exchange Rate (%)	16	25	15	10	10	5
Nominal Interest Rate (SBP Policy Rate) (%)	6	12	9	8	7	6
Rate of increase in Energy Prices (%)	5	25	8	8	8	8
Growth in Federal PSDP (%)	-18	-13	5	10	15	15

Source: Punjab Growth Strategy Team

The expectation is that the process of stabilization will be completed by the end of 2019-20 and both the national and provincial economies can then get on a trajectory of higher and more sustainable growth. As such, there will be a resort to more expansionary fiscal and monetary policies from 2020-21 onwards.

1.3 PGS identifies the sectors in which Punjab has the comparative advantage1 in the national context and harnesses their potential

The location quotient of each sector and sub-sector of Punjab is given in Table 2.3 The sectors with the comparative advantage are shown in Figure 2.2. The biggest comparative advantage of Punjab is in two sectors, viz., major crops and small-scale manufacturing. Other sectors with significant comparative advantage are livestock, social and community services, transport, storage and communications, minor crops and construction. Three emerging sectors of comparative advantage are finance and insurance, wholesale and retail trade and public administration and defense.

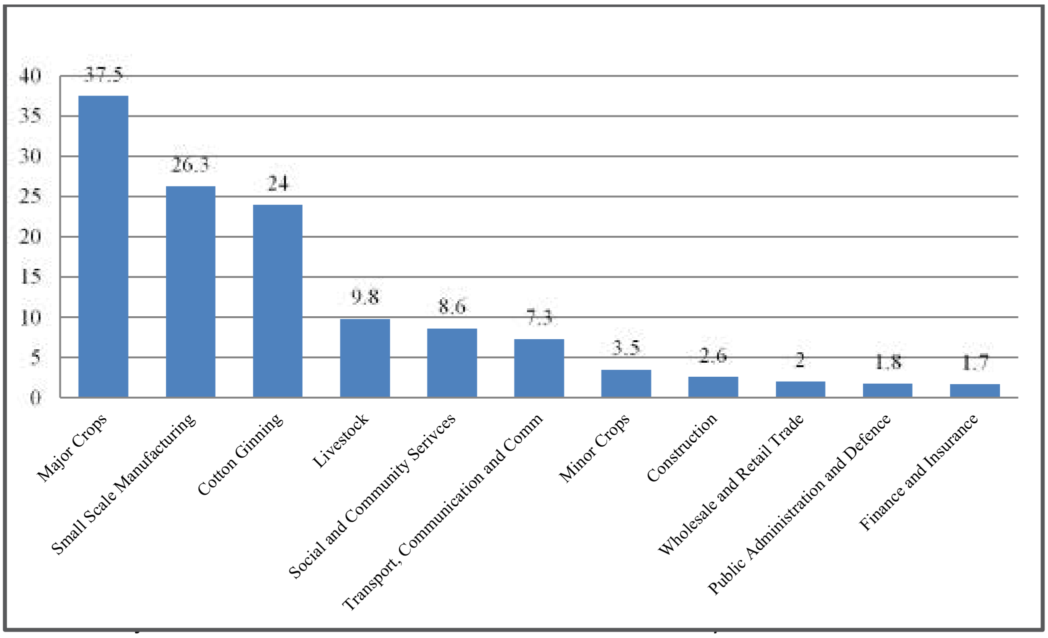
The PGS focuses on the sectors of comparative advantage. This will also contribute to stronger integration and inter-provincial trade within Pakistan. Sectors like large-scale manufacturing will need special support in Punjab so as to enhance their share in the national economy.

Table 2.3: Share of Punjab in each Sector and Location Quotient of the Sector, 2015-16

	Share of Punjab in National Sectoral Value Added (%)	Location Quotient
Agriculture	**62.2**	**1.148**
Major crops	74.5	1.375
Minor crops	56.1	1.035
Cotton ginning	67.2	1.240
Livestock	59.5	1.098
Forestry	22.4	0.413
Fishing	48.1	0.887
Industry	**40.2**	**0.742**
Mining and Quarrying	12.8	0.236
Manufacturing	**43.9**	**0.810**
Large-scale	39.5	0.729
Small-scale	68.5	1.263
Slaughtering	52.7	0.972
Construction	55.6	1.026
Electricity and Gas distribution	39.3	0.725
Services	**56.3**	**1.038**
Transport, Storage and Communication	58.2	1.073
Wholesale and Retail Trade	55.3	1.020
Finance and Insurance	55.1	1.017
Ownership of Dwellings	53.4	0.985
Public Administration & Defense	55.2	1.018
Social and Community Services	58.9	1.086

Source: Punjab Growth Strategy Team

Figure 2.2: Sectors in which Punjab has a Comparative Advantage and the Extent of the Advantage (%)



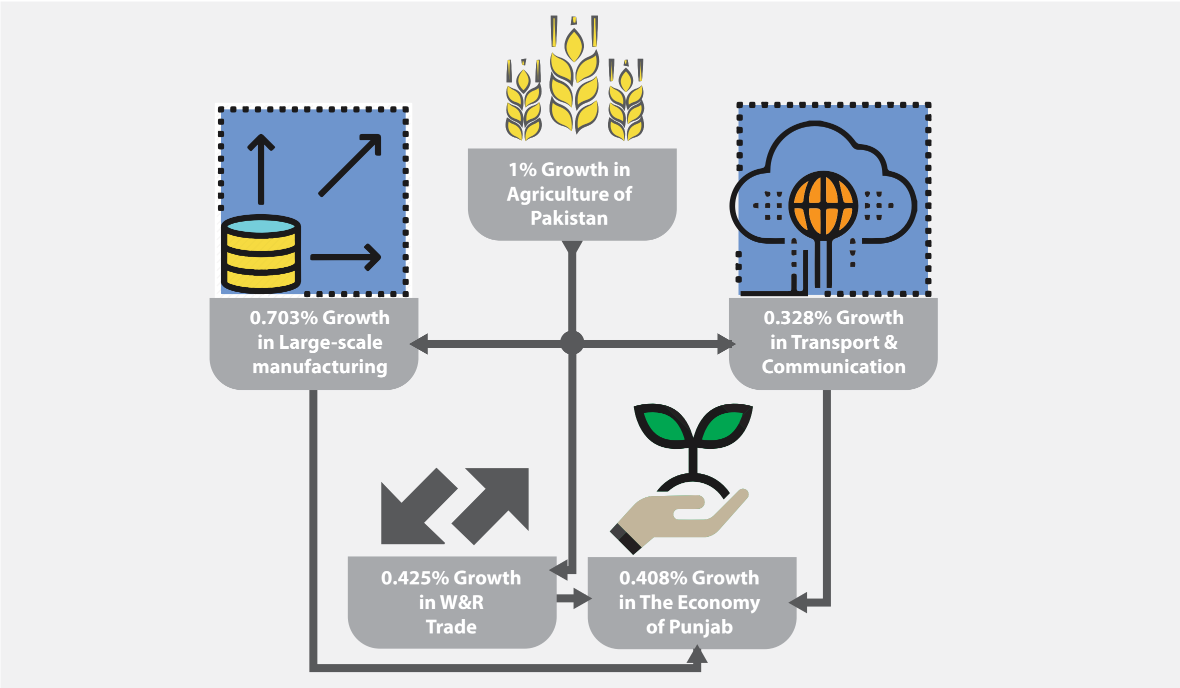
Source: Punjab Growth Strategy Team

Punjab Has Comparative Advantage in 11 out of 18 sectors

1.4 PGS focuses on the leading role of agriculture in Punjab and its forward and backward linkages with other sectors of the regional economy

Historically, agriculture has been the backbone of Punjab economy and through its many linkages has facilitated the overall growth of the province. Today, bulk of the agricultural exports of Pakistan is from Punjab and there is enormous potential for enhancing this contribution. Figure 2.3 highlights the contribution of agricultural growth to growth in sectors like manufacturing, wholesale and retail trade and transport. **It is a striking finding that 1% growth in the agriculture leads directly plus indirectly to over 0.4% growth in the overall economy of Punjab.**

Figure 2.3: The Direct and Indirect Contribution of Agriculture to the Growth of Punjab's Economy



Therefore, PGS looks to accelerate the growth rate of agriculture from about 2% in the last five years to between 3.5% to 4% in the next five years. This alone will add 0.6 to 0.8 percentage points to the overall growth rate of the economy of Punjab. Specific initiatives in the PGS for augmenting the growth rate of agriculture are described in a subsequent chapter.

1.5 PGS determines public investment and ADP sectoral priorities so as to maximize the impact on growth

The production module of the PGS Model estimates production function of each sector as dependent on the private capital stock, employment, stock of public investment and other demand related variables. The results are presented below in Table 2.4.

Table 2.4: Impact of increase in Public Capital Stock on Productivity in Different Sectors of Punjab's Economy

	1% Increase in Public Capital Stock in*					
Impact on Sector Productivity	Agriculture	Irrigation	Roads & Transport	Urban Development	Energy	Education**
Crops	0.504	0.504	0.063	-	-	-
Livestock	0.340	-	0.340	-	-	-
Large-scale manufacturing	-	-	0.631	0.137	0.137	0.876
Small-scale manufacturing	-	-	-	-	-	-
Construction	-	-	0.335	0.335	-	1.126
Finance and Insurance	-	-	0.391	0.391	-	1.284
Wholesale and Retail Trade	-	-	0.116	0.057	0.116	1.027
Transport and Communications	-	-	0.216	0.079	0.216	0.586
Social, Community Services	-	-	-	-	-	0.198

*Health and Water Supply and Sanitation impact mostly on health indicators and quality of life

**Via the impact on the human capital endowment of the employed

Source: Punjab Growth Strategy Team

Sensitivity analysis of the sectoral ADP allocations has been undertaken to determine where an increase in share of allocations has the maximum impact on the rate of growth of Punjab's economy. The ranking of the impact is given below:

1. Education
2. Agriculture and Irrigation
3. Roads and Transport
4. Urban Development

1.6 Given the strong impact of Human Capital on Economic Growth, the PGS focuses on more Human Capital Formation and its Utilization

The present position with regard to the education level of the labor force of almost 40 million workers in Punjab is given below in Table 2.5. Less than 8% are graduates or with post-graduate qualifications. Employment opportunities are limited for these workers and unemployment rate is extremely high at close to 19 percent. The PGS will not only target for increasing substantially the number of educated workers but also ensure their productive absorption.

Table 2.5: Distribution of the Labor Force and the Employed by Level of Education in Punjab, 2017-18 (%)

	Labor Force	Employed	Unemployed	Unemployment Rate
Illiterate	41.4	42.4	24.8	3.6
Literate	58.6	57.6	75.2	7.7
Pre-Matric	33.5	33.8	26.9	5.1
Matric	12.6	12.6	12.6	6.3
Inter	4.7	4.4	8.7	11.2
Degree, Post Graduate	7.8	6.8	24.9	18.9
Total	**100.0**	**100.0**	**100.0**	
Number (million)	**39.98**	**37.60**	**2.38**	**6.0**

Source: Pakistan Labour Force Survey, PBS, Government of Pakistan

There is another serious issue with regard to employment. The 'youth bulge' in the population of Punjab needs to be provided employment. The unemployment rate among young workers, aged 15-24 years is 11.6 percent. Currently, there are as many as 11.4 million "idle" male and female youth in Punjab, with 30 percent male youth. Given the possibility of religious extremism and crime especially among male youth, it will be essential to launch Youth Programs to ensure that they also have a productive role in the economy.

1.7 PGS is based on the launching of a vigorous Fiscal Effort by the Government of Punjab to raise its own Revenues

The Government of Punjab has put in a significant fiscal effort between 2012-13 and 2017-18. The

Table 2.6: Trend in Own-Revenues of the Government of Punjab (Rs. in Billion)

Indicators	2012-13	2017-18	Annual Growt h Rate (%)
Tax Revenues	77.3	197.5	20.6
Sales tax on Services	37.0	105.9	23.4
Other Taxes	40.3	91.6	17.8
Non- Tax Revenues	28.1	61.6	17.0
Total Own -Revenues	105.4	259.1	19.7
% of Punjab's GPP	0.9	1.4	
Extent of Self -Financing	15.0	18.3	

Source: Finance Department, Government of Punjab

However, much of the increase in the tax revenues has come from the imposition of the sales tax on services following the 18th Amendment. The emphasis over the next five years will be on further expansion of the sales tax base and on the development of other taxes like the Urban Immoveable Property Tax and the Agriculture Income Tax. Similarly, non-tax revenues will also be augmented, especially by enhancement in the rates of Abiana, in an effort to increase efficiency of water use. A feasible target for the next five years is to raise the provincial own-revenues to GPP ratio from 1.4 percent in 2017-18 to almost 2 percent by 2022-23.

1.8 The PGS is based on the assumption that Punjab's share in the NFC Transfers will remain at least unchanged

The share of transfers to Punjab out of the Federal Divisible Pool and in the form of straight transfers is given in Table 2.7 below. The share has risen somewhat from 46.9 percent in the 2012-13 to 48.6 percent in 2017-18. The transfers were equivalent to 76.4 percent of the total revenues of the Government of Punjab.

Table 2.7: Provincial Share of Punjab in Total Revenue Transfers from Federal Government (Rs. in Billion)

	Total Federal Transfers to Provinces	Transfers to Punjab	Share of Punjab (%)
2012-13	1215.0	569.3	46.9
2013-14	1406.3	646.3	46.0
2014-15	1538.7	726.9	47.2
2015-16	1862.2	901.5	48.4
2016-17	1965.8	928.8	47.3
2017-18	2217.4	1078.8	48.6

Source: Ministry of Finance, Government of Pakistan

The 9^{th} NFC has recently been constituted and has already had its first meeting. The PGS Model has made projections of the economy of Punjab on the assumption that the share of the province in federal transfers will not fall below the level in 2017-18 of 48.6 percent. The model reveals that even a 5-percentage point drop in the share could reduce the annual GDP growth rate of Punjab by as much as 1 percentage point.

1.9 One of the objectives of the PGS is to reduce Gender Inequality in Punjab

There is a significant gap in the literacy rate, school enrollment, labor force participation rate, employment-to-population ratio and level of wages between the male and female population of Punjab, as shown in Table 2.8.

Table 2.8: The Extent of Gender Inequality in Punjab 2014-15*

Indicator	Unit	Female	Male	Ratio
Literacy Rate	**%**	**72**	**78**	**0.923**
Primary GER	%	93	87	
Middle GER	%	58	56	
Secondary GER	%	35	33	
Overall School Enrollment Rate	**%**	**68**	**64**	**0.941**
Labor Force Participation Rate	%	50	20	
Unemployment Rate	%	5.4	7.5	
Employment-to-Population Ratio	**%**	**47.3**	**18.5**	**0.391**
Average Wage**	Rs. per month	**13,537**	**15,631**	**0.866**
Index of Gender Inequality				**0.535**

*The labor related data is for 2017-18
** In an intermediate occupation

Source: Bureau of Statistics, Government of Punjab and Pakistan Bureau of Statistics, Government of Pakistan

The target in the PGS is to reduce the gender gap by at least half in the next five years. This will require a disproportionate allocation of new schools and teachers for girls. There will be a need to expand employment opportunities at a sufficient rate and in occupations for faster and larger absorption of female entrants into the labor force. Removal of wage discrimination will require appropriate legislation and its implementation.

1.10 PGS makes the full effort to contribute to the five year cumulative targets of the Government for Job Creation and Construction of New Housing Units. The national targets of the Government from 2018-19 to 2022-23 are as follows:

'10 million jobs in five years'
'5 million new housing units in five years'

Table 2.9 highlights the performance of the economy of Punjab in the process of job creation over the last five years. Between 2012-13 and 2017-18, the number of new jobs on average annually was 834,000. This represents a high proportion, 74 percent of the total jobs created in the country.

The required rate of job creation will have to be 50 percent more annually in Punjab if the province is to make a befitting contribution to attainment of the target. In other words, the number of new jobs will have to be on average 1,250,000 annually over the next five years.

Turning to the target of new housing units, the performance in Punjab has been slower than the country as a whole. During the period, 2011-12 to 2015-16, the number of new housing units in the province has averaged 377,000 annually as compared to the national average of 826,000 units. Over the next five years, the number in Punjab will have to be increased to 566,000 if an adequate contribution is to be made to achieving the government's target.

Table 2.9: New Jobs Created from 2012-13 to 2017-18 (000)

	2012-13	2017-18	Annual Job Created	Growth Rate (%)
Employment Punjab	33,430	37,600	834	2.4
Pakistan	56,010	61,710	1,140	2.0
Punjab as % of Pakistan	59.7	60.9	73.8	
Required Rate of Enhancement in Job Creation to Achieve Target (%)			50*	
Target of Job Creation in Punjab to Achieve government's Target				

*With Punjab creating 63% of the new jobs in the country.
Source: Punjab Growth Strategy Team

Table 2.10: New Housing Units built from 2011-12 to 2015-16 (000)

	2011-12	2015-16	Annual New Houses Constructed
Housing Units Punjab	15,968	17,477	377
Pakistan	28,116	31,423	826
Punjab as % of Pakistan	56.8	55.6	45.6
Required Rate of Enhancement in Construction of Housing Units to Achieve Target			53*

*With Punjab constructing 56% of the new housing units.
Source: Punjab Growth Strategy Team

1.11 The PGS aims to raise the rate of progress towards achievement of the key SDG targets by 2030

The focus of PGS is also on accelerating the rate of progress on some of the key targets in the Sustainable Development Goals (SDGs) of the UN. These are listed in Table 2.11.

Table 2.11: Required Rate of Progress in Achieving Selected SDG Targets by 2030

Indicators	Base Year 2017-18 Value	Target	Required Annual Rate of Progress
Incidence of Poverty (%)	26.2	½ of base year	-1.0
Stunting and Wasting of Children (%)	31.0	0	-2.4
Child Mortality (per 1000 live births)	69.0	25	-3.4
Net Enrollment Rate (%)			
Primary			
Boys	65.6	100%*	2.6
Girls	66.3	100%*	2.7
Secondary			
Boys	36.3	100%*	4.9
Girls	35.9	100%*	4.9
Index of Gender Inequality	0.521	1	5% growth annually

*Both boys and girls.
Source: MICS 2018, Bureau of Statistics, Government of Punjab

2. Recommended Strategy

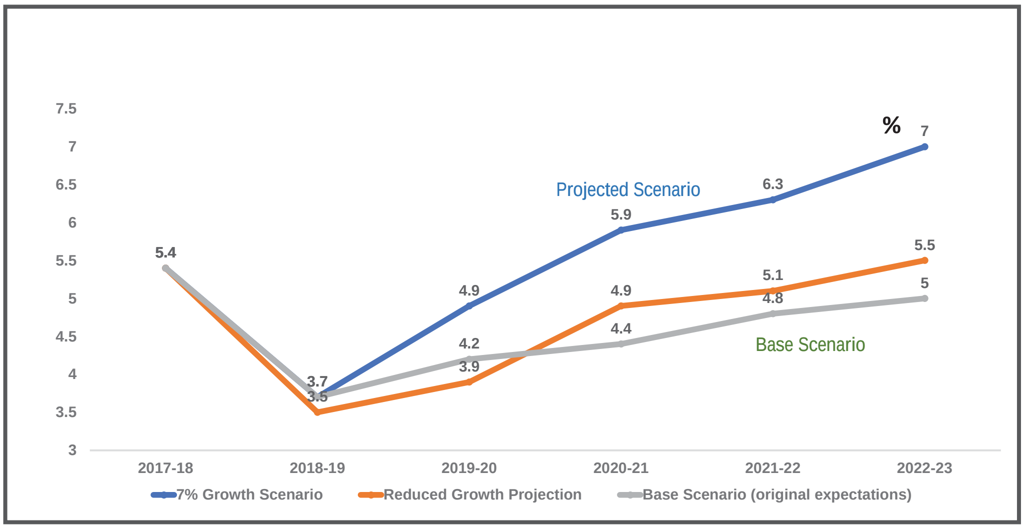
2.1 The PGS Model develops two growth scenarios from 2018-19 to 2022-23

These are with the terminal growth rate of 5 percent and 7 percent respectively in 2022-23. The 5 percent growth scenario corresponds, more or less, to the base scenario. The higher growth rate scenario highlights the extra effort that will need to be made to raise the growth rate of Punjab's economy. Also, the 7 percent growth rate scenario builds in the impact of a change in sectoral allocations in the ADP towards education. The recommended strategy is to attempt the achievement of 7 percent growth rate in 2022-23.

2.2 Growth Path

Figure 2.4 below highlights the two growth paths of Punjab's GPP. The growth rate achieved by the Punjab economy was at 5.4 percent in 2017-18. However, the two years, 2018-19 and 2019-20, are likely to see a perceptible fall in the growth rate to only 3.7 percent in 2018-19 and 5.1 percent in 2019-20 for achieving 7 percent growth by 2022-23. This loss of growth momentum is attributable to the fact that in an attempt to stabilize the economy, contractionary monetary and fiscal policies will be adopted both at the national and provincial level. The provincial budget of 2018-19 has cut the size of the PSDP substantially so as to generate a sizeable cash surplus and thereby make a significant contribution to the reduction of the consolidated fiscal deficit.

Figure 2.4: Annual Growth Rate of Punjab's GPP in Different Growth Scenarios



Source: Punjab Growth Strategy Team

Punjab's economy is expected to get on to a higher growth trajectory by 2020-21. The growth rate should approach 6 percent by 2020-21 and rise to 7 percent by 2022- 2023. Over the five years, the faster growth of the economy will mean that in 2022-23 the provincial GPP will be 7.5 percent larger than in the base scenario.

The average annual sectoral growth rates in the two scenarios are given in the Table 2.12 below. The average growth rate of agriculture approaches 4 percent in the recommended growth path while industry will average 7 percent and services above 6 percent.

Table 2.12: Average Annual Growth Rate in the two Scenarios (%)

	Agriculture	Industry	Services	Total GPP
5% Growth Scenario	3.0	4.7	4.8	4.4
7% Growth Scenario	3.9	7.0	6.1	5.8

Source: Punjab Growth Strategy Team

3. Financing the Growth

The financing of the development of the Punjab will come from the development spending through the ADP and by private investment in different sectors of the regional economy. Clearly, achievement of the financial targets will be the basic pre-condition for staying on the path for achieving the 7 percent growth target. The analysis below also indicates the extra effort that will be required in relation to the base scenario.

3.1 Required size of the Provincial ADP

The required size of the provincial ADP is given in the Table 2.13. The ADP has been cut sharply in 2018-19 as highlighted earlier. In the recommended scenario, some recovery in size will be possible in 2019-20. Thereafter, with relatively rapid growth, the size of the ADP will need to be increased to Rs. 865 billion to achieve the growth rate of 7 percent in 2022-23.

Table 2.13 also indicates that the extent to which the size of the ADP will need to be larger than in the base scenario. Cumulatively, over the five years, the ADP will need to be larger by over Rs. 440 billion. However, increasing the share of education in the cumulative ADP from 2018 to 2023 can lead to a saving of over Rs 350 billion in order to achieve the 7 percent growth in 2022-23. This saving is in relation to the required size of the cumulative ADP if the share of education is not increased.

Table 2.13: Average Annual Growth Rate in the two Scenarios (%)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Base 5% scenario	411	238 (-42.1) *	386 (62.1)	463 (19.9)	560 (21.0)	700 (25.0)
Recommended 7% scenario	411	238 (-42.1)	433 (81.9)	563 (30.0)	690 (22.6)	865 (25.3)
Extra Size (%)		0	12.2	21.6	23.2	23.6

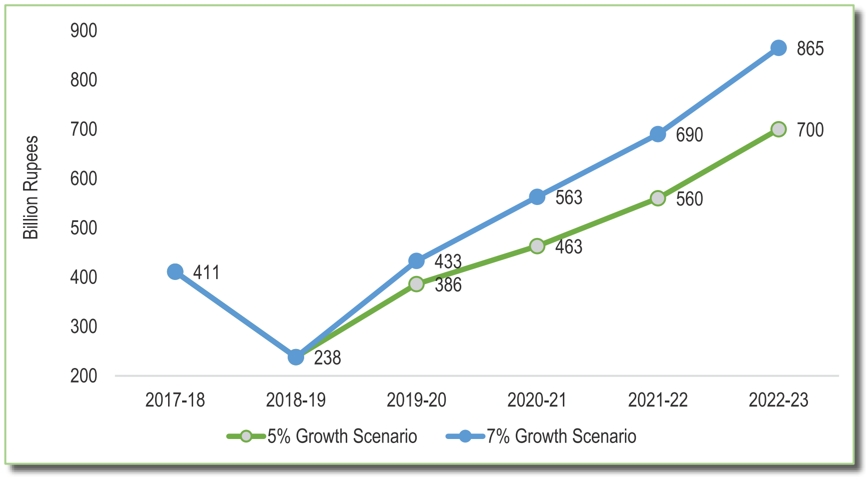
*Annual Growth Rate

*Figure 3.5 presents visually the increase in ADP size

Source: Punjab Growth Strategy Team

The implied levels of own-revenues of the Government of Punjab and transfers from the Federal Government are highlighted in Table 3.14 and 3.15 respectively.

Figure 2.5: Size of the Provincial ADP



Source: Punjab Growth Strategy Team

3.2 Growth in Own Revenues

Table 2.14 gives the growth in own revenues of the Government of Punjab to contribute to financing the larger ADP size in the 7 percent growth scenario. Almost 18 percent annual growth will need to be

Table 2.14: Level of own revenues (Rs. in Billion)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Growth (%)
Base 5% Scenario	259	297 (15.0)	350 (17.4)	412 (17.7)	484 (17.7)	572 (18.1)	17.1
Recommended 7% Scenario	259	297 (15.0)	355 (19.5)	427 (20.2)	518 (21.3)	630 (21.6)	19.5
Extra Effort (%)		**0**	**1.4**	**3.6**	**7.0**	**10.1**	

Source: Punjab Growth Strategy Team

3.3 Growth in Federal Transfers

The level and growth of transfers from the Federal Government are presented in Table 2.15. The required annual growth rate to finance the 7 percent growth path is 13 percent. Historically, between 2012-13 and 2017-18, this was also the growth rate of transfers to Punjab.

Table 2.15: Transfers to the Provinces

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Growth (%)
5% Scenario	1,072	1,250	1,390	1,560	1,740	1,920	12.4
7% Scenario	1,072	1,250	1,410	1,610	1,820	2,050	13.8
Extra Transfer (%)	**0**	**0**	**1.4**	**3.2**	**4.6**	**6.8**	

Source: Punjab Growth Strategy Team

There is also a need to highlight the growth required in credit to SMEs and to agriculture respectively, as shown in Table 2.16. The level of credit to SMEs will have to rise above Rs. 750 billion, with an annual growth rate approaching 11%. In the case of agriculture, the credit needs to achieve the target growth rate of 4% or more approaching Rs. 1300 billion by 2022-23. This will **necessitate an annual growth rate exceeding 13 percent.**

Table 2.16: Level of Credit to SMEs and Agriculture

Credit to SMEs (Rs. In Billion)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Growth (%)
5% Scenario	443	465	488	527	575	632	7.4
7% Scenario	443	465	511	578	658	757	11.3
Extra Credit (%)		**0**	**4.7**	**9.7**	**14.6**	**19.8**	

Source: Punjab Growth Strategy Team

Credit to Agriculture (Rs. In Billion)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Growth (%)
5% Scenario	652	684	718	776	846	930	7.4
7% Scenario	652	684	787	913	1072	1287	14.6
Extra Credit (%)		0	9.6	17.6	26.7	38.4	

Source: Punjab Growth Strategy Team

Based on the levels of availability of credit, the required level of private investment in Punjab to achieve 7 percent growth by 2022-23 is given in Table 2.17.

Table 2.17: Level of Private Investment in Punjab

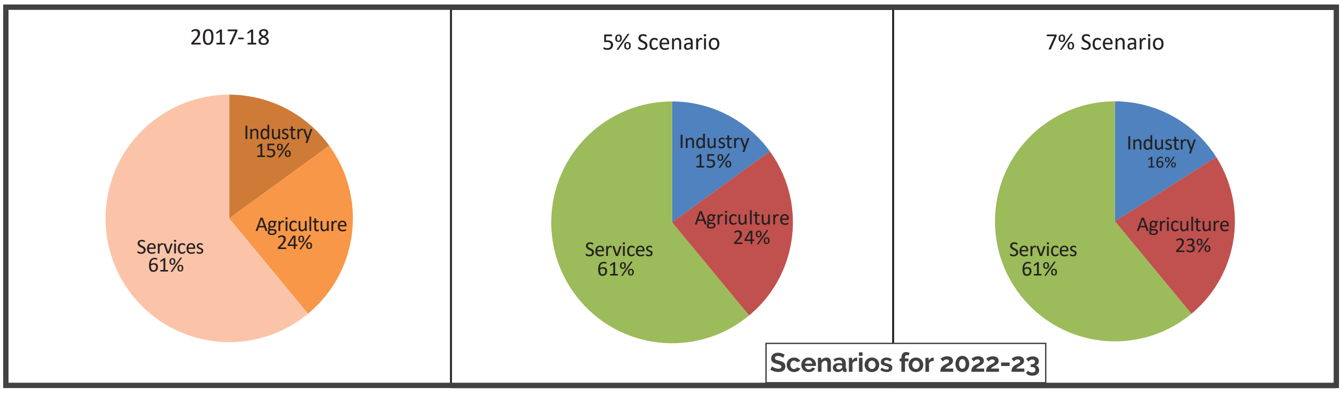
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Growth (%)
5% Scenario	2,304	2,596	3,021	3,525	4,109	4,826	15.9
7% Scenario	2,304	2,596	3,055	3,642	4,336	5,150	17.4
Additional Investment (%)		**0**	**1.1**	**3.3**	**5.5**	**6.7**	

Source: Punjab Growth Strategy Team

The growth rate of private investment in the higher growth path will have to be high at 16 percent over the five year period. The focus has to be on improving the business environment, enhancing the ease of doing business and taking advantage of the fiscal incentives offered in the CPEC Special Economic Zones (SEZs) located in Punjab.

The sectoral distribution of private investment projected in the 7 percent growth path is given in Figure 2.6.

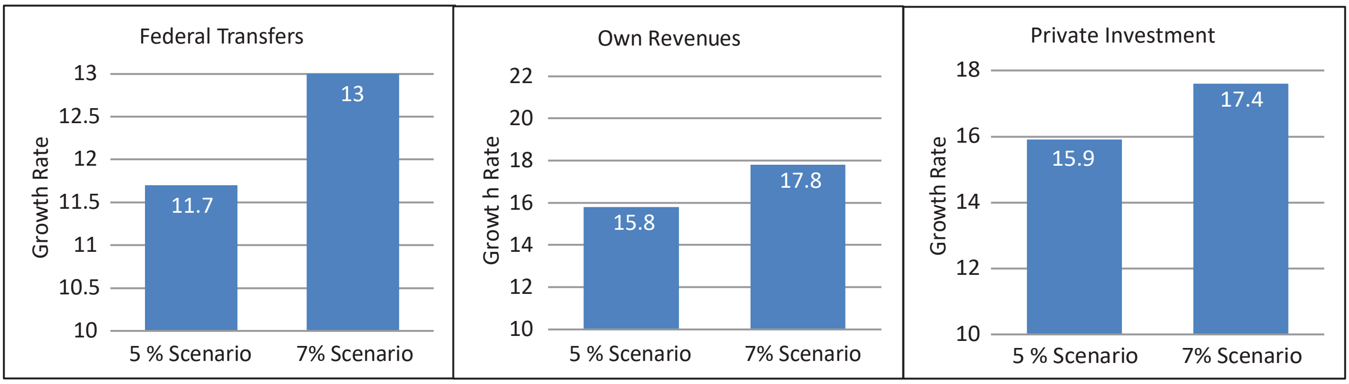
Figure 2.6: Sectoral Distribution of Private Investment

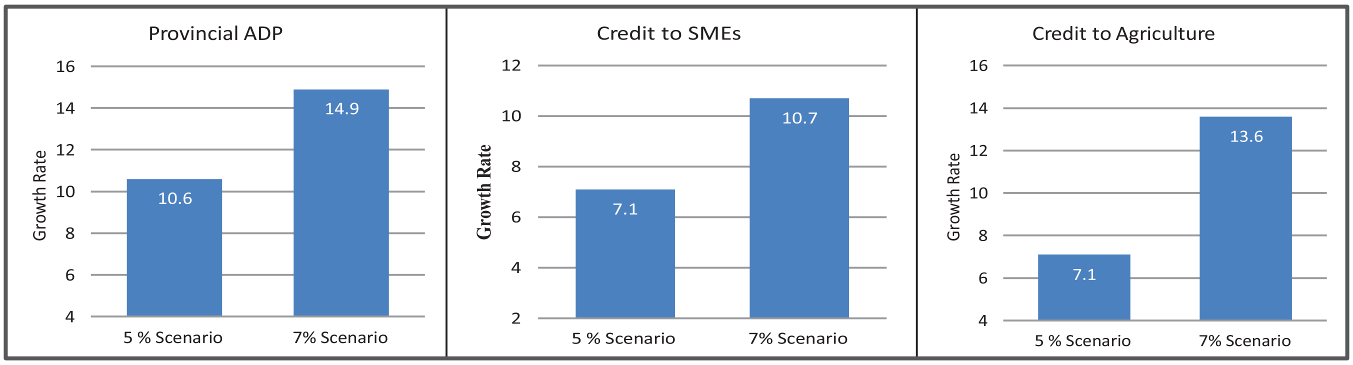


Source: Punjab Growth Strategy Team

A summary is given in Figure 2.7 of the difference between the base line scenario and the high growth scenario in terms of the growth rate of different sources of financing. The Government of Punjab will have to make a truly exceptional effort to achieve the fastest growth among the sources in own revenues of almost 18 percent annually. Also, the largest difference in the growth rate in the two scenarios is in agricultural credit.

Figure 2.7: Growth Rate of Different Forms of Financing of the Development of Punjab (%)





Source: Punjab Growth Strategy Team

Before the outcomes from the 7 percent growth scenario are highlighted, it is necessary to indicate the changes in the sectoral composition of the annual ADP from 2019-20 as compared to the composition in the base scenario. Table 2.18 shows that in the former case, the share in the ADP of the education sector is increased yearly from 13.8 percent in 2018-19 to 23.8 percent by 2022-23. This implies that education will replace roads and transport as the largest sector by 2021-22. As the share of education increases, the shares of other sectors are reduced proportionately. The shares remain unchanged in the base scenario.

Table 2.18: Shares of ADP by Sector

	5% Base Scenario 2018-19 to 2022-23	7% High Growth Scenario 2018-19 to 2022-23
Agriculture	**4.8**	**6.0**
Industry	**4.0**	**6.5**
Irrigation	**8.2**	**11.0**
Roads and Transport	**26.9**	**16.1**
Urban Development	**2.1**	**1.8**
Energy	**2.1**	**1.8**
Education	**13.8**	**23.8**
Health	**13.9**	**17.1**
Water Supply	**8.6**	**10.6**
Others	**15.6**	**5.3**
TOTAL	**100.0**	**100.0**

Source:Punjab Growth Strategy Team

The outcomes of implementing the 7 percent Growth Strategy are highlighted in the next section.

4. Outcomes of the Punjab Growth Strategy

4.1 Employment Generation

One of the key elements of the PGS is the achievement of inclusive growth, especially by creating widespread and diverse employment opportunities throughout the province. As highlighted, currently the educated workers, females and youth face high unemployment in Punjab.

The projected level of employment is given in Table 2.19. With 7 percent growth by 2022-23, there is a rapid growth in employment on average annually of 3.5 percent. This is substantially higher than the growth rate of 2.3 percent in the base scenario and 2.4 percent over the last five years. In fact, in the high growth scenario, the number of additional jobs created is 2.6 million in to the 5 percent growth path.

Table 2.19: Projected Level of Employment

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Annual Growth Rate(%)
5% Scenario	37.6	38.2	39.0	40.0	41.0	42.3 (4.7)	2.3
7% Scenario	37.6	38.2	39.6	41.2	42.9	44.9 (7.3)	3.5
Extra Employment	**(%)**	**0**	**1.5**	**3.0**	**4.6**	**6.1**	

Source: Punjab Growth Strategy Team

The government's target of creating 10 million jobs in five years requires Punjab to create at least 6,255,000 jobs, as derived in Table 2.19. This is achieved by more than 1 million by implementation of the 7 percent growth strategy. However, there is a slow start towards the target in the first two years. The growth rates of employment by gender are presented in Table 2.20.

Table 2.20: Employment Growth of Male and Female Workers (%)

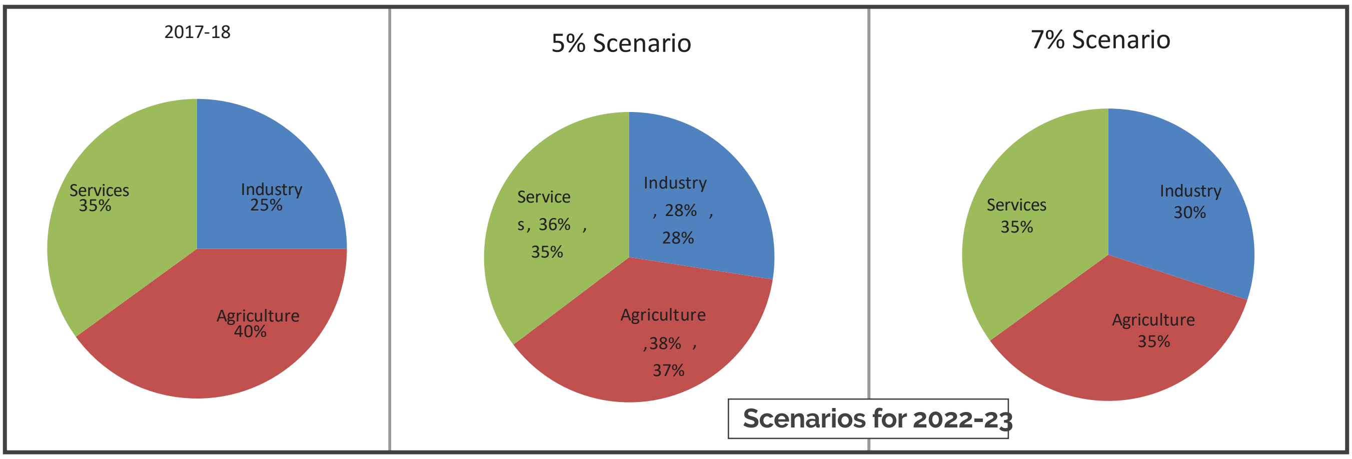
	Male	Female	Total
5% Scenario	2.2	2.5	2.3
7% Scenario	3.3	4.3	3.5

Source: Punjab Growth Strategy Team

The employment growth rate for female workers could be as high as 4.3 percent. This will not only encourage higher rate of labor force participation but also reduce the rate of unemployment.

The sectoral distribution of employment is presented in Figure 2.8. As expected, in the high growth scenario, there is significant reduction in the share of agriculture in employment from 40 percent to 35 percent. Bulk of the increase is in the industial sector. The share of services remains unchanged.

Figure 2.8: Sectoral Distribution of Employment



Source: Punjab Growth Strategy Team

The faster growth of modern sectors like large scale manufacturing, banking and industry, public administration and defence and economic and social services will provide ample opportunities for graduate workers and for the educated labor force.

4.2 Meeting the SDGs

Table 2.21 has quantified the required rate of progress from 2017-18 to 2022-23 so as to facilitate the achievement of the key SDG targets by 2030. The table below gives the performance with regard to these SDGs in the high 7 percent growth path.

Table 2.21: Rate of Progress towards meeting the SDG targets

Indicators	2017-18	2022-23	Annual Change	Extent of Achievement of the Required Rate of Progress (%)
Incidence of Poverty (%)	26.2	19.5	-1.3	130.0
Stunting & Wasting of Children (%)	31.0	17.3	-2.7	112.5
Child Mortality (per 1000 births)	69.0	30.5	-7.7	226.4
Net Enrollment Rates (%)				
Boys, Primary	65.6	71.3	1.1	42.3
Girls, Primary	63.3	70.8	1.1	40.7
Boys, Secondary	36.3	41.8	1.1	22.4
Girls, Secondary	35.9	40.7	1.0	20.4
Index of Gender Inequality	0.521	0.611	3.2*	64.0

*Growth Rate

Source: Punjab Growth Strategy Team

Therefore, there is the prospect of subtantial progress in reducing poverty, stunting and wasting of children and child mortality. However, there will be need for doing more in the areas of primary and secondary education and for the reduction in gender inequality. Further, the rapid growth of agriculture and the off- farm economy will be of special benefit to South Punjab. In addition, the share in ADP must consistently be higher in South Punjab than its population share. This will ensure a faster rate of poverty reduction in the more backward areas of the province.

4.3 The Number of Housing Units

The number of housing units that are likely to be constructed from 2018-19 to 2022-23 is cumulatively 3.2 million. However, this is based essentially on self-financing by households without large-scale access to mortage finance from the banking system. Consequently, while the number is large the quality of hosuing will remain low. Only 30 percent of the new units are likely to be pakka and 50 percent will have 2 rooms or less. Therefore, achievement of the government's target will require upgradation of the housing units being constructed through housing revolving funds plus substantially increased access to housing finance after the promulgation of appropriate mortgage legal provisions.

4.4 Idle Youth

The rapid expansion in employment will also induce greater participation of youth in the labor force. Consequently, the proportion of youth who are 'idle' will decline from 10.3 percent of the population in 2017-18 to 8.8 percent in 2022-23. This could be further reduced by launching of a number of Special Youth Programs.

Overall, the proposed Punjab Growth Strategy which aims to achieve 7 percent growth by 2022-23 promises inclusive and sustainable growth. There are prospects of high rates of employment generation, reduction in gender inequality, big reduction in the incidence of poverty and so on.

However, implementation of the strategy will require a strong fiscal effort at mobilizing more revenues,raising subtantially the size of the ADP along with shift in allocations towards human development and away from over investment in physical infrastructure, improvement in the business climate for the private sector leading to higher investment and sustained high growth in fiscal transfers from the Federal Government.




CREATING AN ENABLING ENVIRONMENT FOR GROWTH

Growth through Private Sector Development

The private sector in Punjab produces more than 90 percent of the goods and services in the province. It is, therefore, the main driver of economic growth, employment and social outcomes in the province. The role of private sector in current times has become even more important as the government is squeezed for fiscal space. Thus, creating an enabling environment, in which private sector can flourish, is the most cost efficient way of achieving development targets by the government. The provincial government is clear in its strategy: that whether it is optimising returns from the China-Pakistan Economic Corridor (CPEC), achieving compliance with SDGs or attaining the overall-inclusive growth and employment targets, the government can only support, with the private sector taking the lead in investment and delivering towards targets. The public resources and public policy will act as the driving catalysts to bring real change led by the private sector.

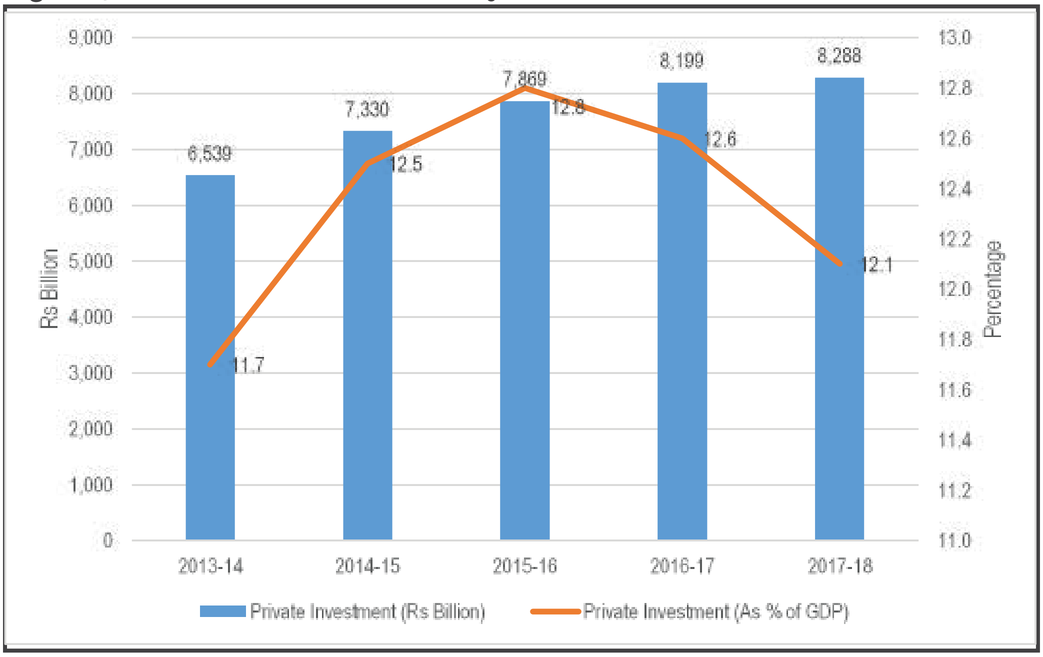
This strategy is not unique in labelling private sector as the engine of growth, as strategies of the previous government identified a similar approach. However, if one is critical of Punjab's performance, the regret is for opportunities missed and for not performing to its potential, rather than for a failed outcome. The criticism is that the province could have done much better. The PGS provides for a strong approach to address issues restricting private sector activity.

1. Pillars for Private Sector Development in Punjab

The main drivers of private sector growth and productivity are the creation of capital assets (i.e. investment) and the efficiency with which these assets are used. The incentive for investment and the achievement of economic efficiency require several conditions.

Firstly, successful development of the private sector requires a stable macroeconomic and policy environment. Inconsistency in either makes it exceedingly problematic for businesses to assess future costs and returns, and, therefore, unable to take a firm view on expected future profits. Since investment depends to a large extent on expectations of future profits, any uncertainty concerning them is likely to result in scaling back of investments.

Figure 3.1: Private Investment in Punjab (2014-18)



Source: Punjab Growth Strategy Team

The responsibility for provision of overall macroeconomic environment conducive to investment and the tools for managing it still rests primarily with the federal government. The management of fiscal matters and taxation policy, interest rate, exchange rate, power pricing and duties, tariffs and overall investment policy also resides with the federal government.

Nevertheless, Government of Punjab will take a more proactive role in managing the province's economy.

It will get a greater control over the macroeconomic environment in the province. It shall do that by, at the least, bringing consistency and robust implementation of policies under its domain, such as, the investment policy, industrial policy, MSME policy, agriculture policy and policy for key services sectors such as Tourism, ICT, Construction and Retail. It will also work on developing a provincial tax policy with dual focus on increasing the revenues and creating growth in the services sector. Punjab will also advocate with the federal government to finalise its 5-year economic plan at the earliest and ensure consistency of policies.

Secondly, a major development of the private sector requires a transparent, effective and well-functioning system of economic governance. Such a system would promote security about rights and assets, effective compliance with contractual obligations, create an environment of open and fair competition that would minimise costs, and establish an efficient mechanism for adjudicating and resolving commercial disputes.

It is clear that Punjab will have to do much more to set the system in place to increase the confidence of the private sector and induce them to invest more. For example, statistics released by the Law & Justice Commission of Pakistan in the first quarter of 2018 reported that 1.8 million cases were pending in courts, including the apex court and lower courts. At the district judiciary level, Punjab was the worst performer with 1,168,782 pending cases. Over 150,000 cases were pending decisions in the Lahore High Court. A majority of these relate to commercial disputes.

In terms of formal statistics, the Law & Justice Commission of Pakistan has not produced an annual statistics report since 2014. Moreover, it is not just the pendency, but the time and cost to enforce contracts is also a significant barrier. The World Bank Investment Climate studies show that when cases are taken up by the courts, it took an average of 46 steps and almost one-third of the contract value to enforce it. Such slow and costly judicial procedures can act as a severe disincentive to business investment, especially foreign investment, which has very wide options about where it can invest.

Thirdly, increasing the private sector's productivity and profitability requires efficient factor markets, so that factors of production can move easily and at low cost from areas of low productivity to where there is more demand. Punjab's factor markets still contain substantial degree of rigidity and uncertainty. Key elements impacting the efficiency of markets include information and coordination failures and inadequate regulatory governance.

Similarly, Punjab's labour market has certain inflexibilities. For example, there are issues pertaining to restrictive labour regulations, design of temporary contracts and retrenchment procedures, etc. The private sector still complains of intrusive and extortion based uncoordinated inspections by as many as 27 agencies/authorities that continually disrupt productive activities. Similarly, obtaining regulatory compliances and approvals is still a cumbersome process and many complain about informal costs to be paid for getting the work done. As a result of the several restrictive measures and a discretionary approach of different authorities, many, if not most, firms circumvent regulations to some degree, whilst other prefer to stay small and avoid the radar.

Fourthly, the hardware issues are equally important. Successful private sector development requires an adequate infrastructure, especially in the form of power supply, adequately priced suitable land, connectivity and transport logistics. These factors help a firm minimise costs and remain competitive, and are important especially for international competitiveness.

Power remains a critical factor, both from the perspective of availability and cost. Data on Punjab's GPP shows that 1 percent increase in the incidence of power load shedding in Punjab reduces large-scale manufacturing value added by 1.23 percent. Similarly, 1 percent increase in energy price further reduces the large-scale manufacturing value added by 0.5 percent. In terms of private investment, 1 percent increase in power load shedding reduces agriculture sector private investment by 1 percent, manufacturing sector private investment by 0.4 percent and the services sector investment by 0.7 percent. These are significant numbers, showing that provision of reasonably priced and consistent supply of energy is the key factor behind private sector investment and growth.

Similarly, availability of suitably and reasonably priced land is a key determinant of private sector investment, for SMEs. Land in Punjab is usually classified as agricultural or residential. Apart from the government provided industrial states, no zoning of land has ever been done in Punjab. This has resulted in two issues.

One, it has resulted in a disorganised mushrooming of industries in residential areas, whereas a large segment of SMEs is now crowded in residential localities. For example, if one walks through any small residential street in Sialkot, the split of residential settings and small manufacturing units will be 50-50. This is a clear problem, both for the industry as it cannot expand, and the residents as they are living in areas that are not environmentally safe. Second, the unorganised conversion of land into industrial ventures has also resulted in market price speculation. This has significantly increased the access price of land that is suitable for industry.This high entry cost eliminates a large segment of small investors who are unable to gather enough capital.

The road infrastructure in Punjab compares favourably to other provinces, however, more efforts are required to strengthen the farm-to-market network. Similarly, the Internet penetration and quality of signal is still an issue in remote areas that limits the use of modern business tools. Finally, in terms of logistics, especially in light of CPEC, the quality of trucks and cool chain services are still problematic that restrict the performance of businesses.

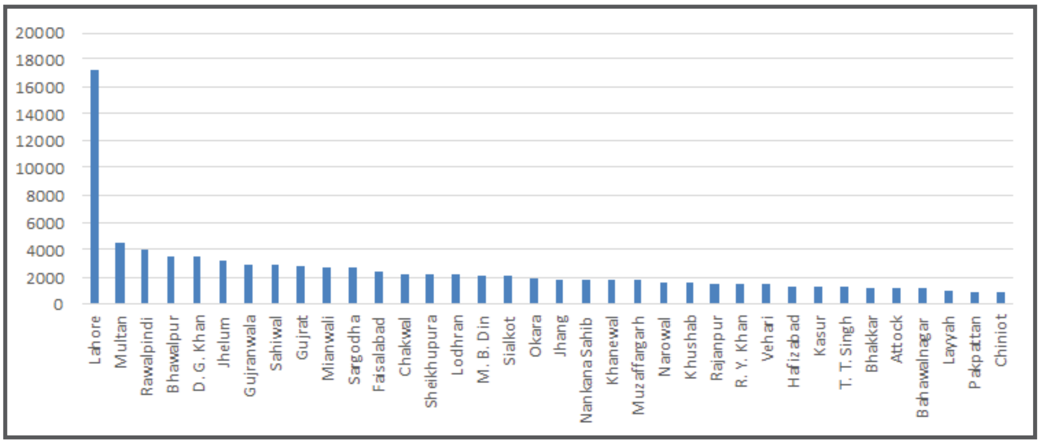
Fifthly, the cost of acquiring technology and research is a critical factor determining local investment and expansion into value addition. Businesses in the Punjab continue to be stuck in the low-value added quadrant as there are limited avenues to acquire technology and research. A critical factor constraining this is the quality of the human resource. Data on Punjab's GPP show that 1 percent increase in schooling of worker increases large-scale manufacturing by approximately 2 percent. This is captured with a strong focus on formation of the capital.

Sixthly, rapid private sector development cannot be sustained in the absence of secure law and order conditions and an element of trust and respect in the institutions providing security. The law and order and security situation in Pakistan and Punjab has now considerably improved as compared to that of a decade ago. However, the private sector still complains about the culture and practices of the agencies providing safety and security. For example, police is the first and most common interface of public sector with the private sector. The private sector, due to the environment and behaviour of the front desk staff, often shies away to report issues and crime, and quietly absorbs the loss.

Lastly, a more balanced development strategy is required for the province to grow quicker and attain equity. Both in matters of hardware and software, Punjab's development plan has been 'Lahore-centric'. Figure 3.2 below shows the disparity between per capita spending between districts over the last four years. This clearly shows that certain gains that could have been made were missed out. For example, spending a billion rupees in Rajanpur would have a much significant impact as compared to the same amount being spent in Lahore.

The province will follow an equalisation and a city diversification strategy. The government will make conscious efforts to reduce the disparities in terms of development and support development of other urban cities so that the pressure on Lahore decreases.

Figure 3.2: Average Annual Per-Capita Development Expenditure Per District 2014-18 (PKR)



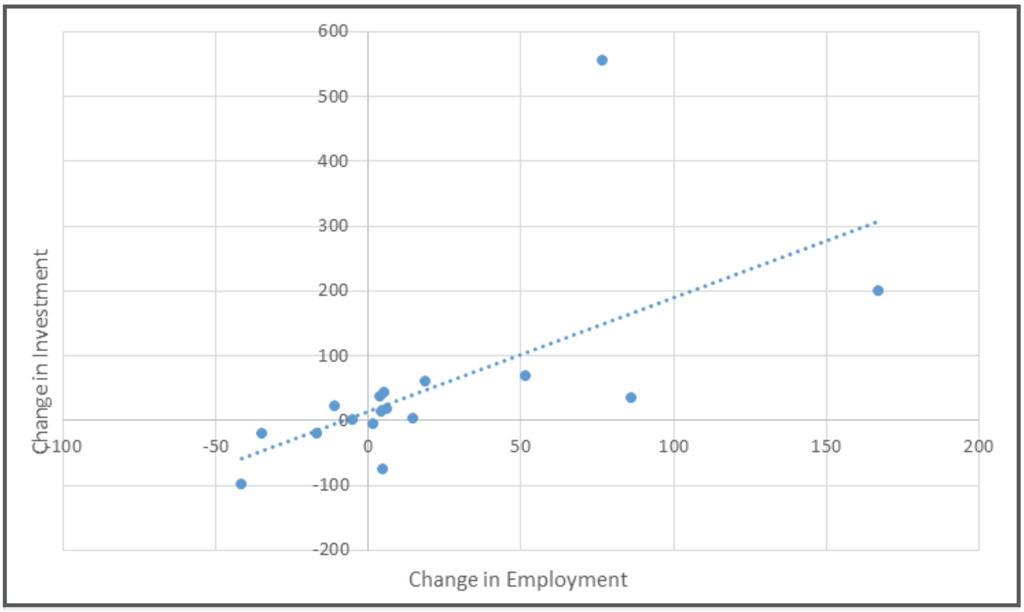
Source: Finance Department, Government of Punjab

In short, Punjab's strategy to enhance private sector development is based on addressing the policy issues with the federal government, addressing the business and investment environment by reforming the economic governance and bottleneck restricting the operation of factor markets, and provision of necessary hardware and software, including a safe environment.

2. Improving Business & Investment Environment in Punjab

The key elements underpinning the development of the private sector are the ease and the cost of doing business. The incentive to invest depends largely on profit; therefore, anything that impedes the investment process or increases the cost of doing business or reduces the ease will discourage entrepreneurs from making desired investments. This also has a direct impact on employment creation. Figure 3.3 provides the correlation between growth in investment and growth in employment in Punjab. The figure shows that apart from a few outliers, there is a clear positive relation between increased investment and increased employment. To achieve the target of creating 6.1 million jobs, the government will have to create an enviornment that increases investment.

Figure 3.3: Investment & Employment Relationship in Key Industries (%)



Source: Author's calculations using data from Directorate of Industries, Government of Punjab

A large number of surveys done by international institutions and the provincial government itself reveal that private sector still faces a number of issues that raise the costs and diminish the attractiveness of investment.

A standard international comparative measure of costs associated with business is the World Bank's Doing Business rankings. Pakistan over the years has consistently fallen in the doing business rakings: in 2006, it ranked at 60 out of 155 countries, slipping to 148 in 2016 and slightly recovering to 139 in 2018 out of 190 countries. These are national ratings. However, given Punjab is almost 60 percent of the economy, the concerns about cost of doing business remain valid. In 2009, the World Bank conducted a sub-national Cost of Doing Business Survey in Punjab that showed city-wise disparities of different indicators in Punjab and other cities of the country. An interesting disparity identified was in the time taken and the costs of enforcing contracts. For seven major cities in Punjab, it took an average of 1,116 days to enforce a contract at an average cost of 31.9 percent of the value of the claim. The costs included attorney fees, court fees, expert fees and enforcement fees. The costs were the highest in Lahore, as high as 42.8 percent of the claim, with more than half of it representing attorney fees.

Government of the Punjab is making a serious effort to improve the doing business ratings. The reform agenda in Punjab is headed by the Chief Secretary, and is based on two key pillars: (i) continuous implementation of transparent, inclusive and effective policies, and (ii) improving regulatory practices using ICT. Punjab has taken some key reforms in the last two years. The major ones include:

2.1 Business Registration

- The Punjab Business Registration Portal has been completely integrated with the Securities and Exchange Commission of Pakistan's (SECP) portal Virtual One Stop Shop (VOSS) for registration of all types of businesses.

- Dedicated helpline has been established to facilitate queries regarding business registration.

2.2 Construction Permits

- The building permit issuance system has been automated by the Lahore Development Authority (LDA).
- The LDA has set up the Punjab Land Records Authority (PLRA) counter at its one-window facility for timely verification and issuance of 'Fard' (land ownership record).
- The Traffic Engineering and Planning Agency (TEPA), the Water and Sanitation Agency (WASA) and the Bank of Punjab counters have been established at the LDA.
- The building by-laws of the LDA and the Metropolitan Corporation Lahore (MCL) have been standardised, moving towards One City, One System.
- The MCL has linked its system with the Geographic Information System (GIS) record of the Punjab Land Records Authority (PLRA), so 'Fards' can be issued within minutes.

2.3 Property Registration

- A significant achievement has been the elimination of the need to advertise transfer of property due to land/plot records being digitalised.
- Third-party based complaint management system has also been established to address complaints regarding property registration process for immediate redressal.
- Obtaining an NOC and clearances (one government principle) from the Excise & Taxation Department online.

2.4 Paying Taxes

- Employers can now pay monthly social contributions and pension payments over the counter at the Bank of Punjab branches.
- The PRA, in collaboration with 1-Link and the Finance Department, has introduced the facility to pay General Sales Tax (GST) online through mobile and web applications.

As a result of the above critical reforms, the city performance of Lahore in the latest doing business report has shown a better performance. The performance under the World Bank methodology is measured by the distance towards the frontier defined at 100 - a score of 100 being the top performance. Lahore fares better than Karachi in 5 indicators, does worse in 1 and is on a par in the remaining indicators. More specifically,

- In dealing with construction permits the score of Lahore is 58.16 versus 51.13 for Karachi.
- In getting electricity connection, Lahore scores 46.86 versus 43.62 for Karachi. However, India scores 89.15 on this indicator.
- Registering property score of Lahore at 66.38 is better than both Karachi (33.47) and India (43.55).
- In resolving insolvency, Lahore is marginally better than Karachi with scores of 60.9 and 59.29, respectively.
- In enforcing contracts, Karachi's score is better at 44.36 versus the score of Lahore at 41.86.

The strategy going forward will be:

- The provincial government will continue to enhance the agenda of reforms triggered to improve the national doing business rating of the country. The Punjab government will take active steps to communicate and market these reforms to both local and international investors to demonstrate the strengths of Punjab as a business and investment hub.

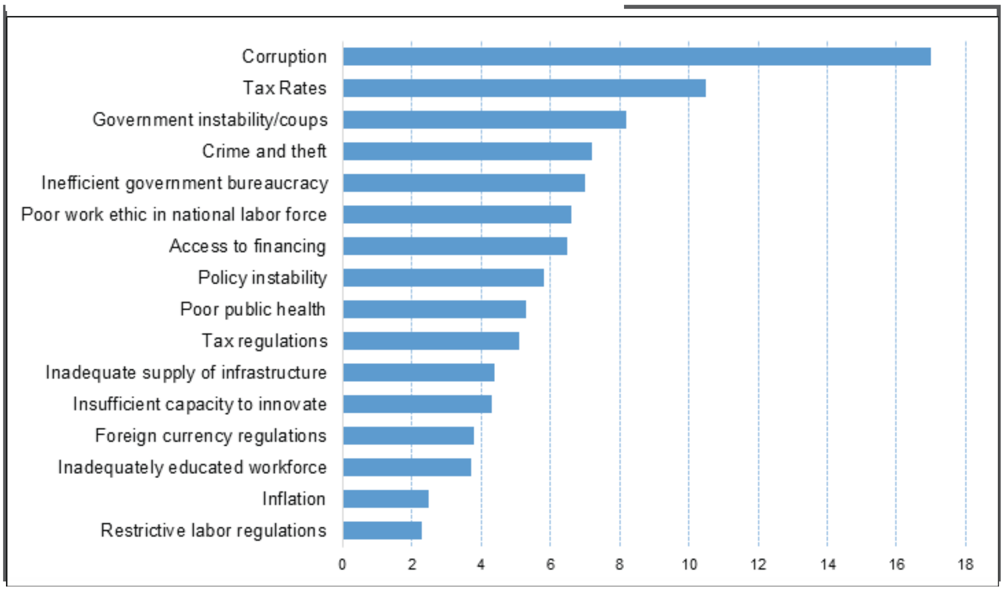
- The property registration and electronic verification of Fard will be gradually expanded to other development authorities of the province.

- The Punjab government will ensure publications in international investor magazines and websites to tell the real change story of Punjab. It will work with international journalists to write positively about the Punjab reform agenda.

- Punjab will work with the World Bank under the Jobs and Competiveness Programme to redo a 'Sub-National' Doing Business Survey to identify the disparities within key cities of Punjab and that of other provinces. The findings will then be used to develop a more Punjab-specific Doing Business Reforms agenda, where it can replicate good practices of other provinces, and focus on specific weak areas.

However, it must also be realised that the Doing Business Reforms agenda only captures one segment of the overall regulatory and compliance regime that retard private sector investment. For example, the World Economic Forum Executive Opinion Survey collects data from 14,000 business executives across 148 countries who are asked to identify the risks of highest concern for doing business in their respective countries. The survey covers various aspects of the business environment, such as appetite for entrepreneurship, the extent of the skills gap and the incidence of corruption, and acts as a complement to the traditional sources of statistics (see Figure 3.4).

Figure 3.4: Problematic Factors for Doing Business in Pakistan, 2017 (% of Firms)

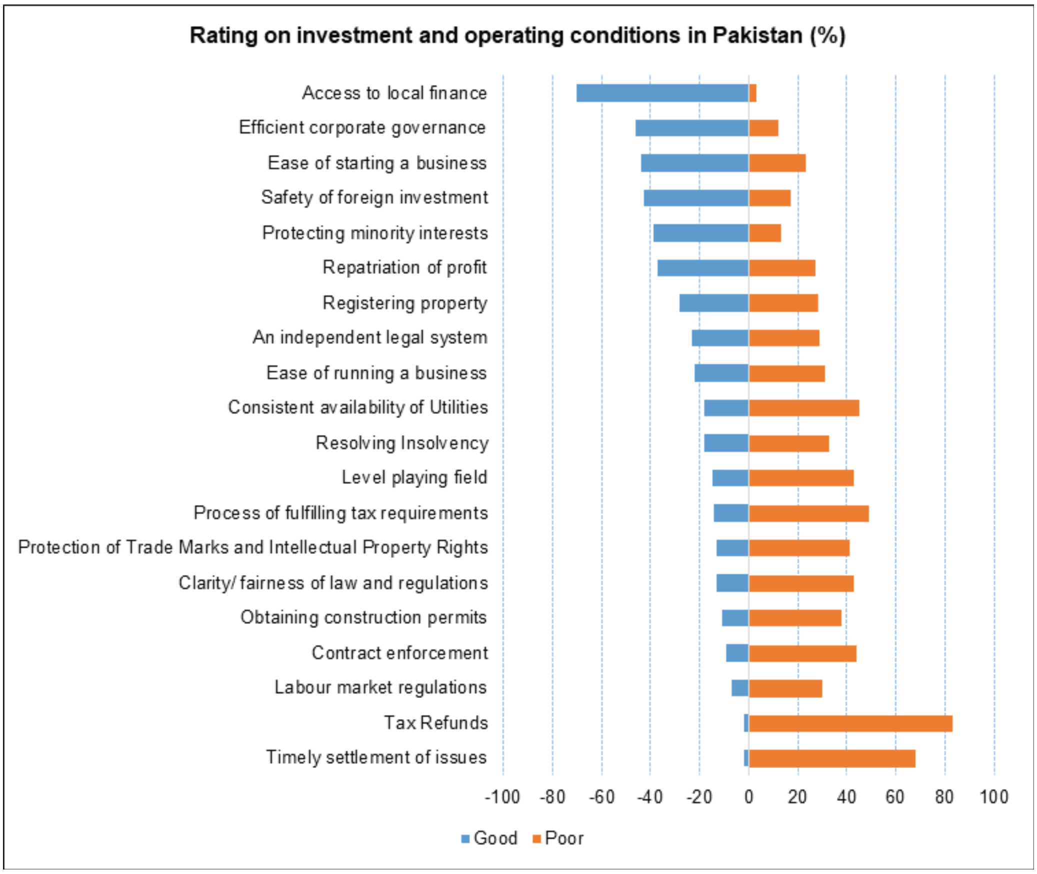


Source: Executive Opinion Survey 2017, World Economic Forum

Similarly, the OICCI Perception and Investment Survey 2017 collected data form 141 members who are leading foreign investors in Pakistan involved in 14 key sectors. The results show that timely settlement of issues, tax refunds, labour market regulations and contract enforcements are the most problematic areas. The labour market regulations, especially pertaining to labour inspection and EOBI and social security payments, are a significant challenge for firms. These recent survey results suggest that governance and corruption are two major impediments that need to be addressed to increase investment.
Based on the above general findings and more specific data collected on Punjab in a report done by the Business Environment Reform Facility (BERF), the following section highlights the critical issues and the provincial strategy to address these.

(i). Businesses identified problems and lag in the business licensing and registration procedures. The first issue identified was the several steps involved in registering a business, which should have been circumvented to some extent by the Punjab Business Registration Portal. The registration for sales tax is still problematic, and requires a significant role of tax lawyers. This increases the time and cost of obtaining a sales tax number. Also, the set of information required by firms to register is complicated and most new firms struggle with the documentation. Various other clearances are required, such as those from the Town Municipal Authority, Lahore Development Authority/relevant development authorities, Intellectual Property Organisation, Environment Protection Agency, Civil Defence, Traffic Police and others. These delay the processes and often require informal payments.

Figure 3.5: Perception of Investors About Investment & Operating Conditions in Pakistan, 2017 (% of firms)



Source: OICCI Perception and Investment Survey 2017

The strategy to address this will be:

- The provincial government will advocate with the SECP to create an online search function of the already registered names. This will allow self-screening of names at the time of entering the first set of data. Names that have already been registered will not be accepted, and the user will be prompted to choose a different business name.

- The Punjab Business Registration Portal will be further strengthened and expanded with the idea that all new business registrations in Punjab will be through the portal and the time of registration will be brought down to 1 day.

- The Punjab government will establish the Punjab Investment Portal to support both domestic and foreign investors, not just to start the business but to offer a continued post-investment support.

(ii). Tax policies and administration has also been identified as a major deterrent to both existing and new businesses. The country and the province suffer at the hands of lack of tax policy and resulting non-harmonised taxation regimes, focused just on extortion rather than facilitation of business or expansion of tax base. The tax policy, both at the federal and provincial levels, is subject to sudden changes, particularly customs or regulatory duties. This can seriously impact the financial feasibility of investments. Tax administration is generally considered hostile, less trained and without any accountability. The tax inspector has no penalty on issuing a wrong notice. Businesses face a duplication of taxes, particularly value added tax, by the Federal Board of Revenue (FBR) and the Punjab Revenue Authority (PRA).

The strategy to address this will be:

- The provincial government will a develop tax policy aligned with that of the federal government and will create channels of continuous two-way communication to harmonise the taxation structure and design, and implement policies to increase the tax base rather than to increase the tax rates.

- The Punjab government will consider the proposal to give new firms an incubation period where they are exempted from non-revenue based taxes.

- The Punjab government will consider establishing a unified taxation agency for the province so that the information on collection, payees and tax potential is all located under one roof. This will assist in eliminating redundant, overlapping and distortionary taxes.

- The Punjab government will seek greater coordination with the FBR and synchronise the tax policy with wider policy objectives of the government. It will make recommendations to look at the evaluation criteria of tax inspectors and introduce the element of accountability, especially in cases of issuing incorrect tax notices too often.

(iii). Labour laws and administration are most often quoted as extremely distortionary to doing business in Punjab. The key mandate of the Labour Department in Punjab is to work for labour welfare, and is not required to promote growth or employment creation. This very mandate makes them a core regulatory department with archaic laws and having too much discretion to take any form of penal action against businesses. The vaguely defined laws and extortionary nature of inspectors make the department a real issue for businesses. There is a strong need to have a detailed look at the labour regulations and make them more precise and easy to follow and monitor.

The strategy to address this will be:

- The Punjab government will consider moving towards an inspection-friendly regime for labour for example, social security payment.

- In the immediate term, the Labour Department will develop a short labour code compliance checklist based on all applicable laws and regulations. The Labour Policy will ensure that it not only protects the workers but also supports businesses to grow. Labour Department will consolidate all labour laws according to topics.

(iv). An expanded issue leading from the example of Labour is the overall quality of regulatory governance in the province. The overarching performance of the regulatory governance affects all aspects of doing business in the province. Businesses have to deal with junior officers from a multitude of government departments, with large amount of discretion. Businesses suffer from obtaining NOCs from EPA, Traffic Police and Civil Defence, besides several others documents like dengue inspections and structure safety certificates.

The strategy to address this will be:

- The government will undergo a formal 'Regulatory Guillotine' to reduce the overall burden of regulations on the businesses[1]. To implement the guillotine, the following broad steps have been identified:

[1]The Modern Regulatory Guillotine Approach is a trademark approach engineered by Jacobs and Associates and has been successfully tested in several Organisation for Economic Co-operation and Development [OECD] countries. To date, the approach has simplified over 25,000 laws and regulations in more than a dozen countries and has reduced the business costs by $8 billion per year, with a return on the cost of the guillotine of more than 3,000 to 1. The upcoming SME Policy 2019 of the federal government supported by SMEA project of the USAID also makes a strong case for this approach both at the federal and provincial levels.

- Set up a small reforms committee under the Minister for Finance/Planning. The committee will send a formal proposal to the cabinet and take its approval for running the process.

- All departments will be required to count and document all regulations, taxes, fees or formalities affecting businesses.

- Each regulation will then be reviewed by three bodies; (i) the public departments themselves; (ii) the private sector; (iii) by independent regulatory/legal experts.

- The review will look at each regulation to answer the following:
  - Is it legal?
  - Is it needed?
  - Is it business friendly?
  - Are the fees/taxes necessary and reasonable

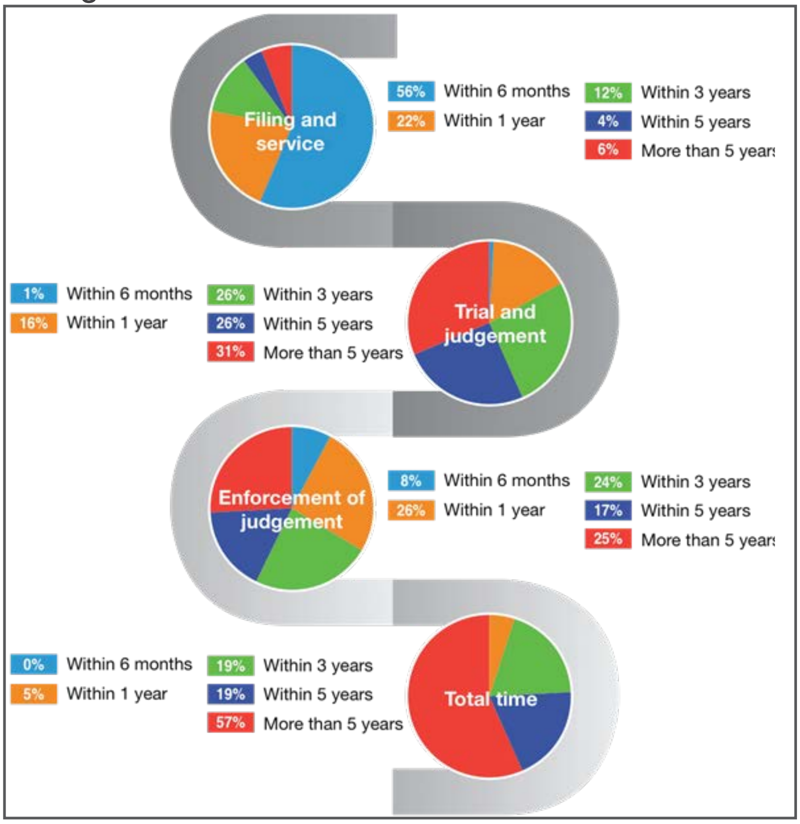
- After the review, each regulation will be classified in one of the three categories; (i) keep as it is; (ii) simplify; (iii) eliminate.

- The committee will then take the final proposals to the cabinet for approval and immediate implementation.

- The overall process will take up to 18 months.

(v). Lack of contract enforcement and non-availability of Alternative Dispute Resolution Mechanisms (ADRM) have been identified as critical barriers for investment and business expansion. Figure 3.6 below shows that 95 percent of the commercial disputes take more than 3 years to resolve. The cost associated is in addition to the wastage of time. This is a key reason why firms prefer to stay small and these statistics are a big put-off for foreign investors, as they are unaware of local conditions and thus develop stronger apprehensions.

Figure 3.6: Average Time to Resolve a Commercial Dispute Through the Courts



Source: OICCI Perception and Investment Survey 2017

The strategy to address this will be:

- Fully implement the Case & Court Management Strategy developed under the Lahore High Court in 2017.
- The ADR centres that have been established in all district courts will be strengthened and offered legal backing to ensure that a larger number of commercial disputes are settled prior to being forwarded to the courts.
- Complete establishment of the specialised courts, as per the nature/category of cases, in district judiciary as ordered by the Lahore High Court.
- In order to improve the case management system, the Punjab government will strengthen the administrative control and collection of statistical information on the performance of the courts. This will better equip the judges and court staff to address backlogs and delays.
- The Punjab government will consider introducing mandatory time limits on hearing and other procedures for cases relating commercial disputes – this has massively supported other countries, including most of Central Asia, Russian Federation, Algeria, Norway and Portugal.

(vi). Inadequate Public-Private Dialogue mechanism restricts relevant input of the private sector in policymaking and key decisions made by the public sector. The P&D Board has established a Public Private Dialogue Council. However, it has bigger business bias and fails to incorporate the voice of small firms operating in Punjab. There is a need to expand the PPD to become inclusive.

The strategy to address this will be:

- The P&D Board will design and implement an Online Feedback Mechanism (OFM) that will include all relevant stakeholders across the province, and will deliver on pre-identified specific business environment or investment climate areas. The stakeholders will be able to submit specific recommendations and concerns, and data will then be collected and analysed by the ICRU. The outcomes will be shared for final comments and implementation progress will be shared transparently. This is a business version of the Citizen Complaints Portal, but is much controlled to restrict feedback on specific issues. The operational and technology design has already been provided by the Business Environment Reform Facility, and the P&D Board will adapt and refine it for quick implementation.

(vii). Most firms do not consider the government as credible source of quality market information The access to quality market information can be expensive and most small firms may not be able to find the space to ever explore new markets and products as well as pricing structures. Similarly, a large number of people may have capital but lack ideas to start a business and shy away from spending resources on acquiring market information. To some extent, provision of information is a public good, as a large number of new small firms can benefit from this.

The strategy to address this will be:

- Industries, Commerce & Investment Department will establish an Industrial Intelligence Unit in collaboration with the PSIC, TDAP and SMEDA. The primary purpose of the unit will be to establish pools of relevant and reliable market information that can help businesses target their export markets and also diversify into new businesses.

3. Enhance the Provision of Capable Human Resource

Inadequacy of appropriately trained manpower and human capital also restricts private investment in the province. The supply of human capital in the province at all levels is in sharp contrast with the demand. A majority of the TVET graduates in Punjab are enrolled in courses like electrical/electronics, plumbing, masonary, textile/garments, basic computers, mechanical and Auto CAD. The demand for these skills is limited, as most of these contribute to self-employed services. There is a need to increase the industry-relevant courses in partnerships. Moreover, in case of higher education, there are serious concerns over the quality of graduates, especially those graduating in engineering and ICT fields. Moreover, the trained and educated youth suffer from lack of employability and soft skills. The attitude of workers is not apt, and is a big deterrent for firms, as it majorly impacts productivity. Moreover, the skills market suffers from information gaps, and employers and trained workers have little or no avenues to exchange information.

4. Increase Entrepreneurship and Enterprise Development Opportunities

Limited support exists for entrepreneurship, enterprise development and business development services. The start-up culture in Punjab has picked up in recent times. However, due to lack of proper guidance and management, it is having a more distortionary impact than productive. The vide around the ICT-based start-ups of the Silicon Valley attracting market valuations in billions of dollars is seriously distorting the decisions of youth graduating from IT universities in Punjab. Most of them in quest of developing a technology solution without realising the commercial problem and market invest time and resources, which they are unable to recoup or benefit from. This issue needs to be addressed before it becomes a serious problem add more to the idle youth figure in the country. Secondly, limited opportunities are available for individuals to become self-employed entrepreneurs. The key constraint restricting their transition are capital and entrepreneurial skills. Thirdly, small businesses are unable to find financial freedom to innovate and climb the technology and productivity ladder. Finally, business development services, such as support with taxation, registration, product development, technology acquisition, design and marketing, are expensive and difficult to obtain.

The strategy to address this will be:

- The Higher Education Department will ensure that university programmes, especially those relating to IT, must include courses and guidance on entrepreneurship. These courses will be taught from a practical angle so that the students are able to better understand the risks and the characteristics of stepping into entrepreneurship.

- For creating small scale entrepreneurs, the government will initiate a programme to provide nano-entrepreneur loan. The entrepreneur loan will be an interest-free personal loan with following terms:

    - 0% interest with 5-year repayment plan.
    - 1-year grace period.
    - No personal guarantee.
    - The loan amount can be anywhere between PKR 50,000 and PKR 1.5 million.
    - The loan will be open to all skills graduates enrolled via TEVTA, PVTC or PSDF programmes. The preferred trades include electricians, machine mechanics, masons,
    - plumbers, drivers, tailors, cleaners, chefs, carpenters, IT technicians, welders, other construction trades and beauticians.
    - The applicants, however, to become eligible for applying for the loan, will have to enrol and graduate from the ‘Entrepreneurship Bootcamp (EB)’ to be offered by the PSDF in collaboration with PSIC. The “EB” will help these individuals train in basic merits of running a business, develop a business and expansion plan and also to test out the aptitude for business. The recommendation from the ‘EB’ is a must for the candidate to apply for the loan.
    - The loan portfolio will be managed by the PSIC, which may outsource fund management.

4.1 Loans to support Business Development & Start-ups

The business & start-up loan will be a Punjab government-backed loan available to individuals/businesses looking to start or grow their business. The government will be the guarantor and the loan portfolio will be managed by commercial banks. Under the State Bank 2017 SME Credit Policy, the State Bank can assist the government in developing the working model for this risk-sharing scheme[2].

4.2 Grants will be given to support Enterprise Innovation

The government will set up an innovation fund that will call competitive applications from existing businesses to apply for a grant to bring about a technology or a business process or a productivity innovation that will enhance growth and employment. The fund can be segregated in terms of priority sectors, including all three main sectors - agriculture, manufacturing and services.

- PSIC will expand its scope to offer business development and cluster formation services. These may include simple services of managing taxation to product development and design support. The existing cluster development initiative will be expanded to other key sectors.

- The government will develop access points in second-tier universities across the province to identify, support and link youth with strong entrepreneurial ideas to business incubation facilities available in the province.

- The government will look for the adoption of Limited Liability Partnership Act 2017 promulgated by SECP, for partnerships registered at the provincial level. It will also advocate with SECP for suitable regulations to attractive high powered investments through VC and crowd funding.

4.3 Increasing Private Financing/Credit, Especially for SMEs

Most firms across the sectors complain about availability of suitably priced credit. However, for the SMEs, credit becomes a binding constraint. The employment trends of Punjab indicate that of the total employment, 55 percent are employed in non-agriculture-based activities, a majority of which are part of the small and informal sectors. These translate into over 14.5 million people working in small and cottage enterprises. With a large part of the labour force employed in small units, the SME and informal sector is a valuable source of income, and a major focus area for the province to increase employment. More importantly, the data on Punjab shows that a 1% increase in SME credit increases SME employment by around 1%.

However, the SMEs' access to affordable finance is plagued by certain issues. The key issues include a major reluctance by banks to forward small loans due to higher risk. The banks usually ask for secures, high-value assets as collateral, given these are hardly available with the SMEs, the loan applications are usually rejected. Secondly, the cost of processing a small loan or a large loan by banks is the same. Therefore, there is a natural tendency to process a smaller number of larger loans. This is more profitable for the banks. The current State Bank regulations only recommend general quotas on credit for SMEs based on a generous definition, where a medium firm is any firm with a turnover of less than PKR 800 million. Therefore, the banks get away with servicing loans to clients in the higher spectrum, completely ignoring the small firms. Moreover, the process and procedures for firms to even open accounts are cumbersome. In this case, there is a first order problem - since firms are unable to bank, the banks have no information about the business, and hence have little or no information to process the loan application. Small businesses usually have informal records of accounts and business, which makes it difficult for banks to accept most of their documents as they are not formal. The State Bank has approved a new policy to support financing to SMEs. However, the implementation of the policy is still in early days.

The strategy to address this will be:

- The provincial government will advocate with the federal government to keep pushing the State Bank to attain the target of increasing SME lending from PKR 400 billion to PKR 1.8 trillion over the five years.

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[2]In Malaysia Credit Guarantee Corporation provided 445,217 guarantees against loans totalling USD 14.8 billion.

- The provincial government will advocate with the State Bank to ensure greater utilisation of existing credit guarantee schemes.

- The Punjab government will park its own resources through the BOP and other banks to initiate provincial credit guarantee scheme.

- The Punjab government will obtain the viability of developing a fund in order to reduce the mark-up cost for targeted SMEs.

- The Punjab government will advocate with the State Bank for a speedy operationalisation of the movable asset registry, enabling movable assets to be used as collateral for working capital, and also advocate expanding the scheme to the manufacturing sector in addition to agriculture sector.

- The Punjab government, through PSIC, will provide support to small businesses to develop credible documents for account opening and other papers and evidences required by banks for assessing loans.

5. Providing Adequate Infrastructure

As discussed above, the hardware issues are equally important for providing an environment where investors feel confident enough to invest. To address this:

- The government will extensively use spatial planning in its development and infrastructure planning. The Punjab government has completed its work in mapping out its assets and infrastructure spatially. It is also in the process of developing its spatial strategy to map out projected changes over the next 30 years. This will be the central tool for developing and taking all infrastructure decisions in the future.

- The LDA is working on zoning of industrial land, and the government, based on areas of high concentration of industry, will declare such areas as industrial corridors and ensure that relevant support in terms of power, gas, road network, environment facility, etc., are provided.

6. Improving the Quality and Standards of Punjab's Produce

The Punjab Food Authority is often quoted as a good example that has ensured upgradation in the quality of food products available locally. The produce of Punjab suffers from lack of credibility by international buyers. The overseas buyers are increasingly becoming more conscious about the quality and compliances in terms of product specification, environment, labour treatment, working conditions, product performance and even fair pricing. For example, in the leather sector, Punjab's leather sector now has to get certification from the 'Leather Working Group'. This is creating a problem for a large number of manufacturers of leather products to attain certification. In garments, there is a green apparel initiative and increasingly more buyers are subscribing to this standard. The provincial garment manufacturers will soon find it difficult to export if they fail to have relevant certifications.

The strategy to address this will be:

- The Punjab government will work with the private sector to develop a set of regulations to initiate a phased implementation to start improving quality and standards compliance in the local markets. This will help in building capacity of the firms to meet international standards. In the interim the government will initiate cost sharing mechanism to support firms intending to get international certifications for export markets.

7. Marketing Punjab Internationally

The government intends to make Punjab a hub of investment and business. Under its Developmet Strategy, the government will unleash a massive reforms agenda to improve the basics of private sector development and enhance investment opportunities in the province. These will have to extensively publicised and communicated to international investors and local investors. This is where the PBIT will have to step in.

The strategy to address this will be:

- The PBIT will establish and operationalise the Punjab Investor Platform as one-window pre- and post-investor support.
- The PBIT will develop a network of domestic and international PR/media in which every initiative in Punjab will be extensively publicised and also explained in local languages of the targeted markets.
- The PBIT will develop a common logo to brand Punjab as a hub of business and investment, and this will be used in all communications across the government.
- The PBIT will develop impactful documentaries, sectoral opportunities, Public Private Partnership (PPP) opportunities and general information about positive business environment in Punjab. These will be displayed at all government events, locally and internationally.
- The PBIT will develop an interactive website to communicate with investors and provide immediate replies to key questions.
- The PBIT will continue to host national and international investor forums. However, it will make these more result-oriented.
- The PBIT will develop linkages with alumni of local universities based in foreign markets, and also connect more strongly with the Pakistani Diaspora to invest in Punjab.

8. Reforming Public Procurement to Support SMEs

The government is a large buyer of goods and services. However, the current procurement rules of the PPRA discourage SMEs to become suppliers to the government. Public procurement through SMEs can provide significant stimulus to small businesses and can help them grow, resulting in increased employment.

- The government will review PPRA Rules to make it more balanced for SMEs to successfully compete and obtain work from the government. Moreover, the government will also lobby with bank, especially the BOP, so that the government work order may be used as collateral to advance credit to small firms.

9. Leveraging Private Investment via PPPs

Successful PPPs play an important role in economies to deliver development objectives by leveraging private capital and building private sector capabilities to deliver mega projects by lowering their risk. Punjab developed its PPP Act almost a decade ago and has been managing its PPP transactions through a well-defined process under the PPP Cell. The set of existing operation projects include:

- DHQ Hospital Pakpattan contracted out under a management contract.
- Construction and management of 32 vehicle inspection centres (BOT basis).
- Flyover railway crossing at Kahna Kachha (BOT basis).
- Lahore Ring Road Southern Loop (BOT).

A few other projects on BOT basis have been awarded, but are yet to be initiated. The PPP activity in Punjab has been on-going for a long period. However, the results to date are not optimal. The PPP financing for development is negligible, whereas neighbouring India has had a substantial increase in investments under the PPP projects. Around 50 percent of India’s 12th plan was funded by the PPPs. Some recent projects initiated under the PPP include airports, medical colleges, TVET institutions, sea port, power transmission lines and systems, metros and road projects.

Punjab will have to work on its PPPs and enhance both the size and the variety of projects. There is a need to diversify away from standard road projects and move into more innovative projects, especially those targeted towards SDGs. To this, Punjab will have to be more aggressive and build PPP toolkits that lay down the processes in a transparent manner. The PPP Cell has been working on the PPP Policy and the policy must address the issues and slow up-take of PPPs. The strategy for enhancing PPPs include:

- Complete, approve and initiate implementation of the PPP Policy in the province. The government's target is to increase PPPs to 10 percent of the ADP by 2023.
- The PPP Cell will operationalise the viability gap fund and develop complete SOPs and other procedures and access protocols.
- The PPP Cell will develop guidance papers and PPP toolkit to support project preparation and decision-making process.
- The PPP Cell will identify sectors for investment in Punjab. Based on Punjab's needs, Table 3.1 below provides a list of sectors in which investment by the private sector has to be made, and highlights the sectors that are most suited for the PPPs.
- The Punjab government will increase the size of PPP investments to reach 10 percent of the ADP by terminal year 2023.

Table 3.1: Key Investment Sectors in Punjab

Key Investment Sectors in Punjab
AGRICULTURE
Milk Production and Marketing
Fruits and Vegetables Production
Pulses Production
Drip Irrigation*
Storage Facilities*
Genetically Modified Cotton and Improved Seed Varieties
Marketing Centers*
Service Centers / Rental Facilities* of Agricultural Machinery
MINERALS
Iron
Copper
Limestone
MANUFACTURING
Agro-base Industries
Value Added Textiles
Cement
Chemicals
Leather Products
Industrial Parks*
*Sectors with potential for Public-Private Partnerships (PPP)

ELECTRICITY
Transmission*
Generation*
o Renewable Energy (Small Hydel, Solar, Biomass, Bagasse)
o LNG based plants
Distribution Networks (both Provincial and Local)
TRANSPORT AND COMMUNICATIONS
4G / 5G Telecommunications
Public Transport Systems* (Mass Transit)
REAL ESTATE
Housing Colonies*
Commercial Construction (Offices, Shopping Plazas)
BANKING AND INSURANCE
Islamic Banking
Health Insurance*
Crop Insurance*
Rural Banking
Microfinance*
SME finance*
PERSONAL AND COMMUNITY SERVICES
IT Software
Security Services*
Business Services
Private College Education
Vocational and Technical Training*
Specialised Private Health Facilities
Entertainment Sports
Media
INFRASTRUCTURE
Secondary and Tertiary Roads*
*Sectors with potential for Public-Private Partnerships (PPP)

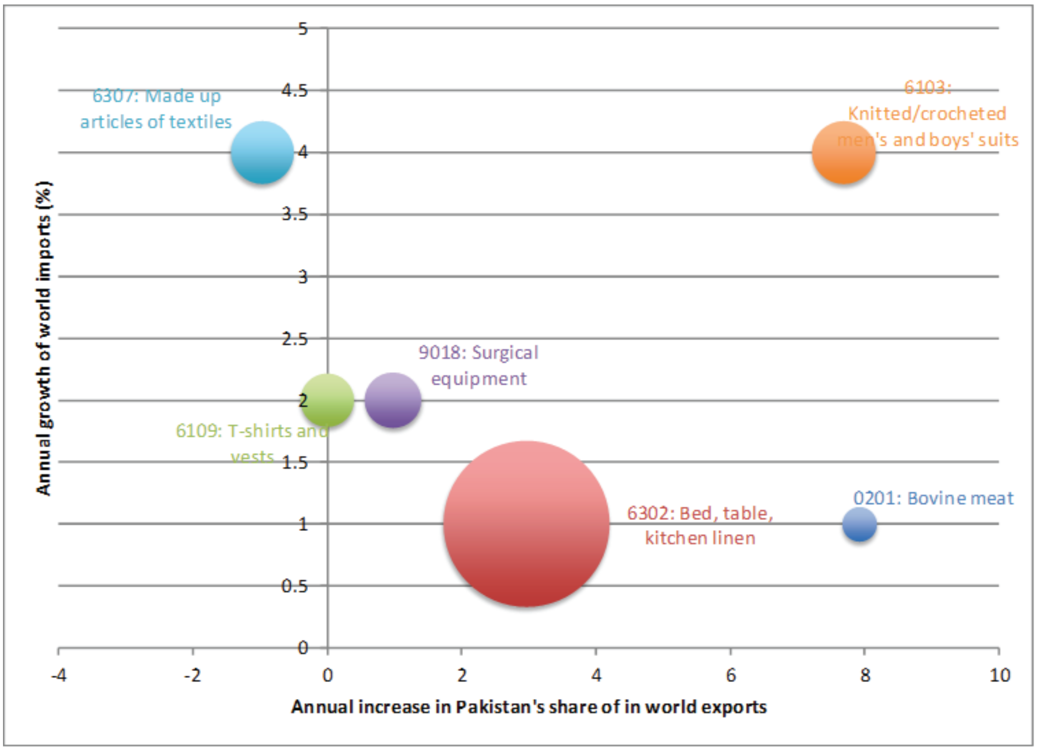
10. Enhancing Exports of Punjab

The exports from Punjab consist of approximately 51 percent of the national exports. Punjab is house to dynamic clusters in which Pakistan has significant international presence, such as surgical, sporting goods, rice, garments, leather and now rapid growth in export of ICT services. Moreover, the export growth has strong multiplier impact on SME growth, especially in terms of employment. A 1 percent increase in export quantum increases SME employment by more than 2 percent in Punjab in the long run.

With the exchange rate adjusted, the exporting sectors now feel more competitive and the government should support these key sectors to improve the price points at which they supply in the global market.

Figure 3.7 maps Pakistan's exports in terms of volume, growth in Pakistan's exports, and world demand for the products. Surgical goods, knitted garments and bed/table linen are the three most attractive sectors in the segment, with Bovine meat suggesting growth opportunities.

Figure 3.7: Competitive Sector for Pakistan*, (2013-17) (%)

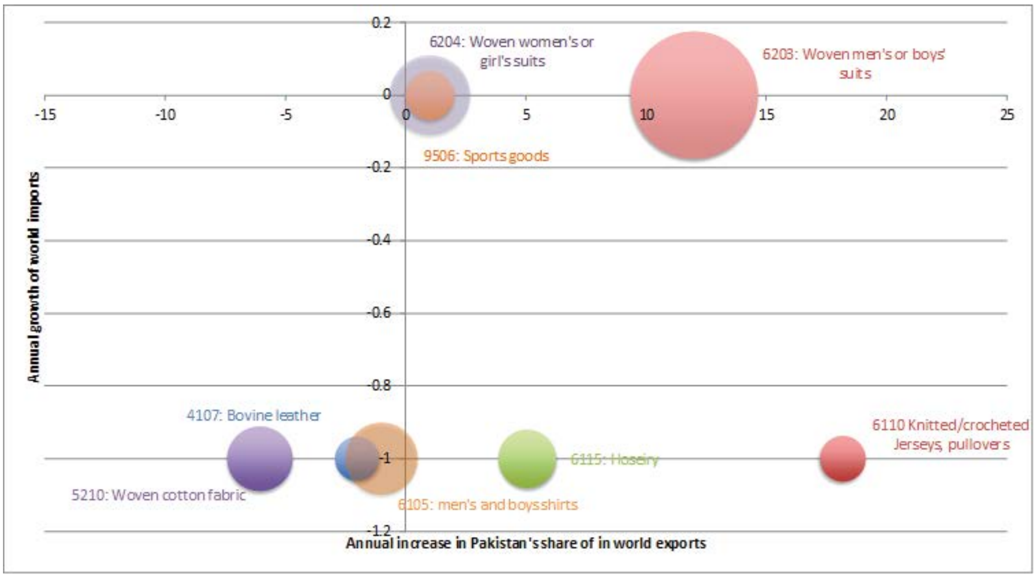


*The size of the bubble represents the export volume: the five-year average growth in global demand for the product is represented on the vertical axis and the five-year average growth in Pakistan's share of global exports in represented on the horizontal axis.

Source: OICCI Perception and Investment Survey 2017

Figure 3.8 suggests that woven garments (all categories) show opportunity, as it is a sector that is growing significantly and is sufficiently diversified. This growth is likely to spur more investments in the sector to further diversify the product base by adding value and, hence, can offer a significant amount of future employment opportunities. Sports goods manufacturing is also a sector where Pakistan has developed a niche, and it has seen positive growth through positive branding, becoming the official supplier of the Football World Cup (FIFA World Cup 2018).

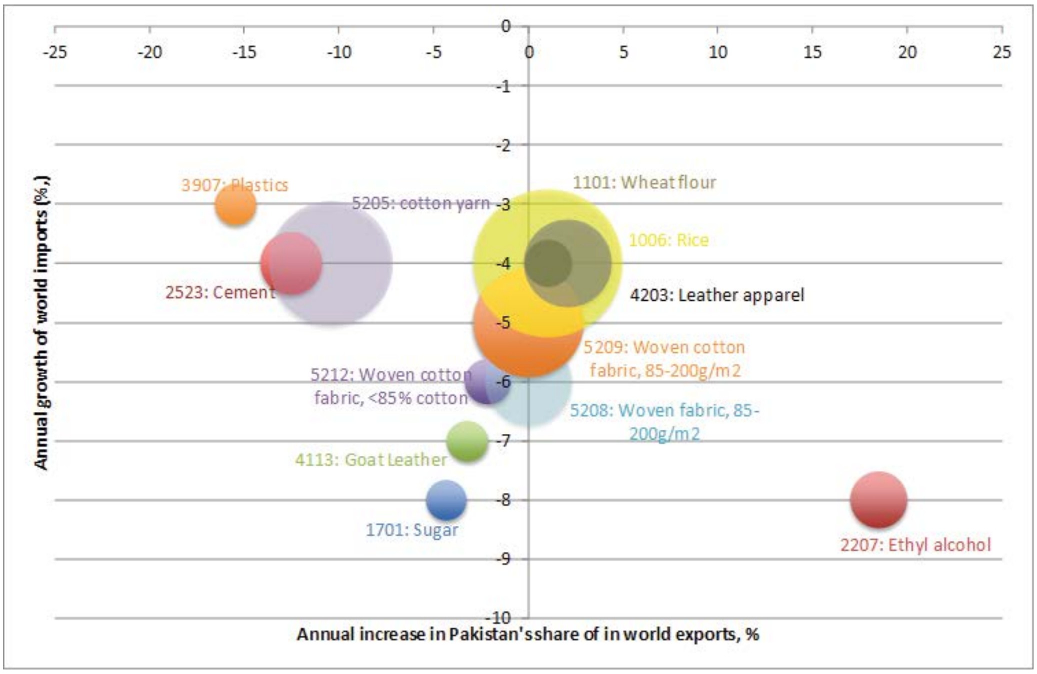
Figure 3.8: Pakistan's Growing Sectors with Constant World Demand, 2013-17 (%)



Source: OICCI Perception and Investment Survey 2017

Figure 3.9 shows sectors where Pakistan still has large share and is growing, but internationally these sectors are declining. Except rice, most of these sectors belong to low value added exports such as cotton yarn, wheat flour, base leather, sugar, woven fabric and ethyl alcohol. Punjab will have to diversify away from these low value added products if it has to obtain higher value growth from the export markets.

Figure 3.9: Pakistan's Non-Competitive Exports, 2013-17 (%)



Source: UN Comtrade

The above statistics suggest that a large number of exports from Pakistan and Punjab lie in non-competitive segments, and are products that are losing share in world markets. If Punjab continues to ignore these trends, the export growth will continue to become difficult. Export decisions are made by private individuals. However, it is the responsibility of the government to ensure a competitive environment in which firms can grow. In order to address this:

- The provincial government will engage in a continuous dialogue with the federal government to ensure consistency of trade policy and management of exchange rate to support the exporting sectors. Industries and Agriculture Departments, with the help of the PBIT, will develop export enhancement proposals on a regular basis to share with the federal government.

- For small manufacturing sectors, the PSIC will enhance the cluster development initiatives and support sectors on cost share basis in activities such as design studios, technology reengineering, product development services and networking to work for joint orders.

- The Agriculture Department will work on improving farm practices, both in crop sector and horticulture, to ensure greater compliance and higher exports.

- The government will fully operationalise the Quaid-e-Azam Apparel Park and colonise it with modern textile and garments value chains to enhance exports and develop products that obtain higher price points in global value chains. The government will also advocate with the Ministry of Commerce to allow import of those manmade fibres and intelligent materials that are not being manufactured in Pakistan but are required for high value-added garments.

- The PITB will revisit the Punjab IT Policy to create a bigger space for private sector-led growth and develop a roadmap for IT exports from the province.

Industrialising Punjab & Unleashing its SME Potential

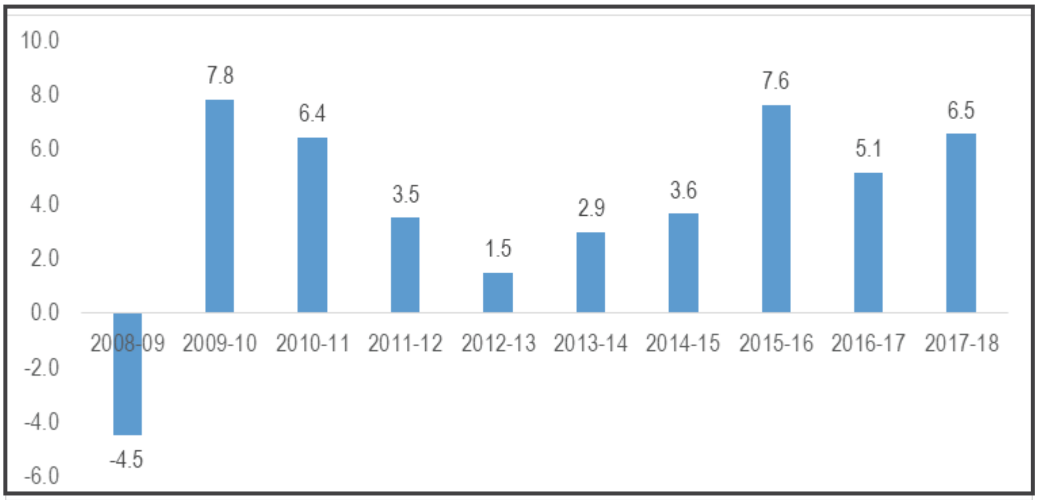
The manufacturing and industrial sector has substantial links with several key sectors across the economy. Industrial activity stimulates economic activity and acts as a propellant for the economy. As industrial activity grows, it requires more inputs from mining, agriculture, infrastructure, utilities and downstream suppliers. It creates jobs and enhances investment opportunities in other sectors that use its outputs, such as transportation, construction and retail. It also spurs growth in services, such as finance, e-commerce and insurance. In short, industrial sector growth results in significant multipliers for the economy. For example, 1 percent increase in manufacturing value added increases the wholesale and retail trade value added by almost 1 percent in Punjab. The Government of Punjab, therefore, sees industrialisation as a key pillar of its Growth Strategy and the main instrument that will generate a large number of productive jobs for its youth and earn a substantial amount of foreign exchange through value added exports.

1. Performance & Landscape

The industrial sector holds a significant position in Punjab's economy, and an even greater potential. The industrial sector of Punjab in 2017-18 contributed 17.5 percent to the total value of goods and services produced in the economy. It employed almost 9.3 million people, of which 4.58 million were engaged in the SME sector of Punjab. Punjab's share in national exports was close to 51 percent, with industrial sector being the major contributor. Lahore (19 percent), Multan (11 percent), Faisalabad (10.5 percent) and Sialkot (8 percent) are the major exporting hubs in Punjab, and also house the majority of SMEs in the country. The industrial sector in Punjab has experienced variable performance over the last 10 years. 2008-09 saw weak performance due to high prevalence of extremism and power shortage. The performance during 2009-11 improved majorly due to growth in the automobile and textile sectors. Performance during 2011-15 dipped again due to severe energy shortage. However, the provincial and national governments made significant investments in the energy sector to improve the power outages, especially in key industrial areas. The improved availability of power and an uptake in garment exports provided stimulus to industrial growth in 2017-18.

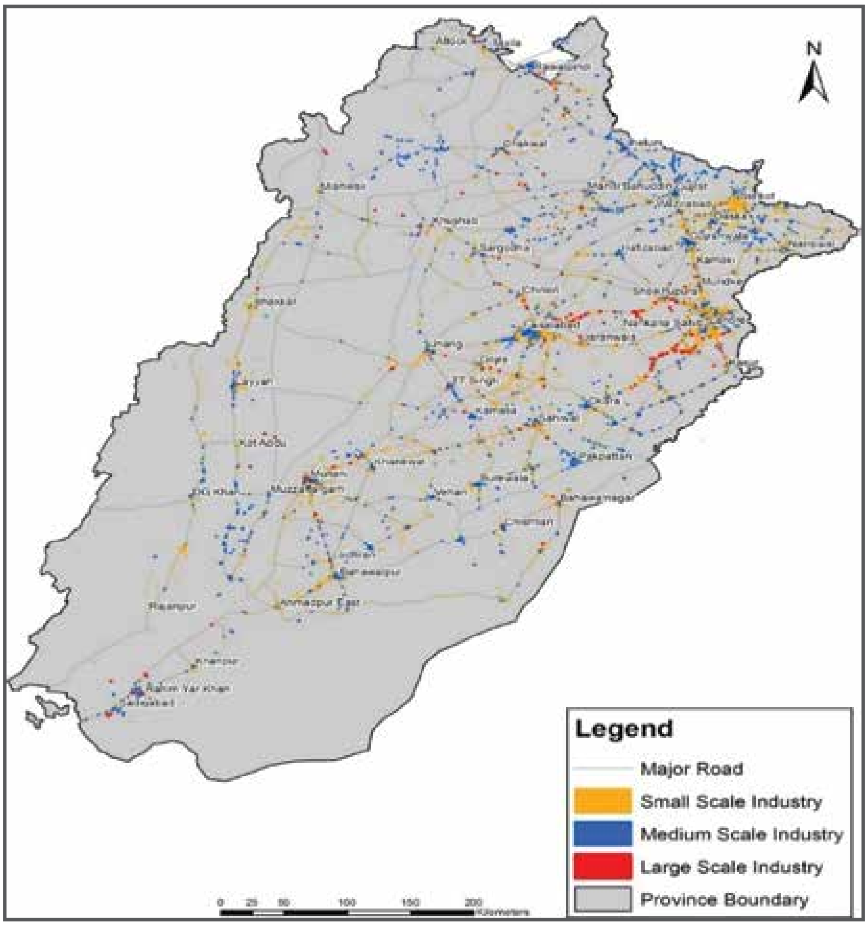
Owing to the historic performance and events, the industrial structure of Punjab has turned out to be different than that at the national level. Punjab's share of large scale manufacturing (8.9 percent) in the GDP is less than the 10.8 percent share of the entire country. Large scale manufacturing is only 51 percent of the industrial value added in Punjab, whereas it is 80 percent at the national level. However, the share of SMEs in the GDP of Punjab is 3.4 percent as compared to 1.9 percent share in the national GDP.

Figure 3.10: Performance of the Industrial Sector in the Punjab, 2009-18 (%)



Source: Punjab Growth Strategy Team

Figure 3.11: Spatial Mapping of Large Scale Industry and SMEs in Punjab (%)



Source: Urban Unit, Government of Punjab

Moreover, large scale manufacturing in Punjab remains limited to only few central districts of the province. The SME sector is better diversified, but the western districts such as, Mianwali, Khushab, Bhakkar, DG Khan and Rajanpur are relatively deprived. Consequently, there are more economic opportunities in Faisalabad, Lahore and Kasur, which together employ 43% of Punjab's industrial labour. On the other end of the spectrum, Rajanpur, Jhelum, Lodhran, Narowal, Bhakkar and Layyah each continue to provide less than 0.5 percent of industrial employment in Punjab[3].

2. Key Determinants and Challenges

Industrialisation is a complex phenomenon and the growth of this sector depends on a number of factors. Stable macro economy, well-functioning factor markets, enabling business environment, friendly investment climate, policy consistency, productive human capital and supportive infrastructure are some of the key determinants of industrial success. Some of the key macroeconomic policy levers lie with the federal government, and there is not much the provincial government in Punjab can do apart from playing a strong advocacy role. The overall growth model for Punjab estimates some key elasticities to identify levels of impact on its industrial progress. The main determinants are listed below:

- A one percent increase in capital stock (private investment) increases large-scale value added by 1.1 percent in Punjab.
- A one percent increase in the average years of schooling of the employed increases large-scale manufacturing value added by almost 3 percent in Punjab.
- A one percent increase in agriculture value added increases the large-scale manufacturing value added by almost one percent in Punjab.

[3]Punjab Economic Report, 2017

- A one percent increase in the incidence of power load shedding reduces large-scale manufacturing value added by 1.2 percent in Punjab.
- A one percent increase in the energy price index reduces the large-scale manufacturing value added by 0.75 percent in Punjab.
- A one percent improvement in the hard infrastructure increases the large scale manufacturing value added by 0.3 percent in Punjab.
- A one percent increase in nominal interest rate reduces manufacturing sector private investment by almost 0.2 percent in Punjab.
- A one percent increase in public investment increases manufacturing sector private investment by almost 0.25 percent in Punjab.
- A one percent increase in credit to SMEs increases SME employment by almost one percent in Punjab.
- A one percent increase in quantum of export increases SME employment by more than 2 percent in Punjab.
- A one percent increase in growth of cotton production increases export of goods and services by almost one percent in Punjab over the long run.

The evidence above clearly shows the importance of strong human capital for industrial development in Punjab. The human capital not only includes quantity and quality of general education but also technical and vocational skills and a better educated and healthier workforce. The strategy places a strong emphasis on developing the human capital in Punjab. The technical and vocational skills area comes under the overall spectrum of the Industries, Commerce and Investment Department.

2.1 Human Resource & Skills Gap

The skills space in Punjab on the supply side consists of more than 350 technical institutes run by TEVTA, institutes under the PVTC and private sector training institutes. On the assessment and certification side, Punjab has well-established Trade Testing Board (TTB) and the Punjab Board of Technical Education (PBTE). To manage skills delivery, engage in innovative partnerships and address public sector TVET failings, the Punjab government has established the Punjab Skills Development Fund (PSDF). Under the previous Growth Strategy, a target of producing 2 million skilled graduates over four years was set. The target was met by the Punjab government. However, certain issues were identified during the implementation of this target. The main issue highlighted was lack of specificity on trades that were to be covered.

Moreover, TEVTA and the PVTC, in order to produce a larger number of trained individuals, relied on offering courses of shorter duration. The trainings offered by departments also included short courses with some being just a week-long.

However, the structural issues in the provision of the skills sector still remain. The supply of skills is predominantly skewed in favour of skills more suited for self-employment rather than for employment in growing sectors. For example, Punjab produces a large number of electricians, welders, masons, dress makers, beauticians and general machinists. These skills are more relevant for self-employment rather than industrial or sectoral employment. However, ironically, the training content pays no attention to teaching entrepreneurship.

2.2 Access and Cost of Energy

A second key determinant impacting the industrial and manufacturing performance is the availability and the price of energy. Uncertainty in the availability of electricity and gas, coupled with energy tariffs, strongly impact the value added by the manufacturing sector. The NEPRA estimates that cumulative load shedding last year in Punjab amounted to **around 41 million minutes**. To enhance industrial activity, there is a strong need to manage the access, availability and the cost of energy.

2.3 Deficiency in Hard Infrastructure

The third key determinant is the availability of suitable and reasonably priced industrial infrastructure, especially industrial land. Punjab historically has invested in industrial estates, and two new institutions PIEDMC and FIEDMC were set up as a result of the Punjab Industrial Policy 2003. The PSIC has also made significant investments in industrial estates for small and cottage industries. Sunder Industrial Estate under the PIEDMC has been a good model of success, and similarly, the Multan Industrial Estate II produced good dividends that created resources for investing in more industrial estates. However, generally, there is a colonisation issue in most government industrial estates, an issue that needs to be addressed. Secondly, a number of small and cottage industries in Punjab, after rapid urban expansion, have been engulfed in dense residential areas. This is becoming a serious problem for cities in and around the golden triangle and Lahore. Moreover, no zoning laws or rules are in place. There is a need to address these growing problems as it is not only hindering growth of industries but also impacting liveability of residents and exposing them to environmental and health hazards.

2.4 Subpar Agriculture Sector Performance

The evidence on Punjab suggests that the manufacturing performance in the province is strongly correlated with the agriculture sector performance. The output of the agriculture is used by industrial sector for value addition. As mentioned already, the growth of cotton has a strong multiplier effect on exports from Punjab. However, the agriculture sector performance has suffered in Punjab due to input issues and obsolete agricultural practices. The chapter on agriculture sector provides a more detailed analysis of agricultural and related issues and the strategy of the government going forward.

2.5 Limited Credit to SMEs

As highlighted in the chapter on Private Sector Development, credit to SMEs is seen as a major constraint for small and medium enterprises. However, as stated previously, it acts as a strong employment multiplier.

2.6 Business Enabling Environment & Investment Climate

The most fundamental elements impacting the performance of the manufacturing sector are the cost and burden of regulations. The two elements need to be reduced in order to create an environment in which new businesses feel comfortable to invest and grow. The regulatory burden in Punjab and Pakistan has been high, and several international studies have reported key problematic areas.

3. Target Setting

The Industries, Commerce and Investment Department recently developed the Punjab Industrial Policy 2018, which has been approved by the provincial cabinet. The policy has made some overarching targets for the sector over the next five years. These overarching targets have been further segregated over the five-year period and are presented below:

The Industrial Policy and Industrial Strategy seeks to:

1- Attain a terminal year growth of 10 percent for the industrial sector in Punjab. The Growth Strategy 2023 predicts a more conservative trajectory, which is provided below:

2018-19	2019-20	2020-21	2021-22	2022-23
2%	6.5%	8.4%	8.5%	9.7%

2- Increase the share of industrial value added in the GPP to 18.2 percent. The trajectory is provided below:

2018 -19	2019 -20	2020 -21	2021 -22	2022 -23
17.6%	17.7%	18.0%	18.2%	18.2%

3- Creation of 2.89 million jobs over the five year period in the industrial sector. The trajectory is provided below:

2018-19	2019-20	2020-21	2021-22	2022-23
120,000	510,000	660,000	700,000	900,000

4- Train a total of 2.5 million skilled graduates over the five year period with an increased number of industry-relevant and industry-partnered training courses. The trajectory is provided below:

2018-19	2019-20	2020-21	2021-22	2022-23
450,000	450,000	500,000	550,000	550,000

5- Ensure close to 100 percent colonisation of the existing industrial estates by 2023.

6- Ensure an average 10 percent annual increase in exports over the five-year period.

4. Strategy

As mentioned above, the government has recently approved the Punjab Industrial Policy 2018. The policy is based on the fundamental approach of creating an enabling environment conducive for industrialisation. The policy does not take the subsidy provision or disproportioned incentive route, and instead tries to address the key provincial policy levers to deepen industrial activity, encourage diversification by attracting new industry and enhance the value-added mix of exporting sectors. The policy addresses the factor markets issues for market failures and provides support to address information failures that constrain industrial performance. The key directions taken by the policy include:

- **Revamp Industrial Zones as Anchors for Industrial Transformation:** Build on the existing special economic zones and industrial zones, and leveraging investments through the CPEC. These zones will offer attractive incentives, be optimally located along the industrial corridors in line with the provincial spatial strategy, and feature dedicated infrastructure and a business-friendly regulatory regime. To enable this, the system of governance for zones will be revamped.

- **Transform Productivity Through People and Processes:** Increase productivity of the manufacturing sector in Pakistan by instituting reforms to the vocational training system in order to allow it to better serve the industry needs in terms of number and skills of graduates, and by facilitating firms in increasing their productivity through greater adoption of advanced management and operational practices.

- **Expand Access to Financing for Industry:** Increase access to finance for businesses throughout their lifecycle, particularly focusing on supporting the SMEs by offering credit guarantees, establishing a credit bureau and creating an ‘investment matching’ programme for Venture Capital and Private Equity firms seeking to invest in SMEs.

- **Address Specific Governance Challenges:** Improve the business environment in Punjab through provision of one-window service and facilitation centres, and by ensuring private sector consultation before introduction of any new regulation. A “grace period” will be given to allow the private sector to adapt to regulatory changes.

- **Develop Strong Industrial Clusters:** Facilitate growth of industrial clusters that benefit from economies of co-location e.g. shared infrastructure, skilled workforce, technology transfer, some of which can attract and support globally leading large-scale manufacturers as anchor investors. The government will improve the investor attraction process and work closely with the industrial sector to unlock productivity gains through specific initiatives.

- **Optimising the Use of Punjab's Natural Resources:** Punjab has a rich mines and mineral sector. The sector has great potential to develop as an industry on its own and also to contribute significantly to other value added industries. The government will improve the function of the sector and increase value added. This will be done by better cataloguing of our natural assets, developing governance systems of partnerships and addressing the issues in pricing policies. The reforms will focus on brining transparency and ease of process to ensure a stronger interest by the private sector.

- **Capitalising on the SME Potential of Punjab With a Focus on Exports:** Punjab is house to over two million SMEs and some very dynamic exporting clusters such as surgical, garments, sporting goods, footwear, auto parts, furniture, fans, agricultural implements, pumps, processed food and frozen meat. The government will ensure an increased contribution from these sectors to exports and value added by providing activity-based support, such as business development services, product development, market information, credit and marketing and networking locally as well as internationally.

- **Increasing Compliance with International Standards:** The defining of and compliance with quality standards for industrial products has been weak in Punjab. The lack of local standards makes it difficult and costly for producers to meet compliance requirements set by international buyers and countries. The example of the garments sector shows the large investment now being required to move towards environmental compliance. The government will support the regulatory regime to set local standards and support by cost sharing measures for small firms striving to meet international standards and trying to attain certification.

To implement the policy, the industrialisation strategy developed under the development framework includes the following pillars:

The government will:

(i). Support provision of affordable and quality industrial land and infrastructure

- Speed up sale of vacant PIEDMC/FIEDMC industrial estate plots and increase colonisation.
- Ensure provision of quality infrastructure in industrial estates, including power, waste disposal, effluent treatment, vocational training and one-window facilitation.
- Colonisation of PSIC Industrial Estates, exit from non-viable estates and development of a land lease policy to reduce access cost for SMEs.
- Operationalise one-stop shops at all industrial estates of Punjab.

(ii). Increase affordable credit to SMEs

- Launch credit guarantee scheme and mark-up support scheme for SMEs with growth potential.
- Support to SMEs by the PSIC in registering them and helping in preparing documents required for loan processing. The PSIC will collaborate with banks to lobby for SME credit by providing information on registered SMEs.
- Initiate enterprise development and entrepreneurship fund.

- Launch credit guarantee scheme and mark-up support scheme for SMEs with growth potential.
- Support to SMEs by the PSIC in registering them and helping in preparing documents required for loan processing. The PSIC will collaborate with banks to lobby for SME credit by providing information on registered SMEs.
- Initiate enterprise development and entrepreneurship fund.

(iii). Upgrade human capital for industrial growth

- Improve the use of ICT for job market information and connecting trainees with potential employers. Enhance the focus on skills pathway rather than just training.
- Expand the outreach of the PSDF and moving it towards a self-sustaining organisation acting as the market brand for provision of quality and relevant employable skilled graduates.
- Work towards consolidation of training institutes to create excellence centres, with larger numbers trained at one point.
- Ensure a stronger inclusion of soft skills training and personality development in all TVET courses.
- Enhance linkages with Diaspora job recruiters in the UAE and the Middle East to enhance the export of human capital and develop suitable workforce for these markets. PSDF has conducted a detailed study and they will be encouraged to launch a programme on this aspect.

Human capital development is the key pillar of the Punjab Growth Strategy and offers the highest rate of return.

(iv). Strengthen and develop key clusters

- Provide cluster development support in partnerships to key industrial clusters of Punjab; (i) garment, (ii) footwear, (iii) surgical, (iv) sports goods, (v) cutlery, (vi) furniture, (vii) auto parts, (viii) value added livestock, (ix) light engineering.
- Creation of design institutes and R&D centres for technology and product development on cluster basis, especially focused on increasing exports.

(v). Provide business development services

- PSIC will provide/coordinate/facilitate key services such as taxation, compliance, certification, testing, marketing and branding support.

(vi). Implement measures to increase private sector investment (domestic and international)

- Reduce the regulatory burden in the province with regard to doing business.
- Develop a consistent long-term investment policy and market Punjab for investment[4].
- Provide quality pre- and post-investment facilities

[4]SMEA Project of USAID has developed a draft of the Investment Policy for Punjab.

(vii). Enhance the contribution of the mines and minerals sector

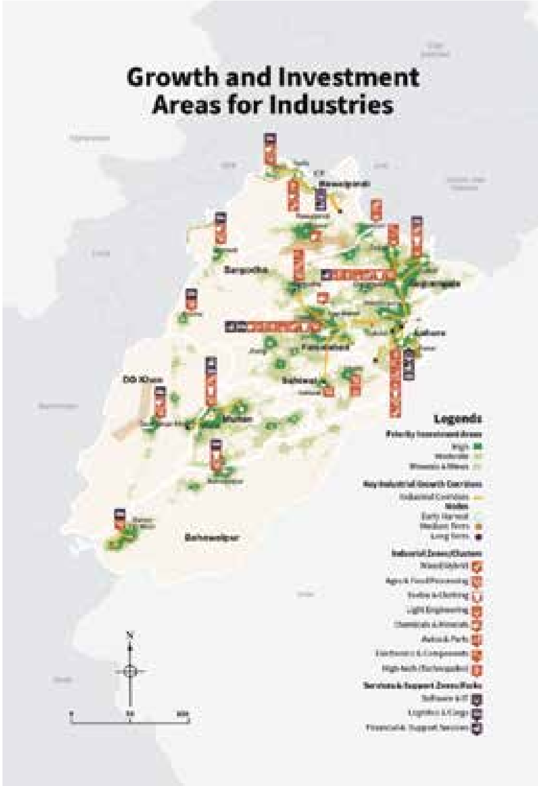
- **Improving mineral governance**
  - This will be done by setting up an inclusive and broad-based decision-making process and strengthening capabilities of all institutions involved. A clear and fair mining legislation will be developed to facilitate private sector-led growth, and rules will be drafted regarding coordinated land use.
  - Development of a coal pricing policy framework.
- **Economic development of the sector**
  - Identification and categorisation of mineral assets and developing function markets for private sector to invest.
  - Developing an equitable and fair revenue generation regime.
  - Strategic management of mineral resource development and value addition.
  - Supporting small and medium scale industries in the sector by creating fair and enabling environment.
  - Developing requisite hard and soft governance infrastructure.
  - Investing more in developing quality human resource for the sector.
  - Initiating online application process for tendering to attract foreign investment.
- **Management of social and environmental issues**
  - Developing health and safety standards to protect and safeguard workers and the environment.
  - Moving the sector towards mining for sustainable development.
  - Strengthening exploration and recourse estimation on mineral resources of Punjab.

The Mines and Minerals Department has estimated that it will require approximately PKR 20 billion in development funds over the next five years to implement the strategic priorities.

(viii). Use of spatial planning and spatial strategy measures to address disparities and improve performance of industrial assets

- An industrial site selection tool will be developed, which will enable investors to select potential site locations through evidence-based policy.
  - The site selection tool will rank site locations on the basis of 40 indicators: various industry-related indicators (such as physical infrastructure, technical and socioeconomic aspects, markets, connectivity, raw material, institutions, geographical and environmental aspect, etc.) to assess site suitability.
  - The tool will also provide a detailed assessment of corridors and potential sites within key economic regions across Punjab. It will also help to identify optimal locations for industrial development where necessary infrastructure is already present, and involves least cost for external infrastructure development.

- Three industrial corridors will be formally demarcated by 2023 by providing a 2km buffer along the already existing corridors. The government will further enhance the competitiveness of these industries by providing an enabling environment, like basic infrastructure, one-window operations, gas and electricity permits, etc. The corridors identified for initial intervention include:
  - The Lahore-to-Shiekhupura corridor - a 24km corridor starting from Kot Abdul Malik to Sheikhupura bypass. As many as 1,062 industries are situated within this corridor.
  - The Manga-Raiwind Industrial Corridor, which hosts about 70 industries along the 14km corridor length.
  - Sialkot-Daska Industrial Corridor, an 18km road that hosts 560 industries.



Source: Urban Unit, Government of Punjab

- Industrial development in these corridors is to be supported through proper master planning. Apart from these three high-priority corridors, more than 15 other corridors have been identified in the Punjab Spatial Strategy to be developed until 2047. The respective and local authorities should set a vision for each corridor with a spatial layout for focused development.

5. Identified Actions and Financing

To implement the strategic pillars, the provincial industries and mines departments have identified the following set of actions and activities. These will continue to be developed further as the government implements and monitors the progress on the Growth Strategy.

5.1 Promotion of SMEs:

- Develop and approve the MSME Policy of Punjab to address the focused concerns of small businesses, especially relating to the ease of doing business, credit, skills and business development services.
- Restructure and strengthen PSIC to become the lead provincial agency supporting the SMEs located in the province.
- Initiate a loan mark-up scheme for critical value position SME industries to ensure affordable access to finance.
- Work under the State Bank umbrella to fund a provincial credit guarantee scheme.
- Establish an enterprise development fund and encourage entrepreneurship at all levels; the fund will share costs for technology upgradation and innovation.
- Establishment and colonisation of small industrial estates in Gujranwala and Wazirabad.

5.2 Moving to an inspection free regime for industries:

- Implement the plan to reduce the interface between public sector inspectors and industries.
  - All fees and taxes to be paid via issuance of challans and, over time, integrated as one online payment. The inspectors will not visit the industry premises for collection of fees.
  - The inspections for weight or measure of products will be done at the retail outlets, eliminating factory visits.
  - Boiler and civil defence inspections will be transferred to a third party. The government will only enforce compliance.
  - PESSI declarations will be on self-assessment with 5 percent random audit.
  - Labour inspections will be against a well-defined simple code book, while the discretionary powers of labour inspectors to place a fine or lock the premises will be removed. These powers will be with directors who, in case of a compliant, will examine the case. Over the medium term, all laws containing labour welfare will be assessed and a new single labour law will be approved.
  - Payment of all local government fees will be made online over time.

5.3 Increasing colonisation of industrial estates and SEZs:

- 100 percent colonisation and speedy development of industrial estates in Vehari, Bhalwal, Bahawalpur and Rahim Yar Khan will be done.
- Speedy colonisation of the Quaid-e-Azam Apparel Park will be done in order to attract foreign investment.
- Establishment and initiating colonisation of Allama Iqbal Industrial City SEZ in Faisalabad will be done.
- Work will be done on the feasibility of the Land Lease Policy for industrial estates.
- Land Use Policy for industrial estates will be developed and approved.

5.4 Working towards the promotion of investment and trade in Punjab:

- The Punjab Investment Policy will be approved and implemented

5.5 Other proposed interventions by Industries Department:

- Operationalisation of one-window shops at all industrial estates.
- Launch of the 'Invest Punjab' portal.
- Establishment of the Punjab Business Council.
- Development of a system to ensure compliance under an inspection-free or minimum inspection regime.
- Move towards self-regulation with random audits.

The Industries, Commerce & Investment Department estimates that it will require approximately PKR 75 billion in development funds over the next five years to implement the policy and the strategic plan.

6. Punjab Industry 4.0

The strategic interventions presented above are designed to reverse the trend of deindustrialisation in Punjab and the country as a whole. The government will increase the efforts to boost the existing industrial activity, but also plans to create an enabling environment in Punjab to provide opportunities for local investors and foreign collaborators to leapfrog into the 4th and 5th generation industrial activity. The Singapore model provides enough lessons that really build the room in Punjab to provide available stimulus to trigger investment in high-growth and catalytic sectors. Punjab's industry today mostly consists of low cost labour manufacturing and our declining exports and increasing imports show that we are continuously losing out from other emerging economies and rapidly changing technologies. The key factors that threaten Punjab's global positioning include:

- Global value chains (GVCs) and spatial locations of production are continuing to shift, especially as China's industry is relocating to Pakistan. This, under CPEC, opens up new opportunities for Punjab. However, policies and positioning are required to benefit from this and become part of global value chains.

- The measure of labour quality is now in terms of higher productivity per dollar and not the cost. Unfortunately, Punjab has not been able to upgrade its human capital and the technical skill and productivity. This alone is the biggest detractor restricting Punjab to enter the next generation industrial activity. The productivity levels and skills of Punjabi workers are not in line with to the demands of portions of GVCs that are looking to relocate.

- The rapidly changing technologies and innovative changes across the region and globe are both disrupting and fostering the technology based production model. The rapidly changing technologies make it difficult and costly to keep pace, especially when the technology development is not happening locally. Punjab is nowhere on the global map of patent registrations. One recent example from Punjab sports goods industry exists of a patent registered in the US for football hybrid technology. This has reshaped the growth of the football industry once again, which was losing market share to China.

Moreover, the GVC approach takes specialisation to the next level. However, this puts an extreme pressure on the performance and the capability of the SME sector. As stated previously, the Punjab SME sector has the quantum; however, they suffer from large inefficiencies, low productivity and redundant technology. The futuristic strategy for Punjab to lift its industrial structure to the next generation will require dedicated efforts. The government intends to adopt the following strategic measures:

- The government will support the SMEs extraordinarily to help them become the real fuel of growth and support the larger value chains to rely on Pakistani SMEs. The government under its MSME policy will detail out the steps required for the purpose. The main focus will be on helping the SMEs with adoption and diffusion of technology, and support in creating production networks between themselves and also to link up in the value chains of MNCs and large firms.

- Human capital is the key to our Growth Strategy and the government realises that this is the factor that will make the difference. The overall education system and the TVET and skills system need an overhaul to move from low cost workers to producing productive workers with strong employability skills. The Skills chapter details out the skills strategy over the next 5 years.

- More specifically, for attracting high talent industry, the government will explore the opportunities for creating technology parks and ensure a strong linkage with local universities and local industry. The model will be a PPP-based intervention driven by the industry itself.

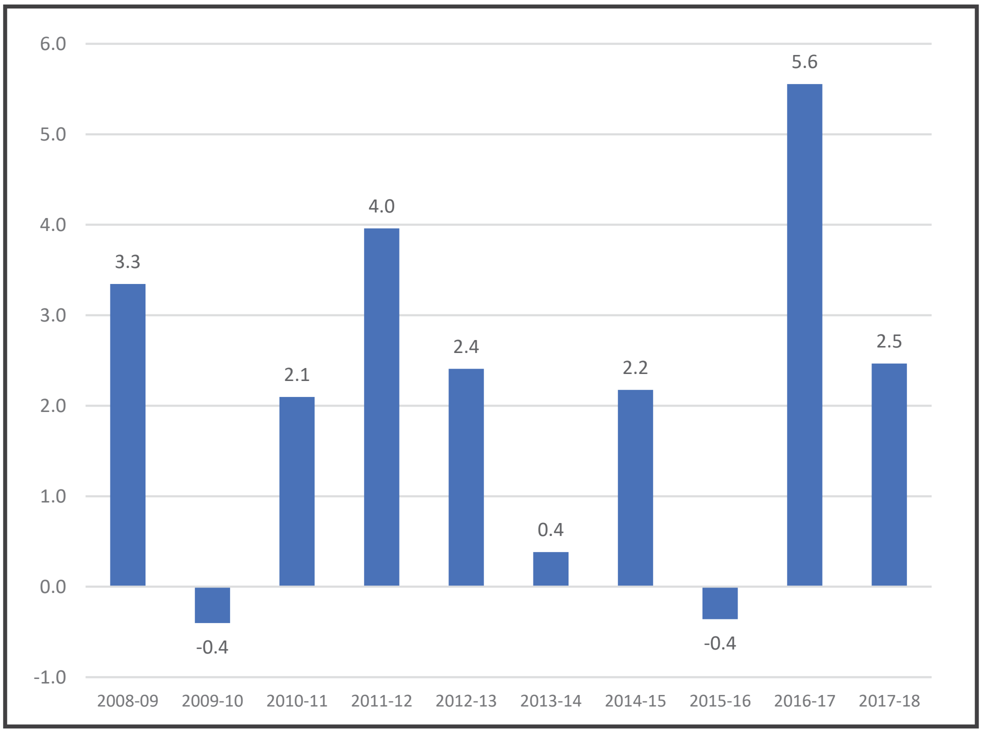
Enhancing Value in Agriculture & Livestock

The agriculture sector features large in Punjab's economy, in 2017-18 it accounted for about 20 percent of the GPP and provided jobs to 40 percent of the labour force. Moreover, the bulk of province's marginalised segments living in the rural areas depend to a large extent on agriculture and livestock for their incomes and sustenance. The efficient development of the agriculture sector is therefore of prime importance and takes a central part in the government's Growth Strategy for increasing incomes, increasing value-added exports, creating employment and reducing poverty.

1. Performance and Landscape

The performance of the agriculture sector has been lacklustre in the province. The coefficient of variation in the agriculture sector is close to 90 percent, suggesting a variable pattern of growth in the sector. In terms of its contribution to Punjab's GPP, the share of agriculture has dropped from 25 percent in 2008-09 to 20 percent in 2017-18. This decline in share has mostly been absorbed by the services sector. However, the sector's share in agriculture has not dropped anywhere close to this number, suggesting that per capita incomes have declined in the sector over the years.

Figure 3.12: Performance of the Agriculture Sector, 2009-18 (%)

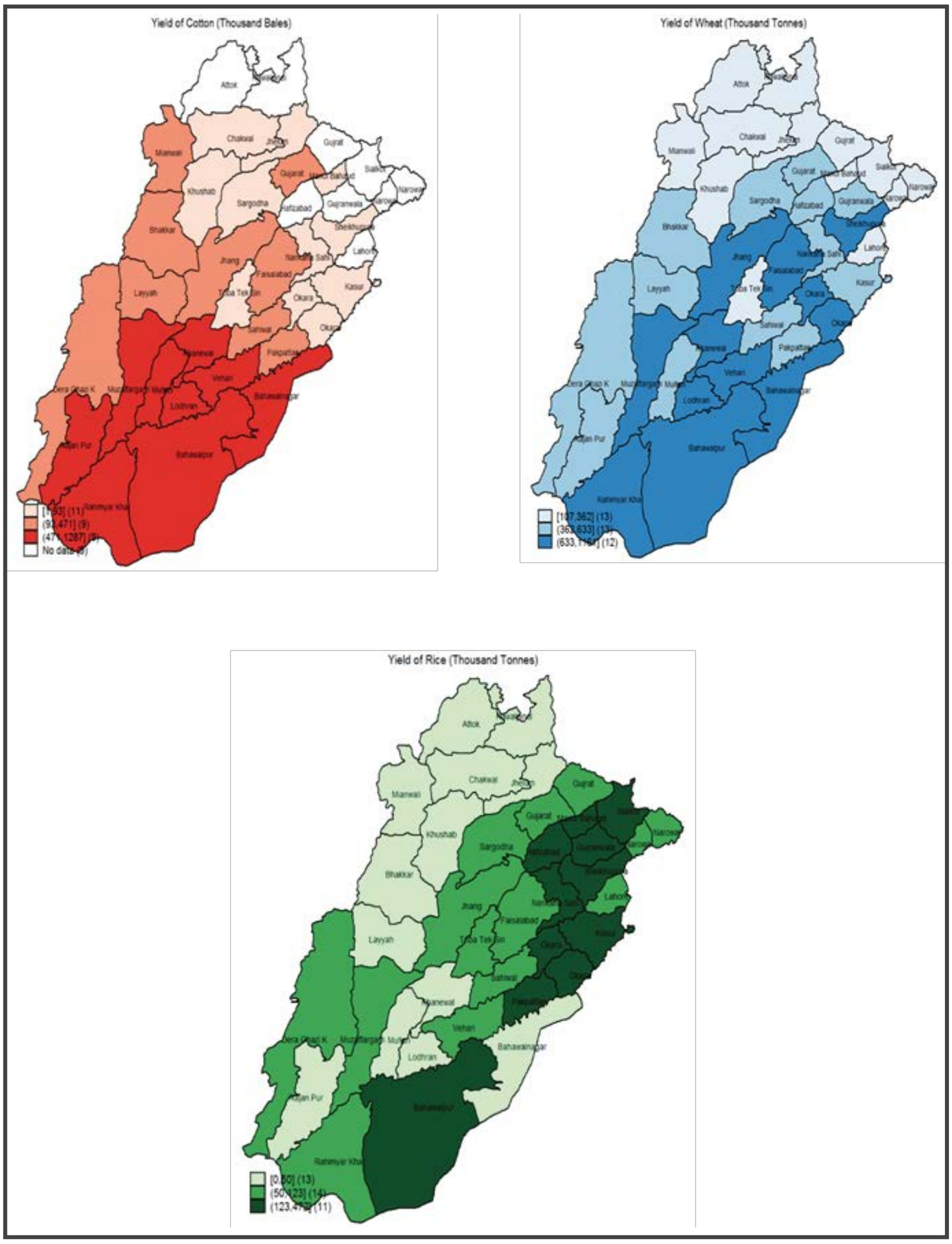


Source: Punjab Growth Strategy Team

As compared to other sectors, agriculture's contribution to the economy is more equitable, as the production of key crops is spread across several districts (See Figure 3.13). In comparison, industry and services are more concentrated in bigger cities only. Therefore, government investments to upgrade the performance of the agriculture sector not only has favourable growth consequences, it also contributes significantly to the government's regional equalisation strategy, as it improves the incomes of the deprived regions.

Moreover, the regions in south have high yields of cotton that supports a large number of female workforce. Most of these females work in the informal sector and depend for their livelihood on cotton farming and home livestock. Therefore, improving productivity and growth in the sector is criticle for social and economic empowerment of women. This makes the strategy of the government strongly pitched in favour of gender empowerment.

Figure 3.13: Heat Maps Showing Production of Key Crops across Punjab



Source: Punjab Economic Report, 2017

In addition to the above three main crops, Punjab produces over 40,000 tonnes of sugarcane and almost 5,000 tonnes of maize annually. Within agriculture sector, in addition to the crops sector, livestock and dairy consists of 56.7 percent of the total agriculture sector value added. Punjab houses more than 191 million livestock heads and produces over 17.7 billion litres of milk. The cattle and buffalo population is in excess of 80 million, whereas there are over 100 million sheep and goats in the province. In addition, around 80 percent of national exports originate from the agriculture sector and Punjab enjoys 60 percent share in the national exports. Therefore, the sector not only impacts the lives of deprived segments but also has a strong growth linkage through enhanced value added exports.

2. Key Determinants & Multipliers

The Punjab Growth Strategy highlight the following critical determinants and multipliers for the agriculture sector.

- A one percent increase in the capital to labour stock will increase crop sector value added by 0.4 percent.
- A one percent increase in irrigation stock (water availability) increases crop sector value added

by 0.5 percent.

- A one percent increase in road investment increases crop sector value added by 0.06 precent and a one percent increase in price of input reduces crop sector value added by 0.05 percent.
- A one percent increase in the capital to labour stock will increase livestock sector value added by 0.94 percent.
- A one percent increase in road investment increases livestock value added by 0.34 percent.
- A one percent increase in credit to agriculture sector increases private investment in the agriculture sector by almost 0.1 percent in Punjab.
- A single point increase in incidence of power load shedding decreases private investment in the agriculture sector by more than 0.5 percent in Punjab.
- A one percent increase in cotton production increases export of goods and services by almost 0.3 percent in Punjab.
- A single point increase in agriculture terms-of-trade increases crop sector value added by more than 0.1 percent in Punjab.
- A single point increase in ratio of livestock prices index to overall price index increases livestock sector value added by almost 0.2 percent in Punjab.
- A one percent increase in agriculture sector value added increases large scale manufacturing value added by almost 0.7 percent in Punjab.
- A one percent increase in agriculture sector value added increase wholesale and retail trade value by more than 0.2 percent in Punjab.

3. Issues & Challenges

The first, and perhaps the most important issue is that possibilities of input-driven growth are becoming exhausted (the constraints on water and land have become much tighter) and thus the approach for the future will have to be different from that of the past. The Punjab Economic Report 2017 shows that total factor productivity (TFP) has dropped from 3 percent in 1980s to just 0.6 percent. This implies that a majority of the productivity is driven by the application of higher capital and labour.

Secondly, water is a key determinant of value added in the agriculture sector. However, the productivity of water used in the agriculture sector has declined over the last three decades. Moreover, it will take time and significant investments to increase supply of water through physical means. The farmers of the province will have to use the available water more productively - 'more crop per drop' will have to be the strategy going forward.

Thirdly, the cropping pattern in the province does not conform fully to its comparative advantage or to the realities of the international market. Five major crops (wheat, rice, cotton, maize and sugarcane) account for 50 percent of the cultivated land and around 40 percent of the value added in agriculture. There is a need to optimise the use of province's resources and bring adjustments to the area where these crops are sown. For example, sugarcane's growing period occupies a full year and, therefore, displaces other crops, particularly cotton (Pakistan has a clear competitive advantage in international markets and multipliers suggest a strong impact on exports). The sugarcane sector also requires subsidy to support farmer prices and has lower sugar content than the cane crops produced in tropical areas.

Moreover, the climate change has also resulted in an enhanced need for addressing the cropping patterns in the province. The current agro-climatic zones of Punjab are presented below:

Table 3.2: Agro-climatic zones of Punjab

Agro-climatic Zones	Districts
Rice/Wheat Punjab	Sialkot, Gujrat, Gujranwala, Sheikhupura, Lahore, Kasur, Narowal, Mandi Bahauddin, Hafizabad
Mixed Punjab	Sargodha, Khushab, Jhang, Faisalabad, Toba Tek Singh, Okara
Cotton/Wheat Punjab	Sahiwal, Bahawalnagar, Bahawalpur, Rahim Yar Khan, Multan, Vehari, Lodhran, Khanewal, Pakpattan
Low Intensity Punjab	DG Khan, Rajanpur, Muzaffargarh, Layyah, Mianwali, Bhakkar
Barani Punjab	Attock, Jhelum, Rawalpindi, Islamabad, Chakwal
Cotton/Wheat Sindh	Sukkur, Khairpur, Nawabshah, Hyderabad, Tharparkar, Naushahro Feroze, Ghotki, Umerkot, Mirpur Khas, Sanghar

Source: Agriculture Department, Government of Punjab

These agro-climatic areas will be redefined due to rainfall volatility, increased drought and rising temperatures due to climate changes. This is seriously impacting crop yields. To fight climate change and increase productivity on the basis of competitive advantage, the redesigning of agro-climatic zones is imperative so that per acre yield can be increased. Also, agro-ecological zones redesigning will recommend farmers to grow the crops that are suitable and comparatively productive in their areas.

Fourthly, Punjab suffers from considerable yield gaps. There is a considerable difference between the productivity of the most efficient farmers and the average. The gap between the average and progressive farmer on average is around 50 percent[5]. This shows that the province can increase its yield by merely improving the performance of the average farmer in the direction of what the progressive farmers are achieving. Further, analysis of efficiency suggests that the efficiency levels have not improved over the years, with cotton being the least efficient at 62 percent and maize being the most efficient at 80 percent. These gaps show that farmers were not able to use full potential of the inputs made available to them[6].

One key reason for these efficiency gaps is the input mix distortions resulting from changes to input prices. For example, low prices of nitrogen-based fertilizers discourage farmers from using phosphate and potassium based fertilizers that have higher yields and are more efficient. However, the efficiency enhancements will majorly come through increasing the total factor productivity, which will increase with interventions such as improving seed quality, bringing better varieties and modernising agriculture.

Fifthly, over the last 50 years, the distribution of the size of landholdings has changed in a direction that is coming back to hurt efficiency of the crop sector. There has been a substantial increase in the number of small landholdings, primarily at the expense of medium holdings. The total reported area for agriculture in Punjab is spread over 17.5 million hectares, of which 12.5 million hectares is cultivated area[7]. Of the total 5,249,800 farms in Punjab, about 14 percent are less than one acre, 77 percent are between 1 and 12.5, and the remaining 9 percent are above 12.5 acres. The 9 percent farms above 12.5 acres constitute about 41 percent of the total farm area[8]. Small land holding makes it difficult and costly to upgrade farming practices and use modernising techniques that will enhance productivity.

Sixthly, the government's pricing policy on wheat acts as a disincentive for private sector investment in storage. The government usually sets prices pre-harvest and these price controls work as disincentive for private storage firms. The government will rework its wheat pricing strategy and move to a model where the private sector forms the market equilibrium.

The livestock sector over the years has focused on improving the milk yield and little work has been done on maintaining the quality. This has resulted in a huge loss of milk, inability to convert milk into high value-added items and increased incidence of health issues. Similarly, focus on raising animals for meat has been far less. Consequently, the average yield of beef is much lower than international standards.

[5]Punjab Economic Report, 2017
[6]Punjab Economic Report, 2017
[7]Punjab Development Statistics 2018.
[8]Agriculture Census (2010)

Finally, little emphasis has been placed on ensuring disease-free animals. This is the biggest constraint in terms of Punjab's ability to enter into the export market.

4. Target Setting

The Punjab Growth Strategy 2023 targets to reach a growth rate of 5.5 percent in the agriculture sector by 2023 and create 1.26 million jobs in the sector.

Years	2018-19	2019-20	2020-21	2021-22	2022-23
Agriculture Sector Growth	1.7%	3.6%	4.8%	4.9%	5.0%

Years	2018-19	2019-20	2020-21	2021-22	2022-23
Employment Creation	130,000	130,000	300,000	300,000	400,000

- The government will bring structural reforms, modernise farm management and increase availability of water and fertilizer to increase total factor productivity by 3 times.
- The government over the 5 years will make Punjab disease-free for livestock.
- The government over the 5 years will eliminate the use of adulterated milk from the market.
- Increase the average animal productivity in Punjab by 25 precent by 2023.
- Enhance the household income of small livestock holders by 10 precent per annum.

5. Strategy for the Sector

In order to attain the targets set above, the government will take the following set of strategic interventions:

- The government will ensure efficient usage of water, invest in irrigation to increase the availability of water, reduce price volatility of inputs, especially fertilizers and develop mechanism to ensure farm upgradation solutions at small farm holdings. The government will work on the pricing policy of water for agriculture to reap resources that will be invested in ensuring sustainability.
- The government will substantially increase public and private investment in the agriculture sector. The private sector investment will be supported by enhancing the agri-credit to the farmers and making these loans more targeted. The investments will be focused on upgrading facilities, especially improving the efficiency of the irrigation system. To increase investments in the sector, the government will utilise all possible methods of mobilising additional financial resources. The government will examine carefully what aspects of its activities constitute public goods and continue to perform these, while transferring to the private sector those aspects that are of a commercial nature. These may be done via PPPs. The government will take measures to improve cost recovery for the provision of public services such as improving the cost recovery of canal maintenance.
- The government will work towards driving value by strengthening commercial agriculture and by providing greater incentives for production of high value added items. The wholesale markets in Punjab are governed by the Agriculture Produce Markets Act of 1939. The government will review and revise the Act and also further enhance the quality and economic viability of wholesale markets. The government has invested significantly in farm-to-market roads. However, it will use spatial mapping to identify further connecting roads that are required to integrate these markets with farms.

- The government will double the investment in agriculture research and development to 0.4 percent of the GPP. The agriculture research will be made more in line with the demands of the farmers. The Punjab Agriculture Research Board (PARB) will be strengthened to provide significant coordination of research work by the government and other private institutes.

- The government is focusing on enhancing the specialisation and knowledge of devolution agents, introducing greater use of ICT, and is involved with private partners and civil society. To extend the efficiency of the extension services, the government will focus on developing its human resource and will implement speedily the projects such as 'Extension Services 2.0' and 'Agri-SMART', which will enable ICT-based interaction and information transfer to the farmers.

- The government will support the growth challenges of small commercial farmers, especially women and youth, to bring about inclusive growth and increase in productivity in the agriculture sector, particularly in areas such as HVA farming and cottage level processing. The government will address disparities in productivity and prices along the agro-climatic zones, thus empowering the SCFs and women to induce agriculture productivity growth and poverty reduction at the same time. On the other hand, steps will be taken to ensure female education and awareness through female extension agents who can provide educational opportunities to the rural women.

- The government will revamp its cropping patterns, agri-cropping zones will be moved towards more value added and high yielding crops given Punjab's climate change, water availability and soil suitability. The government will bring the focus on diversifying horticulture.

- Substandard sanitation coupled with scant market infrastructure accounts for 30 percent to 40 percent post-harvest losses. Furthermore, it is the middleman who benefits the most in the long supply chain by grabbing 60 percent to 70 percent of the value of the produce at the expense of growers. The development of agriculture products' value chain is crucial for agriculture sector's sustainable growth. Well-functioning agriculture value chain ensures a fair price to farmers and adds value to production for local and export markets. Moreover, well-established value chains develop market infrastructure; promote research, improvement in management techniques and shelf life of the produce; and ultimately facilitate the connection between producers and final consumers. Market committees, private sector investment, ad-valorem fee, farmer credit, enhanced competition among brokers, direct farming and storing facilities are the key areas of the proposed market reforms by the Punjab government.

- In terms of the development of agriculture value chains, the government will focus on enhancing the connectivity of farms to the markets by developing the required infrastructure. The intention is to shift the central markets to a modern, private sector and profit-oriented infrastructure. In this regard, the government will design systems to monitor the quality of daily price and quantity reports, increase the efficiency of traditional assemblers and wholesalers, improve the credit services to the farmers, and connect farms and markets cohesively by employing ICT based reforms. In addition to this, the Food Outlook programme will be further developed to provide information to the farmers. Furthermore, the Agriculture Department is moving towards strategic crop cultivation and SMEs for technology and value addition. The Agriculture Department has recently started a horticulture value chain development programme with component of matching grants for SME processors. Several other programmes are also being planned for 2018-19 to assist processing sector SMEs in technology transfer, capacity development and provision of technical and marketing support. Value added sectors, including pack houses, diced frozen fruits and vegetables; jams, pickles and other preserves; edible and essential oil extraction; drying and dehydration; and pulp and concentrate extraction units, will be supported to increase demand for farm produce and enable export of horticulture.

- The government will invest in research for the development of weather resistant varieties of seeds and crops. In this regard, the Climate Smart Agriculture (CSA) techniques will be further developed and implemented. The main thrust of the policy to tackle climate change will be to establish an Institute for Climate Smart Agriculture (ICSA). Adaption and building resilience in events of extreme weather, reducing the effects of underlying cross-cutting issues, mitigation of emissions of greenhouse gases (GHG) and the formation of an enabling policy along with the suitable institutional and legal framework for implementation of CSA are the four broad areas of focus for the CSA. Similarly, research and extension will be further improved for the management of high delta crops such as sugarcane, rice and maize. Along with this, water resource conservation and precise irrigation techniques will be encouraged as part of on-farm water management along with the expansion of small-scale water storage capacity and rainwater harvesting at the farm level. Moreover, the quality of soil needs will be kept under check by focusing on improving application of fertilizer and by developing an evidence-based analytical structure to help the farmers.

- The Strengthening Markets for Agriculture and Rural Transformation (SMART) program aims to make the sector resilient to climate change. To protect the small farmers from yield losses due to natural calamities, the Crop Yield Insurance Index (CYII) stands as a safety net scheme that connects the insurance with the average yield at the tehsil level.

- The government will consider effective use of e-voucher subsidy, in which the vouchers are placed in packets of certified seeds and bags of fertilizers, etc. This will aid the farmers, as it allows a direct transfer of cash to the mobile banking account of farmer within 6 seconds of him sending the scratch code to a digitalised system. The Kissan Cards will serve as a useful tool in the implementation of e-voucher subsidy, as the subsidy money transferred in the digital bank is linked with Kissan Cards, which operate like an ATM or debit card at the point of purchase.

6. Livestock

- The halal market consists of 1.90 billion consumers across 112 countries around the globe, with an estimated worth of USD 2.3 trillion annually. Punjab has advantage of using pork-free feed for poultry production and use of hand slaughtering rather than stunning for meat processing. Going forward, this is going to be an important area for earning foreign exchange and ameliorating the conditions of breeder. The government will:

    - Develop strategies to promote livestock experts, as outlined in the Punjab Livestock Policy 2016.

    - Focus on capacity building of livestock production and processing industry to generate requisite quantity of exportable surplus.

    - Introduce premium price for the value gain in the process of Livestock Development.

    - Focus on development of ostrich, camel and equine meat and hides for exports.

    - Development of HR capacity building in the International Trade Protocols in the context of WTO regime and phytosanitary and sanitary products. The requisite exposure will be obtained as a result of special training and education regarding trade of livestock products.

    - Use ICT based innovative interventions to ensure 100 percent animal vaccination coverage for a disease-free Punjab.

    - Punjab will develop a model to ensure that all milk sold in the market is packaged and will also ensure zero adulteration in milk.

- The Punjab Spatial Strategy has identified the following strategies:

- Punjab's spatial landscape is divided into 25 cropping zones. Using spatial counts, 5 high value cropping zones have been identified. These zones will be focused.

- Use spatial planning to increase the area of production of high value export oriented crops from 6 precent (at present) to 12 precent by 2023.

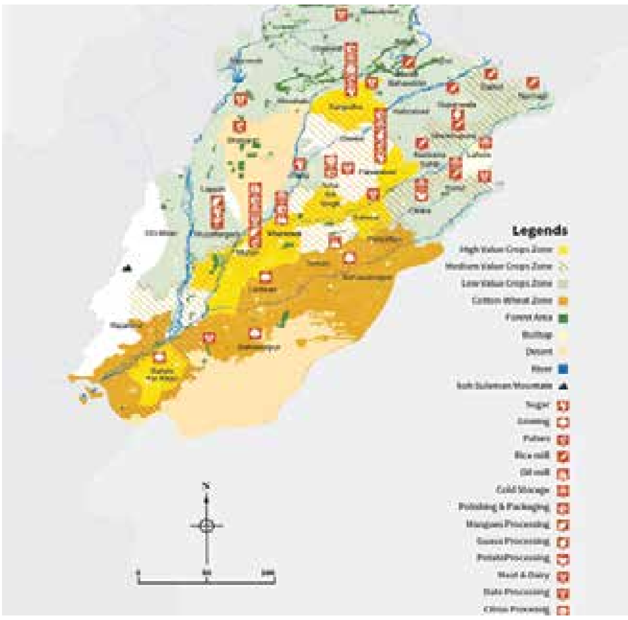
- Information, research and export centres that provide updated information on demand, prices, trends and quality standards in the international market, will be set up in 9 divisional headquarters. Spatial transformation proposed in Spatial Strategy is provided below.

Table 3.3: Proposed Agricultural Transformation Plan for Punjab

Proposed Zone (Based on Crops)	Districts in Zone	Total Cultivated Area of Districts (hectares)	% age Area under these Crops	Proposed Area by 2023 (%)
Olive and Grapes valley, Pulses and Groundnut	Rawalpindi, Attock, Chakwal and Jhelum	994,000	9	15
Citrus and Vegetable Zone	Sargodha, MB Din and Khushab	1,194,000	9	15
Vegetable, Guava and Rice Zone	Gujranwala, Gujrat, Hafizabad, Narowal, Sialkot, Lahore, Kasur, Nankana Sahib and Sheikhupura	2,157,000	52	60
Maize, Potato, Guava, Fodder and Vegetable Zone	Sahiwal, Okara, Pakpattan, Faisalabad, Chiniot, Jhang, Toba Tek Singh	2,276,000	32	38
Mango, Date and Vegetable Zone	Multan, Khanewal and Muzaffargarh	1,087,000	7	14
Cotton, Banana and Oilseed crops zone	Bahawalpur, Bahawalnagar, Rahim Yar Khan, Rajanpur, Lodhran and Vehari	2,754,000	46	55
Pulses, Barley and Date zone	DG Khan, Layyah, Bhakkar and Mianwali	2,097,000	29	35

Source: Punjab Spatial Strategy, Government of Punjab

Figure 3.14: Potential Agricultural Crops Zone



Source: Punjab Spatial Strategy, Government of Punjab

- For livestock, spatial analysis shows that three zones for meat production, processing and value addition can be developed. (i) Zone one consists of districts Rawalpindi, Mainwali, Chakwal and Sargodha (ii) Zone two consists of districts Sargodha, Jhang, TT Singh and Faisalabad (iii) Zone three consists of districts Lahore, Sheikhupura, Gujranwala, Gujrat, Sialkot and Kasur.

- Similarly, for milk production and processing, three zones can be developed on a priority basis in the first phase. (i) Zone one consists of districts Sahiwal, Pakpattan and TT Singh (ii) Zone two consists of Mandi Bahauddin, Gujrat and Gujranwala (iii) Zone three consists of Bahawalpur and Cholistan. These results can be further strengthened by study of nutritional values of soil as well as environmental and ecological conditions of each area before officially notifying these zones.

7. CPEC & Agriculture

The current long-term plan for cooperation in agriculture includes the following focused areas that are relevant for the agriculture sector of Punjab:

- **Planting and Breeding:** Agricultural modernisation along the corridor, guiding agricultural mechanisation and scale production, demonstration projects in Punjab of improved varieties to improve productivity.

- **Agricultural Products Processing:** Introducing modern agricultural product processing equipment and facilities, an agricultural industry cluster could be built around Islamabad and Lahore to create a processing base, which satisfies international standards.

- **Storage and Transportation of Agricultural Products:** Warehousing and logistics facilities in Islamabad and Lahore to form a warehousing and logistics network system connecting cities and covering the area along the corridor.

- **Infrastructure Construction:** An agricultural mechanisation demonstration and leasing centre in Punjab to promote drip irrigation under plastic film and other water saving agricultural techniques, and protected cultivation for the development of facility agriculture.

- **Epidemic Disease Prevention and Control:** A plant and animal disease prevention and control system should be established in Faisalabad and Lahore to reinforce R&D in view of the current cotton leaf roll virus and other viral diseases in plants.

The government will ensure efficient and effective implementation of these initiatives. Additionally,

- The government will advocate with the federal government for negotiating existing tariff structures with China, and ensuring that they are at least on par with those faced by other countries and trade associations such as ASEAN.

- The government will evaluate non-tariff barriers, including Sanitary and Phytosanitary (SPS) requirements, imposed on goods sourced in Pakistan.

- The government will address existing market distortions that adversely affect both the volume and direction of trade, and encourage market based reforms in the agriculture sector.

- Using CPEC cooperation and technical expertise, the government will improve infrastructure networks, particularly those focusing on irrigation, water supply and post-harvest storage and marketing.

- The government will explore public private partnerships, especially in the area of post harvest storage, handling and marketing.

- The government will actively advocate with the federal government to negotiate better access with China for export of citrus, mango and rice to China. These products have competitive advantage in Punjab and are strong part of Chinese import baskets. Moreover, the government will further support development of agriculture products that are part of Chinese import basket.

- Livestock has great export potential for meat and meat by-products to China. In the last four years, livestock has ensured massive vaccination against all prevalent diseases, and efficient surveillance mechanism is laid down all over Punjab. The epidemiological approach of the department to eradicate FMD and other notifiable transboundary diseases is duly acknowledged and being monitored by the FAO. Reviewing all these activities, the federal government is going to sign an MoU on FMD free zone with China for the start of trade regarding livestock & livestock products. There is a need to strengthen the FMD free zones that may be extended from Bahawalpur Division to other divisions. Moreover, it is also required to establish processing units, modern abattoir, value addition techniques and feed and animal by-product industry in these zones.

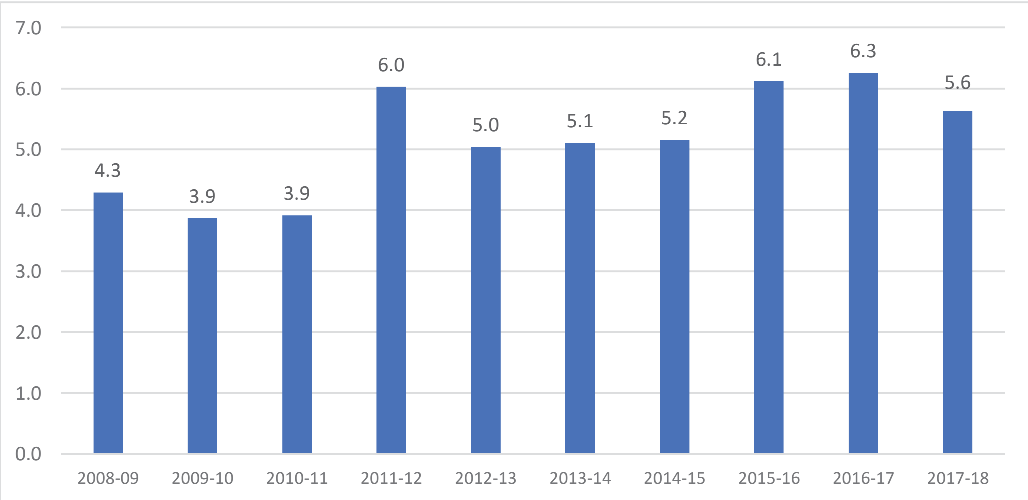
Realising the Potential of Services Sector

As economies grow and develop, they experience a gradual structural shift out of agriculture and manufacturing into the services sector. The growth in the fundamental sectors of agriculture and industry increases demand for services, such as retail, hospitality, banking, insurance, ICT and tourism. The economy of Punjab is no exception to this, and over the last two decades it has seen an increase in the value added contribution by the services sector. However, Punjab has not experienced the growth and increased share of industrial activity, and therefore, to some extent, represents a premature shift (process of early deindustrialisation) into the services sector. Nevertheless, the services sector contributes 62.4 percent of the total value added to the provincial economy. The quality growth of the services sector also has large multiplier effects on other productive sectors, as it creates a more enabling environment for growth and expansion. **The Government of Punjab, under its Growth Strategy, realises the potential contribution of the services sector and its key sub-sectors and will support in creating a less tiring business environment with greater access to quality human capital to ensure further growth and a higher contribution to the exports of the country.**

1. Landscape and performance

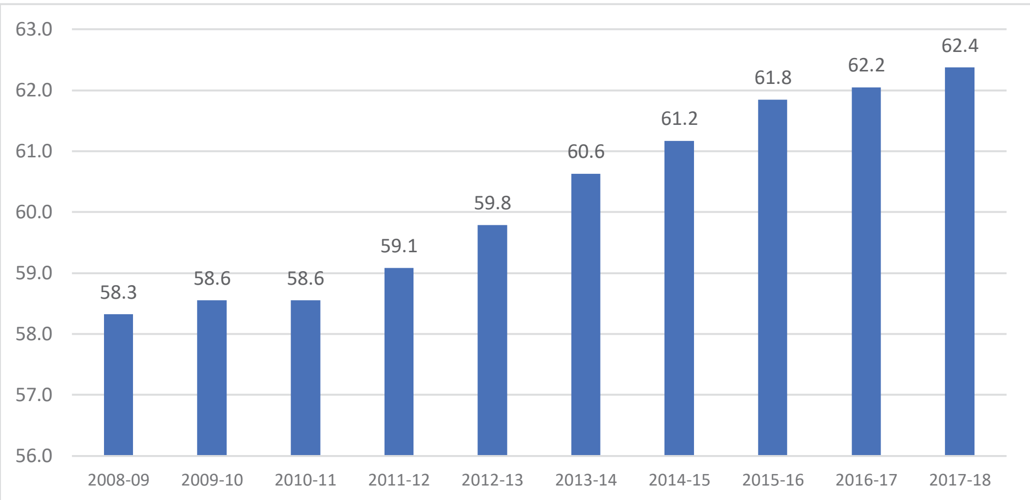
The services sector has been strongest performing sector in the provincial economy. The growth in the last three years has been close to 6 percent and growth has never been negative in the last decade (Figure 3.15). It is due to the consistent performance that the share of services has increased 4.1 percentage points in the last decade.

Figure 3.15: Growth of the Services Sector, 2009-18 (%)



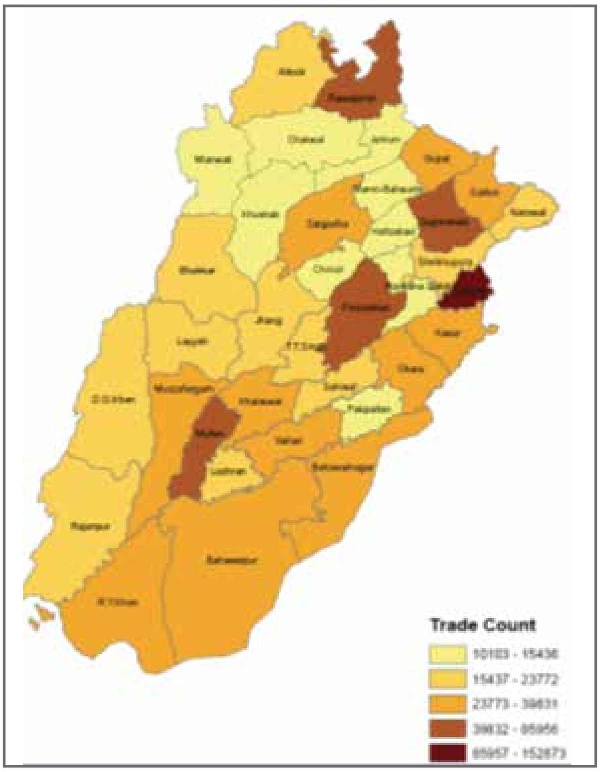
Source: Punjab Growth Strategy Team

Figure 3.16: Share of Services in Provincial GDP, 2009-18 (%)



Source: Punjab Growth Strategy Team

In terms of total employment in the province, the province currently absorbs approximately 11.57 million people, or 31.2 percent of the total employed. However, this is considerably less than the employment share of agriculture. In terms of trade, Pakistan exported services worth USD 5.7 billion and imported services worth USD 10.4 billion in 2017. In terms of sub-sectors, after the public administration & defence, the wholesale & retail (32 percent) adds the most value to the services sector. Transport & communication adds 23.4 percent, finance & insurance adds 5.0 percent and construction adds 4.64 percent. All these sub-sectors have significant potential to fuel growth, especially under the CPEC. The wholesale & retail industry is spread across the province, but more urbanised districts have denser prevalence (see in text map). There is a clear correlation between urbanisation and growth of the wholesale and retail. Therefore, the diversification of investments to create more dynamic cities will fuel more growth.



2. Growth Determinants of the Services Sector & Critical Issues

Services sector growth has a causal relationship with industrial and agriculture sectors. The growth in industrial and agricultural sector stimulates demand for service. However, innovations in services expand the growth potential of productive sectors by providing better access to markets, easing the burden of doing business and enhancing competitiveness. The growth dynamics of the services sector of Punjab present some key drivers as presented below.

2.1 Overall Services Sector

- A one percent increase in power load shedding reduces private investment in the services sector by 0.7 percent.
- A one percent increase in the value of capital imports reduces private investment in the services sector by 0.7 percent.

2.2 Wholesale & Retail Trade

- A one percent increase in agriculture value added increases the wholesale and retail value added by 0.9 percent, and a one percent increase in manufacturing value added increases the wholesale and retail value added by 0.21 percent.
- A one percent increase in average years of schooling increases the wholesale & retail trade value added by 4.7 percent.
- A one percent increase in public sector capital investment in roads & transport and education increases value added by wholesale & retail trade by 0.12 percent.

2.3 Transport Sector

- A one percent increase in the public sector capital investment in urban development increases value added by the transport sector by 0.1 percent.
- A one percent increase in the public sector capital investment in roads increases value added by the transport sector by 0.2 percent.

- A one percent increase in average years of schooling increases the value added by the transport sector by 2.7 percent.

2.4 Construction Sector

- A one percent increase in the average years of schooling increases value added by the construction sector by 5.1 percent.

- A one percent increase in private investment increases the value added by the construction sector by 1 percent, whereas a similar increase in public investment increases it by 0.2 percent.

- A one percent increase in the price of building material reduces construction sector value added by 1.1 percent.

- A one percent increase in public sector capital investment in urban development increases the construction sector value added by 0.3 percent.

2.5 Housing Sector

- A one percent growth in Punjab's income (GDP plus remittances) increases the growth in housing units by 3 percent.

- A one percent growth in the price of building material reduces the housing unit growth by 1.1 percent.

The evidence presented above clearly suggests that quality human capital adds the most value to the services sector in Punjab. However, there are two major issues relating to the provincial services sector that need immediate attention under the Growth Strategy. The services sector as shown above contributes over 60 percent to the economy, but it is the least documented sector. No reliable statistics are available regarding the types of firms, their services and scale, given that a majority of the firms operate fully or partially in the informal sector. Moreover, the employment share just at 30 percent also highlights a potential concern in data. One of the reasons for having less documented data on services in Punjab as compared to industry and agriculture is that no administrative department has been named responsible for the sector.

A second major issue facing the services sector is the current services tax regime in the province. The PRA in Punjab was established in 2012, and has now established itself as a strong base for revenue collection. However, the province still does not have a provincial tax policy and the sector complains about inconsistencies in the taxation regime in the province. It is important to realise that services taxation affect multiple sectors, such as manufacturing and agriculture, owing to an increase in the cost of doing business. As all provinces have now established PRAs, the current tax regimes indicate a lack of harmonisation of taxes between provinces and the FBR. The key issues highlighted by the private sector include: (i) inconsistent tax rates between jurisdictions; (ii) different classification of taxable services; (iii) confusion on whether the tax liability calculation is based on origin or consumption and; (iv) issues with withholding of sales tax.

Moreover, each province has a different rate of services sales tax. Sindh taxes services related to businesses at 13 percent, Punjab charges 16 percent and the federal territory charges one percent. This puts Punjab at a disadvantage, and businesses may decide to move out of Punjab and shift to federal territory or other provinces. The problem is further aggravated as provinces use different definitions and descriptions for the same services. It is important that all services categories be consistently defined for taxation purposes.

Another critical issue is the considerable overlap in the definition and scope of taxable services. At times, disputes arise due to confusion regarding the appropriate classification of services as companies try to avail exemptions on a service that appears to fall under two or more categories simultaneously. Therefore, classification rules are important as they allow the tax authority to apply taxes knowledgeably, identify a service that needs not to be taxed, or allow a business to avail tax exemptions specific for it. It also enables a service to determine date from which a tax may be due in cases where one category attracts taxes from an earlier date than that of the other. Punjab, therefore, needs to bring all PRAs together to address the issue of classification of taxable services.

A third issue is that all PRAs state that a service provided by an individual from their registered office or place of business in a province is taxable in the same province. At the same time, it is provided that if a service is rendered by a resident of one province and consumed by the resident of another province, the person residing in the province where consumption is made is required to pay tax in that province. But as sales tax is a value-added tax, it should be properly paid to the province where consumption is made. At the moment, since there is a lack of clarity on this issue, the businesses in most cases are facing the brunt by receiving duplicate notices from different PRAs. This is impacting the cost of doing business by the services sector. Coordination and harmonisation among provinces is not the only issue; there is also an ongoing problem of classification and value addition with the FBR imposing an additional sales tax on goods.

The existing rate of sales tax at 16 percent in Punjab is one of the highest in the region, with an average of around 12 percent in Asia (15 percent in Bangladesh, 10 percent in Indonesia and just 6 percent in Malaysia).

The evidence presented above suggests that improving human capital has the greatest impact on the growth of the sector. However, at present, the skills effort in the sector is disjointed and hardly any programme exists that is developed and run in partnership with businesses in the services sector.

3. Target Setting Under the Growth Strategy

The key targets for the Services Sector under the Growth Strategy include:

1- Attain a growth of 7.5 percent in the terminal year of the Strategy 2023. The growth trajectory targeted is:

2018-19	2019-20	2020-21	2021-22	2022-23
4.6%	**5.8%**	6.1%	**6.8%**	**7.5%**

2- The sectoral share of the services sector will be maintained at 62.5 percent.

3- The employment target for the services sector totals 1.96 million jobs over the five-year period to 2023. The trajectory is expected as follows:

2018-19	2019-20	2020-21	2021-22	2022-23
160,000	**400,000**	**500,000**	**4000,000**	**500,000**

4. Strategy to Address Issues

To support the sector and realise the growth potential, the following strategic steps will be taken.

- **Creating an Apex Body/Focal Department for the Services Sector:** The government will evaluate the options of mandating the Industries Commerce & Investment Department as the apex body mandated for supporting the services sector or creating a new department for services. The first option is more cost effective and immediate. However, the second option allows more flexibility of design. In the interim period, until a final decision is reached, the Industries and Commerce Department will be made responsible for facilitating the services sector.

- **Census of Services Establishment:** The government will commission a census of establishments covering the services industry in Punjab along the line done by the Directorate of Industries for industrial establishments. The survey will provide a strong evidence base to capture the spatial disparities and gaps in the sector.

- **Provincial Policy for the Services Sector:** The government will develop and approve the provincial policy on services sector. The policy will bring out the formal institutional role to be played by the Industries & Commerce Department to facilitate the services sector.

- **Service Tax Harmonisation and the Taxation Policy:** The government will develop and approve the provincial taxation policy. The policy will consider harmonisation of taxes to the extent possible. The policy will explore the options to at least merge all the provincial tax bodies into one unified PRA. The policy will also look at the option of withdrawing all provincial taxes that contribute less than 1 percent to the provincial revenue.

- **Easing Out the Regulatory Burden & Reducing the Cost of Doing Business:** An enabling environment is essential for the services sector to grow and contribute. The government will work on improving the business environment on a war footing. The details of the strategy to improve the business environment are discussed in the chapter on Private Sector Development.

- **Enhancing the Quality of Human Capital:** The government will support public private partnerships to support HR development and skills training programmes relevant to the services sector. For example, the e-commerce in retail industry is rapidly expanding, which requires staff with skills to manage backend stocks, logistics and online sales. These are specific skills and require dedicated training courses. The government will conduct services sector training and skills need assessment, and identify private sector partners to impart the trainings.

- **Supporting Successful Entrepreneurship:** The government will create opportunities for new entrepreneurs in the services sector by providing opportunities to train, incubate and also secure seed funding. The government will implement incubation models in partnerships with the private sector to develop workable models of providing incubation space and training, besides the common working space.

- **Reforming Public Procurement of Services:** The government will simplify its procurement process and fully move to e-procurement for the services sector. The procurement rules will also be modified to make them more conducive for small businesses to win public sector works.

- The broader strategy sets the overarching frame under which the provincial government will work to enhance value in the services sector. However, sub-sectors-specific actions will be implemented to address constraints, capitalise on opportunities and enhance growth. The section below presents the government's strategy for each of these specific sub-sectors.

5. Wholesale & Retail Trade

The wholesale and the retail sector is regulated under the Punjab Shops and Establishment Ordinance, 1969. The latest amendments to the Ordinance were made in 2013; however, there are still a large number of redundant clauses in the act.

The government will review the Punjab Shops & Establishment Ordinance, 1969 and make relevant changes to allow a more conducive environment for businesses to grow.

The government will use spatial mapping and, under the zoning of land and land use policy, identify the most suited pockets for retail and wholesale parks. The government will use th**e public private partner-**

ship model by providing land, as equity in relatively less deprived area to enhance available space for trade. The spatial approach will also identify population densities in proposing areas of retail activity. The global shape of retail and wholesale is fast changing due to advances in technology brought forth by the 4th industrial revolution and increasing use of artificial intelligence (AI) in decision making and designing products that are far more competitive. Digital platforms such as e-commerce, online payment gateways and Internet of things have redefined efficiency levels. The retail internationally has moved mostly in digital space. The phenomenon is somewhat true in Punjab as well. Several retailers have opened up large marketing outlets; however, they are generating the real sales online. However, cost of and access to the Internet and smart phones is still an issue in the province, with smart phone access for females being exceedingly low. Moreover, the digital marketplace evolves very quickly and the public sector finds it difficult to keep up with the pace of regulatory side, thus curtailing growth.

The government sees significant potential for Punjab in establishing the digital marketplace. The government will work with the federal government and the other stakeholders to ensure that a dynamic regulatory structure is put in place and digital access, as well as the establishment of pathways of digital payments, is made available.

6. Transport & Connectivity

The transport sector presents a significant opportunity for Punjab, especially under the CPEC and the improving logistic infrastructure and road connectivity in the province. The government in previous years has invested significantly in the passenger transport services. This has eased the life of some commuters, but has not triggered the full potential of the transport sector. The CPEC now presents an immense opportunity for logistics, transport and transport services businesses to flourish.

The government will formulate transport policy and include ‘trucking’ and ‘logistic’ to provide a competitive platform for the private sector to invest. The demand for trucks and logistics is likely to increase under the CPEC; however, this will have to maintain a certain level of quality standard. The trucking policy will identify opportunities for the private sector to invest in the logistics industry and benefit from the demand under the CPEC.

The government has also developed a provincial spatial strategy that identified key routes and linkages that offer strong opportunity for growth by improving connectivity. Most of these routes provide for the east-west connectivity so that the province is able to gain from the CPEC. The key corridors that the government will develop by 2023 include:

- Corridor C1 provides link between Rahim Yar Khan and CPEC central alignment via Rajanpur, which would reduce the travel time between the two cities by 3.4 hours through eliminating a big detour.
- Corridor C3 majorly involves widening of existing road. It runs from Karachi-Lahore Motorway (KLM). Combined with K3 corridor, it traverses the province from east to west in the central zone and connects emerging city of Bhakkar to the eastern parts of Punjab via Jhang.
- Corridor C4 runs parallel to corridor C3 on already frequented corridor of Mianwali-Sargodha-Faisalabad. The corridor already has high traffic load, as it connects primary and intermediate cities, and is also an important logistic link transporting cement and other raw material from western Punjab to other parts of the province.
- Corridor K1 is a short corridor between Vehari and proposed corridor C2. Once connected with C2, Vehari will be linked to the major high-speed road network.
- Corridor K2 connects eastern border city of Bahawalnagar to the KLM.
- Corridor K3 runs parallel to K2 and connects Deepalpur and Okara to the KLM.

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- Corridor K3 runs parallel to K2 and connects Deepalpur and Okara to the KLM.

- Corridor N1 runs parallel to the National Highway N5 (GT Road) along the settlements of Arifwala, Burewala, Pakpattan, Deepalpur and Vehari. Completion of the corridor N1 will provide a direct north-south connection. It will also help ease traffic load on N5, which is already observing congestion. Corridor R3 connects Gujranwala to the national motorway network via Hafizabad. This 94km link provides connectivity to Gujranwala city with the CPEC.

7. Construction and Housing

Construction and housing sector is a integral part of the growth objectives of the Punjab government. The government has promised an increase in housing stock by 6 million nationally (around 3.5 million for Punjab) by 2023, and the construction and housing sector generate significant multipliers. The total multiplier for output and employment in the construction industry is estimated to be 2.866. So, for every $1 million increase in construction output, $2.9 million worth of output is created elsewhere in the economy. The construction sector attracts significant FDI, as the country has experienced under the CPEC.

The experience in Punjab and Pakistan is not any different. There are over 50 industries indirectly associated with the real estate construction sector, so the overall economic impact is much higher. A study by Karandaz estimates that the incremental contribution to economic growth as well as employment of housing construction is significant. For instance, if 100,000 houses measuring 5 marlas (1,125 square foot) were constructed in Lahore, it would contribute an additional 1.2 percent to the GDP and generate employment for 200,000 people. For 10-marla (2,250 square foot) houses, the GDP contribution would be 1.9 percent, with employment generation for nearly 400,000 people[9]. Therefore, the Growth Strategy puts a significant emphasis on the construction and housing sector.

The performance of the housing and construction sector depends largely on the overall growth of the economy, regulatory environment, suitably located and priced land, availability and pricing of inputs and availability of financing/mortgage. However, Punjab has not performed to its full potential due to gaps in all of these factors. The growth of the economy in the past has been variable, thus resulting in income variability hampering demand for housing and construction. The export of manpower also saw a dip at the national level, suggesting declining levels of worker remittances, also impacting the demand for housing as suggested above. The difficulty and cost in obtaining construction permits and NOCs from the relevant authorities and public sector offices also delays the construction process and adds to the cost.

The lack of land use policy, unclear titles of land, difficulty in transferring and lack of policy to control land

[9]Karandaz 2018, Enhancing Builder Financing in Pakistan

price speculation has also slowed the growth of housing and construction. The land price, due to speculation, has increased significantly and acts as a natural constraint on the construction and the housing market. Land is bought and resold many times over before any construction begins, which persistently pushes the prices upward. In the absence of mortgage financing, a lot of investment in the real estate sector is investor-driven with the incidences of genuine property buyers low and limited to middle-to-high income groups.

Financing to builders and mortgage financing for housing is fairly limited in Punjab and Pakistan. Builders, developers and house owners usually fund projects out of their own equity, investor advances and customer instalments. Bank lending is relationship based and often limited to those builders who have other formal and established businesses, with an asset base that can be used as collateral. Owing to a range of limitations - from land administration and titling issues leading to insecure collateral, to the lack of capacity of SME builders – commercial banks are wary of lending to new or small builders with no history with the financial institution (Karandaz 2018).

The total construction finance in Pakistan is only 3.8 percent of the total credit forwarded to private sector businesses. The size of mortgage finance is negligible. On top of that, the banks that do offer mortgage products have an extremely small repayment period, usually within 5 years. This makes the mortgage expensive, as instalments come out to be too high.

Additionally, the regulatory environment is not favourable. Whereas part of Punjab has digitised land records, there are a number of legal and administrative issues relating to land that add to the cost and delivery. Poor master planning of cities, governance issues at the provincial and local government levels, involvement of multiple institutions in administrative procedures, problematic zoning restrictions, restrictive building codes and unreliable public utility create issues. To address the multiple issues faced by the construction and housing sector, the government has developed the following strategy.

- The government will develop and enforce the land use policy, and by using spatial mapping identify the most suitable land for housing and other related developments.

- The government will expand the land registration process to ensure all titles are clear and in the name of real owners.

- The government, through the Board of Revenue, will explore options to discourage land speculation for capital gains in the province. Although the FBR has introduced measures to curtail this, the provincial government will ensure further extraction of land from speculators. An ‘idle land policy’ may be introduced.

- The Punjab government will work towards providing credit guarantee schemes for SMEs, the housing market will be introduced after the successful launch of the initiative.

- The federal government has established the Pakistan Mortgage Refinancing Company (PMRC). It has secured a funding line from the World Bank to disburse funds for low-cost as well as normal-price housing. The Punjab government will work with other donors, such as DFID, to get a dedicated mortgage finance window for Punjab.

- The government will advocate with the SECP to ease out the issues in Real Estate Investment Trust law so that market funding is more easily obtainable for mega construction and housing projects.

- A critical factor restricting the mortgage financing was the lack of foreclosure laws. The federal government has now developed the laws, and rules have been formulated. The provincial government will advocate for implementation of the same on a war footing.

8. Tourism & Hospitality

Like construction, growth in the tourism and hospitality industry results in large multipliers. The tourism and hospitality industry attract investments in hotels, restaurants and resorts and also generates local economic activity with spending generated by tourists. The Punjab Economic Report 2017 provides some rough multipliers of the tourism industry for Punjab. More specifically, it estimates that Punjab can generate close to USD 2 billion worth of income by tourism. The domestic tourism potential in Punjab is close to USD 1 billion/year and it will create 243,000 jobs. The Sikh tourism is around USD 0.35 billion with 82,000 jobs and Buddhist tourism can generate around USD 0.15 billion with around 30,000 jobs. However, Pakistan ranks low in the World Travel & Tourism Index, especially in areas like enabling environment, safety and security, environmental sustainability and tourism infrastructure.

However, the current government has a strong focus on exploring the potential of tourism in the country, and the CPEC also offers cross-border visitors into the country. However, to gain, the provincial government will have to take some immediate steps

- The government will develop and approve the Punjab Tourism Policy, which will provide the policy stance for all stakeholders, especially investors looking for public private partnerships. The policy will also look at all relevant laws that need to be amended.

- The government will take a stock of all its tourism opportunities and develop plans to invite private investors on a PPP basis, where the government provides regulation on safety and security and adherence to safety standards.

- The step by the federal government to open the route for Sikh pilgrims is likely to increase the inflow of religious tourists. Without compromising on security measures, the provincial government, again with private sector investment, will look to create opportunities of economic activity in regions where the pilgrims will visit.

- The provincial governments will increase its investments in basic tourism infrastructure and ensure provision of access roads and suitable facilities to all tourist destinations.

- The provincial government, through PPPs, will explore opportunities to work with big hotels to train hospitality and tourism industry staff to support the growth of the sector and to create employment opportunities.

- The PBIT will work with the Punjab Tourism Department and the Pakistan Tourism Development Corporation to develop a list of viable investment projects and resort cites across the province.

- The government will provide spatial tools to initially focus on developing three tourism zones to capitalise on existing urbanisation, connectivity, infrastructure and proximity to major assets with tourism potential. The following zones will be developed by 2023:

- The first zone would develop tourist locations in Lahore division. More specifically, in sites identified in Lahore, Sheikhupura, Gujranwala, Nankana and Kasur. This zone would cater to promoting urban, religious (Sikh) and historic (Mughal) aspect of tourism.

- The second zone would develop tourist locations in the Rawalpindi division. More specifically, in sites identified in Rawalpindi, Islamabad, Attock, Jhelum and Chakwal. This zone would cater to promoting religious (Sikh and Buddhist), historic (Ghandhara) and the adventurous aspects of tourism.

- The third zone would develop tourist locations in the southern part of the province. More specifically, in sites identified in Multan, Bhawulpur and Lodhran. These sites would cater to the historic, cultural, religious (Sufi) and adventurous aspects of tourism.

Another sector closely linked to tourism is the hospitality industry. The food and restaurant business in Punjab provides a great stimulus to the economy and creates a large number of jobs. The Punjab Food Authority has emerged as a strong enforcement agency and has started a crackdown to check food quality issues. While it ensures that the quality of food is not compromised, the role of the authority should not be just to close down businesses but to help and support them in becoming compliant.

- The government, through the PFA, will refine the standards and requirements as per local context and initiate training programmes where the businesses for a reasonable fee can get trained in all regulations and requirements.

- The government will also explore the establishment of a School of Hospitality Management as a centre of excellence, teaching good practices and culinary skills as a PPP venture.

GROWTH INFRASTRUCTURE

Water Resource Management

The National Water Policy highlights the looming water crisis and emphasizes the fact that if the water level continues to drop at the current rate, the economy will transition from a water stressed country to a water scarce country by 2025. Apart from the economy being water stressed, another major constraint faced by the water sector is the lack of financial sustainability of water infrastructure. Abiana (water charges) rates are low to begin with and abiana recovery is only 60 precent of the assessed amount at the national level. If Pakistan is to make progress on the Sustainable Development Goals (SDGs) related to water, it must address the institutional and implementation challenges within its water sector.

The Irrigation Department is working on Punjab Master Plan related to water. This is a step in the right direction. The plan highlights the need for adoption of Integrated Water Resource Management (IWRM). It clearly mentions the short, medium and long-term steps that are needed to increase availability of water through building of small dams, improving flood control measures through repair of barrages, improving financial sustainability through increase in abiana and agriculture income tax rates, etc. This Strategy will provide the direction needed to solve the problems of the water sector in Punjab.

The irrigation conveyance network is serving 21 million acres (8.4 million hectare) of cultivable command area with cropping intensities generally exceeding 120 percent. The share of Punjab in the Water Accord is 55.94 million acre feet (MAF). This includes 18.87 MAF for Rabi and 37.07 MAF for Kharif. However, in Punjab, there has been a yearly shortage of water during the past five years (2013-2018) (Table 4.1).

Table 4.1: Seasonal Water Shortage

Year	Rabi (MAF)	Rabi (%)	Kharif (MAF)	Kharif (%)	Total (MAF)	Yearly (%)
2013-14	17.44	-12	33.83	-2	51.27	-6
2014-15	17.08	-14	35.15	-1	52.23	-4
2015-16	16.87	-15	32.53	-6	49.4	-9
2016-17	15.93	-20	35.51	2	51.44	-6
2017-18	12.76	-36	29.19	-16	41.95	-23
Average	**16.02**	**-19**	**33.242**	**-4**	**49.26**	**-10**

Source: Irrigation Department, Government of Punjab

The growth of irrigation sector is directly linked to the availability of water. Currently, the country is facing a serious water crisis due to a lack of storage facilities. The storage capacity of major dams is depleting at an alarming rate, and no new storage facilities have been initiated or completed during the last 40 years. The current situation of water storage is given in Table 4.2.

Table 4.2: Capacity of Dams

Reservoir	Designed capacity (MAF)	Existing capacity (MAF)	Capacity lost (percent)
Tarbela Dam	9.68	6.05	38
Mangla Dam	5.34	4.49	16
Chashma Barrage	0.72	0.23	68

Source: Ministry of Water Resources, Government of Pakistan

Despite water shortage, the Punjab Irrigation Department has successfully launched various projects for canal rehabilitation, canal lining, rehabilitation of barrages, construction of small dams and flood protection works during the last five years in order to efficiently utilise and protect precious water resources.

1. Issues and Challenges Faced by Irrigation Sector

The vast irrigation system in the province faces major irrigation and drainage challenges with profound economic, environmental and social implications. Hydraulic infrastructure has deteriorated and large deficits in Operation & Maintenance (O&M) have led to sub-optimal service delivery levels characterised by low water conveyance efficiencies. The challenges may be summarised as under:

Water Stress: The often quoted Falkenmark water stress index with a threshold value of 1,000 m3/capita/year hangs over Pakistan, as this index is going to fall below the threshold by the year 2025 due to population increase. For Punjab, it is still worse at 770 m3/capita/year, with total water availability (surface water plus groundwater) of just 75 MAF.

Financial Sustainability: Pakistan's water infrastructure consisting of dams, barrages, canals and other works amounts to USD 60 billion, of which Punjab's share is USD 20 billion for its irrigation infrastructure. Assuming a 4 percent maintenance cost, the financial requirement works out to $800 million a year. The abysmally low water charges at Rs 135 per acre annually, and even at 100 percent recovery rate, is only $120 million a year, which is grossly insufficient and results in deferred maintenance.

Climate Change: Pakistan has been declared as a high risk country under various climate change scenarios. The increased variability of rainfall is also likely to increase flood and drought conditions which may affect our supply and demand management system.

Low Water Productivity: Pakistan's crop yields are much below the world average and also lag behind those of neighbouring India. The main reasons for low yields among other things include inefficiently irrigated agriculture, which includes tenant based farming (as against corporate farming), unreliable supply of canal water, especially for tail-end farmers, inefficient irrigation application, lack of adoption of modern irrigation technologies and practices, etc.

Groundwater Exploitation: Over exploitation is depleting groundwater at an alarming rate. The number of private wells in Punjab has grown to 1.2 million, pumping in excess of balanced recharge of 43 MAF.

Degradation of Land and Water Resource Base: The falling water tables and deposition of excessive salts has now put Pakistan's agriculture at tremendous risk. The problem is further aggravated by extensive use of fertilisers and pesticides, improper sewage disposal and negligible treatment of industrial effluents.

Flooding and Drainage: Despite heavy investments in flood protection structures since independence, flood damages continue to rise. The 2010 flood alone caused damages worth $10 billion, more than the cumulative flood damages in the period 1947-2009. The uncontrolled development in the floodplains due to increasing demographic pressure is the principal cause of rising flood damages even when flood peaks have not exceeded their historic highs. Early Flood Warning Systems and the enactment of the River Act to regulate activities in floodplain is essential.

Transboundary Water Issues: Impact of India's hydropower development on River Chenab, the unresolved issue of Kalabagh Dam, complaints of Sindh on canal releases in Chashma-Jhelum Canal and Greater Thal Canal and its emerging complaints on disposal of drainage surplus from Punjab into Sindh require greater attention.

Poor Governance and Trust: The issue of governance and trust relates to equitable distribution of water between provinces, within provinces, upper-lower riparian zones and head-tail farmers, and participation of all stakeholders in decision making. A transition in water governance is required from building to managing, from development to conservation and from supply to demand, for which institutional reforms, strengthening and capacity building are now required in line departments, while also a new approach towards implementation of the Integrated Water Resources Management (IWRM) methodology is also required.

Knowledge Database and Water Informatics: Punjab currently lacks an integrated database for water and environment, water balance and real-time simulation models, the use of which could tremendously help in resolving water allocation and equity issues.

2. Objectives

The overall objectives of Punjab Growth Strategy 2023 are in line with the objectives stated in the Punjab Water Policy, which talks about providing clear policy directions to the Punjab government on the sustainable management and development of water from multiple sources, for all sub-sectors of water use (domestic, stock water, agriculture, industry, commercial and environment) and for all regions (Indus basin canal commands and outside the canal commands) at the basin level through equitable water allocations, management and development. The specific objectives of the Growth Strategy are:

- Increase Water Availability through advocacy of construction of large dams at the federal level and construction of small and medium dams in Punjab. Steps will be taken for beneficial use of floodwaters and reuse of wastewater. This will result in adequate, equitable and reliable irrigation supplies to mitigate water stress and enhance productivity of irrigated agriculture.

- Punjab will ensure financial sustainability through adequate and regular maintenance of water infrastructure, and proper water pricing through revision of Abiana rates.

- The Integrated Water Resources Management through IWRM Framework. This framework will result in improved water governance. The government will initiate institutional reforms needed to adopt this framework. The government will promote sustainable management of water resource (surface water and groundwater) and drainage network.

- Steps will be taken to adapt to climate change, floods and drought through a combination of structural and non-structural measures under short, medium and long-term scenarios.

- Address transboundary issues with other provinces and internally through structured negotiation and dispute resolution methodologies.

- Develop knowledge database and water informatics through basin/sub-basin wide development of GIS databases for water and environment, water balance and simulation models, hydro-meteorological network, real-time data acquisition and operational models.

3. Identified Actions/ Targets/ Financing Required

The Irrigation Department will conduct following set of actions and activities to achieve its objectives:

3.1 Rehabilitation & Lining of Canals

- 39 canal rehabilitation and 20 canal lining schemes will be completed.

- 1,528 miles of canal network will be rehabilitated and 1,662 miles of canal network will be lined.

3.2 Construction of New Canals and Rehabilitation of Barrages

- 4 new canals will be constructed.

- 563 miles of new canals will be constructed.

- Jalalpur Canal Project costing Rs 32,721 million will be completed with new canal length of 156 miles, bringing 160,000 acres under Culturable Command Area (CCA).

- Greater Thal Canal Phase-II costing Rs 6,261 million will be completed with new canal length of 278 miles, bringing 294,110 acres under CCA.

- Permanent Headworks and rehabilitated system for Kas Umar Khan Canal costing Rs 9,998 million will be completed with new canal length of 30 miles and bringing assured irrigation supply to 112,000 acres.

- Greater Cholistan Project costing Rs 14,966 million will be completed with new canal length of 98 miles, bringing 153,612 acres under CCA.

- Suleimanki, Trimmu, Panjnad and Islam Barrages will be rehabilitated.

3.3 Drainage, Floodworks and Small Dams

- 1 drainage schemes will be completed.

- 486 miles of drains to be rehabilitated.

- Rs 11,858 million required during the next five years.

- 39 canal rehabilitation schemes will be completed.

- 1,528 miles of canal network will be rehabilitated

- 20 small dams will be completed. These dams include Ghabir, Papin, Dadocah & Cherah Dams.

- 440,944 acre feet of water storage will be the capacity added.

Energy Efficiency & Conservation

Punjab, having a population share of 53 percent and 55 percent contribution in the country's Gross Domestic Product (GDP), demands around 68 percent of total electricity.The existence of more than 50,000 medium and large-scale enterprises and an electrification ratio of 95 precent are the primary reasons for the high demand of electricity in the province. The Government of Punjab established the Energy Department to play an active role in the energy sector to develop power projects, demand side management, energy conservation measures and the exploration of gas & oil. The purpose is to achieve the national power sector goals jointly set by the federal and provincial governments.

Energy is an important component of the investment climate in the economy because of its role as an important input in the production process. Affordable and sustainable energy supplies not only bring prosperity for the population at large but also help eradicate poverty through various direct and indirect channels. Self-reliance in energy reduces the economy's vulnerability. Various efforts have been put in place by the Government of Punjab to meet the growing electricity demand, and it played a vital role in completing mega power projects, contributing 5,350 megawatts (MW) to the national grid. This shows the commitment of the Government of Punjab to contribute towards bridging the power supply gap and ensuring the availability of electrical power to all its citizens as well as industrial and commercial institutions. the Government of Punjab aims to adopt a multipronged approach to ensure reliability of electricity supply instead of focusing only on increasing the power generation capacity.

1. Landscape & performance

An important component of the economy is the power sector, which serves as an essential input for the production sector and households. The Punjab Power Generation Policy (2006, revised in 2009) is framed by the Punjab government to attract investors to set up power projects. The Punjab Power Development Board (PPDB) is responsible for liaising with the Private Power Infrastructure Board (PPIB) on related matters, with the NTDC and DISCOs operating in the province regarding sale and purchase of power, and with NEPRA on regulation issues. The power supply of the country is dominated by thermal power, as it constitutes over 60 percent of the total installed capacity. On the other hand, renewable energy (including hydroelectricity) constitutes 34 percent of the entire power generation mix of the country. The gigantic challenge faced by the energy economy of Pakistan has directed all stakeholders to focus on exploring indigenous solutions that will benefit the national economy by providing sustainable solutions in the long run. In this perspective, renewable energy technologies, especially solar energy, have been exploited to be integrated in the national energy mix. Without the inclusion of hydroelectricity, the share of renewables is 5.59 percent (of which solar is 27 percent, wind 54 percent and biomass + bagasse 19 percent) to date, as it has only been a couple of years since investment by private and public sectors has opened up in the renewable energy market of Pakistan. In addition, Government-to-Government (G2G) mechanisms, such as the China-Pakistan Economic Corridors (CPEC), serve as an example for investments in the infrastructure and energy sectors of Pakistan.

The Government of Punjab played a vital role in mitigating the energy crisis in the country, and largely contributed to the increase in the renewable energy share through solar power projects. In performing its obligations under the Punjab Power Generation Policy 2006, revised 2009, The Government of Punjab successfully completed mega power projects, contributing substantial power to the national grid. Technology-wise electricity generation in Pakistan and efforts and contribution made by the Government of Punjab to mitigate electricity demand are depicted in Table 4.3.

Table 4.3: Technology-wise Electricity Generation in Pakistan and Punjab

Technology	Generation Capacity in Pakistan (MW)	Generation Capacity in Punjab (MW)	Punjab's Contribution through Public & Private Investment (MW)
Hydel	7,116	1,794	-
Oil, Gas & RLNG	20,236	11,533	3,630
Coal	1,470	1,320	1,320
Nuclear	1,142	1,005	-

Solar	400	400	400
Bagasse	280	280	-
Wind	785	-	-
Total	**31,429**	**16,332**	**5,350**

Source: State of Industry Report 2017 and PPIB

2. Energy Strategy 2023

The Government of Punjab will strive to achieve Sustainable Development Goal 7 "Ensure access to affordable, reliable, sustainable and modern energy for all" within the provincial domain. The key determinants of the strategy revolve around public private partnership, cost of development and energy produced, financial space, comparative advantage of the cites in Punjab over others, indigenisation and sustainability, integration with the existing systems, capacity of public and private sector, local regulatory regime.

2.1 Policy Intervention

After the 18th Constitutional Amendment, it was required to bring changes to the Punjab Power Generation Policy 2006. The draft bill of Punjab Power Generation Policy 2018 has been prepared and is awaiting approval from the Cabinet. An energy sector policy will be formulated for Punjab to ascertain the energy potential of the province and develop an action plan accordingly.

2.2 Electricity Generation

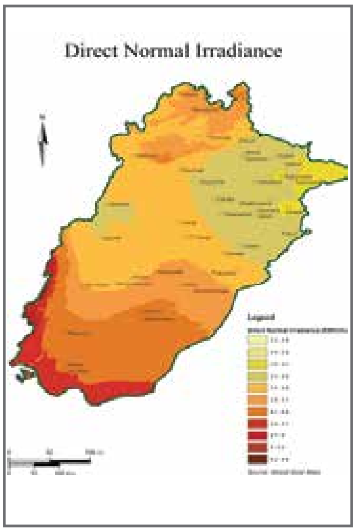
Solar Energy: Punjab is endowed with vast potential of solar energy, estimated at annual mean value 1900-2100 kWh/m2 of solar irradiance levels, as determined by the World Bank ESMAP programme. The province has considerable sunshine available for more than 300 days (approximately) in a year with good insolation levels. Punjab solar insolation ranges from 2.30 to 5.5 kWh per sqm/day[18] which can be a source of energy generation for households and micro-grid systems. This energy can be utilised for generation of power during the daytime, and during night-time by power storage systems

An estimated portfolio of USD 4.5 billion of private sector investment is being facilitated by the Government of Punjab for development of renewable power projects in the province. This includes development of 1,775MW Solar Power Projects, including the remaining 600MW at Quaid-e-Azam Solar Park.

Availability of large potential to produce electricity from solar radiations calls for on-grid and off-grid electrification at the community and household levels. Power generation through solar radiations is the one option which has a lot of potential that will be explored through the installation of small solar power projects at public sector buildings. Industries will also be encouraged to install solar panels for self-consumption. Furthermore, electrification of villages using solar panels is also an option that requires attention from the authorities. Moreover, the Government of Punjab will be using solar resources to produce off-grid electricity to increase access of electricity to un-electrified villages and public sector buildings. To fulfil the demand of households and industry through exploring potential of solar resources, the government will make efforts to develop a mechanism for public private partnership, especially community-based shared loans and microfinance models.

2.3 Wind Energy

Wind potential in Rojhan has been determined for the development of 1,000MW wind power projects with the support of renowned wind turbine manufacturer VESTAS. The Grid Interconnection Study (GIS) was approved by the NTDC. M/s Vestas is in the process of filing tariff application before NEPRA on a cost plus basis, as currently no upfront tariff is available for wind power projects.



2.4 Biomass

Punjab also has abundance of distributed resources in the kind of bagasse, biomass, cow dung and municipal waste, which can also be tapped for development of power generation projects that may reduce bill of imported energy. Development of a 20MW biomass power plant at

Chak Jhumra is in process. The Government of Punjab will provide support to the private sector to develop in-house power generation plants (by promoting small sized biogas digesters as per China or Nepal model) to meet their internal needs wherein the surplus would be sold out to the nearby localities, industrial units or the grid stations.

2.5 Waste to Energy

Municipal Solid Waste (MSW) is also a reliable source of producing energy. The Waste to Energy (WtE) is an efficient way of safe waste disposal. The Government of Punjab has established waste management companies in all major cities of Punjab, which include Lahore, Gujranwala, Faisalabad, Rawalpindi, Multan, Sialkot and Bahawalpur, for collection of MSW and carrying it to the dumping sites. The Lahore Waste Management Company (LWMC) has assured supply of 2,000 tonnes/day of MSW for the development of approximately 40MW WtE power plant in Lahore. This WtE power project was awarded to M/s Lahore Xingzhong Renewable Energy Co Pvt Ltd and is at an advanced stage of development as an IPP. The urban waste collected at the landfill sites in Punjab will be utilised for WtE initiatives.

2.6 Small Hydropower

The provincial area is of relatively flat terrain along the major rivers. However, the irrigation canals and barrages within its territory provide an opportunity for low-head hydro projects. The PPDB is currently facilitating development of small hydropower projects with an aggregative capacity of 264MW.

2.7 Distributed Generation

The Asian Development Bank has offered Result Based Loan (RBL) to the tune of USD 83.690 million through which 15,000 schools and 2,400 BHUs will be solarised. In addition to that, a 2.5MW solar power plant will be installed at Islamia University Bahawalpur, and the Energy Resource Centre will be constructed. Moreover, the Management & Professional Development Department (MPDD) Lahore building will be solarised, mini hydropower sites in Khushab & Nandipur and solar/biogas system in Vehari and Faisalabad will be developed by the Punjab government for catering to the energy needs of communities.

2.8 Advanced Metering Infrastructure (AMI)

As many as 6,000 AMR meters will be installed in series with DISCOs' billing meters as "check meters" against the Punjab government's electricity connections across the province, which will help reconcile electricity billing disputes with DISCOs through accurate consumption.
Energy Efficiency & Conservation.

To meet the growing energy demand and to achieve sustainable economic growth, it is essential to move away from relying on supply side options and to invest in demand side management. Therefore, increased energy efficiency measures can be one of the easiest and comparatively cheaper pathways for the province to reduce the demand-supply gap. To achieve the said goal, detailed policies and regulations will be implemented to create an environment that is conducive for the transformation of our society from an "energy wasting" to an "energy efficient and conserving" one. In addition, testing labs for air conditioners, LEDs, microwave ovens, refrigerators and pumps will be set up and manufacturers and importers will be encouraged to become part of the standardisation and labelling regime for this electrical equipment. All new buildings, as well as buildings undergoing renovation, will be covered by Energy Conservation Building Codes (ECBC) through the ECBC legislation. As many as 50 public institutes will be retrofitted by replacing their lights and fans that will save 73GWh of energy, yielding financial savings of Rs 1,238 million. Top 10 energy consumers among all the public sector universities across Punjab will be solarised through the Energy Servicing Companies (ESCOs). The ESCOs will be contracted to design, install, monitor and maintain the solar system in each of these institutes, and will in return get payment for the energy generated, for a given number of years as specified in the contract.

2.9 Off-Grid Solutions for Electrification

Villages in Punjab have immense indigenous resources that can help cater to their energy needs. These resources are biogas, biomass, solar, wind and small hydro power plants. Due to the high diversity of resources and difficulty in collection for large scale projects, it is decided that each village is to be provided its own power house, to be run by the community. This would reduce the burden on the national grid & dependency on imported fuels.

2.10 Exploration of Oil & Gas

Article 172(3) of the Constitution provided for provinces' equal (50 percent) ownership in mineral oil and natural gas resources found within a province. The Energy Department established the Punjab Energy Holding Company Ltd in 2015 to participate in the Oil & Gas Exploration Blocks in Punjab, by exercising provincial constitutional right of 2.5 percent and to facilitate exploration & production companies working in Punjab. The Cabinet Committee on Finance approved Rs 1.7 billion in February 2018 to participate in the exploration of four blocks in Punjab for investment.

3. Strategy

- Updating and developing provincial policies and regulations, which may ensure energy security in the province. These include Punjab Power Generation, Transmission, Distribution Standards and Safety Rules; Plan for Institutional Development of Energy Department and Affiliates; Equipment Manufacturing and Establishment Standards Regulation and Rules for various technologies to promote local engineering industry, and Energy Efficiency Codes for Buildings and Equipment.

- The Government of Punjab will make efforts to attract private investments to increase the share of renewable energy wherever the grid is more suitable.

- Reducing dependency on the national grid by promoting off-grid electricity solutions through the introduction of financing models for households, firms and communities, in close coordination with banks and relevant federal institutes.

- Development of electricity projects based on the indigenous energy resources available in the province. Financial sustainability and availability of financial resources are the two basic principles to follow for investment in power generation projects. The government will develop power projects that will be privatised after they have started generating power. The funds will be revolved for further investment in power generation projects.

- Prepare and implement a framework for the energy audit of the public sector buildings and encourage the private sector to make energy audits a permanent feature of their policies. The private sector will also be encouraged to utilise energy efficient electric equipment to reduce the cost of production and improve competitiveness, which will improve the level of exports and employment in the province.

- Effective planning at the Punjab level is difficult without an insight into the overall power sector plan. Coordinated efforts will be made on Load Projections and Generation Plan (short-, medium- & long-term), including fuel and technology preferences, for achieving power sector goals.

- Energy efficiency will be based on a comprehensive policy environment covering building codes, appliance and fixture standards, adoption of energy efficiency equipment and technologies, and promotion of supportive industry.

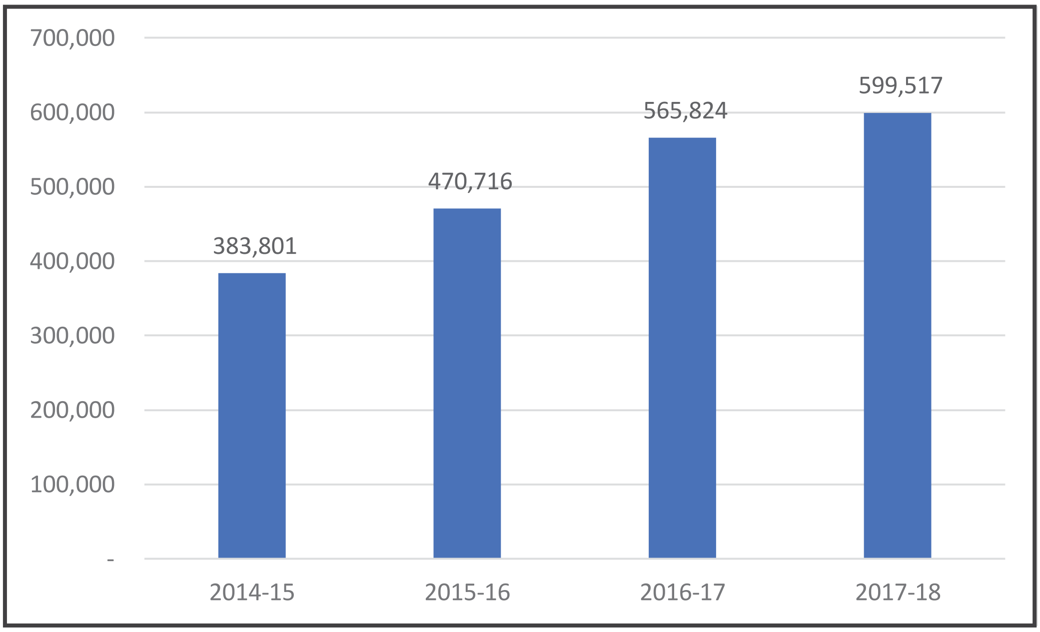
HUMAN CAPITAL FORMATION

Skilling Punjab's Labour Force

The Punjab Growth Strategy and future growth expectations are heavily reliant on improving the human capital of the province. Regardless of the sector, industrial, agriculture or services, the gains to skills are significant both in terms of economic growth and employment. Skilling the youth of Punjab was a main pillar of the previous Growth Strategy, and the government had itself set a target of training 2 million skilled graduates over the strategy period. The government, extended significant investments in the sector and was able to meet the target by training 2.02 million skilled graduates. The training capacity in the province was increased at an average of 16 percent per annum of the period, reaching almost 600,000 in the terminal year (see Figure 5.1).

In terms of institutional delivery, 1.55 million trainings were delivered by the TVET sector institutions and 470,148 trainings were delivered by the sectoral departments. Figure 5.2 shows that the P-TEVTA and the PVTC were the main contributors; training close to 1.1 million skilled graduates over the period. The PSDF funded 222,166 trainings and private sector institutes contributed 135,406. In terms of sectoral

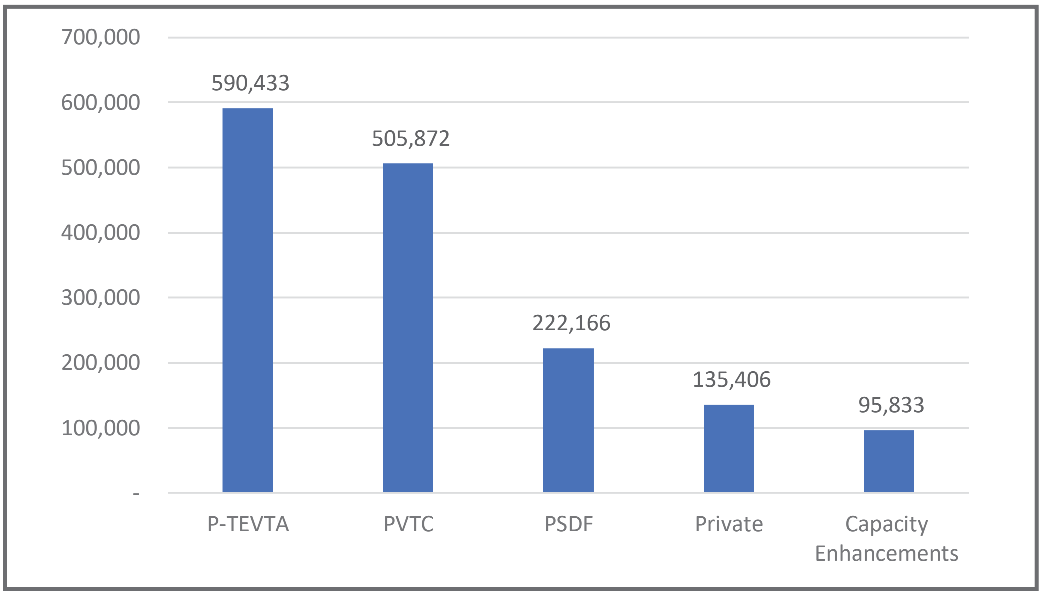
Figure 5.1: Number of Skills Trainings per Year, 2015-18 (numbers)



Source: Punjab Skills Development Programme, Government of Punjab

department contributions, Social Welfare, Health, Local Government, Agriculture and Higher Education Departments imparted a majority of the trainings. The trainings provided by the sectoral departments were added to ensure that the targeted trainings were delivered. However, it must be noted that a majority of these trainings by departments cannot be classified as skills trainings, as they included some very short trainings that are very specific to the staff of the sector. Moreover, the strategy was not very clear on the re-skilling of the already skilled/employed. These trainings are an essential part of human capital development, as they upgrade the existing human resource to become more productive and allows the sift to more efficient positions.

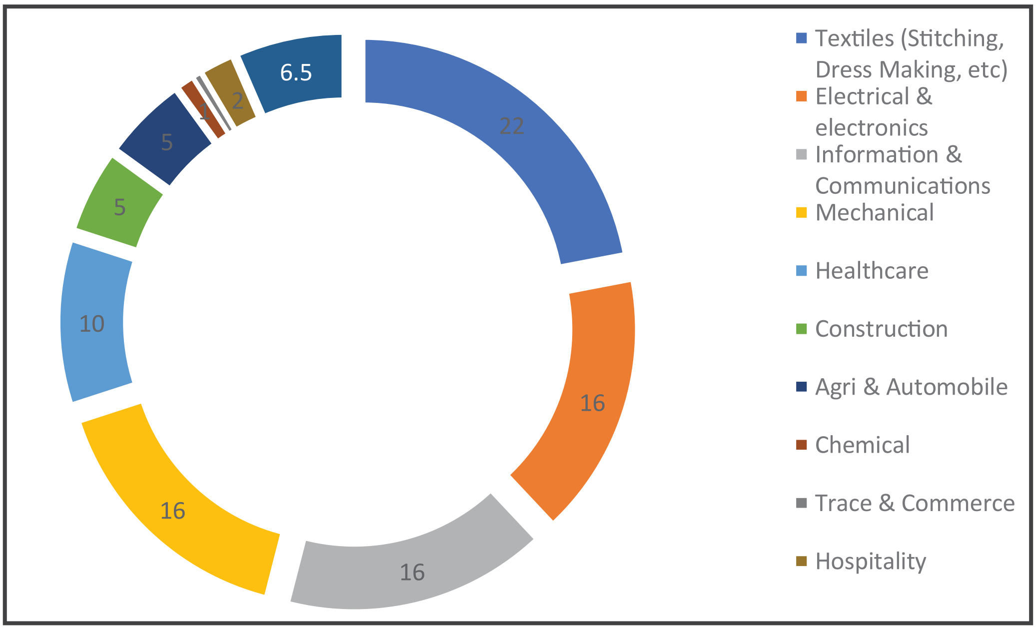
Figure 5.2: Training Count by TVET Sector Institutions, 2015-18



Source: Punjab Skills Development Programme, Government of Punjab

Figures 5.3 and 5.4 provide the spread of skills that were delivered over the period of the previous Growth Strategy. While the strategy provided targets to individual institutions, the action plan developed for the strategy's implementation did not provide the focus area of these trainings. The strategy lacked in linking the demand side factors, and was a strong supply push to jack up the numbers trained. Consequently, the training institutes reverted to deploying shorter duration and easier trainings rather than moving into more complex, high value or demand oriented trainings.

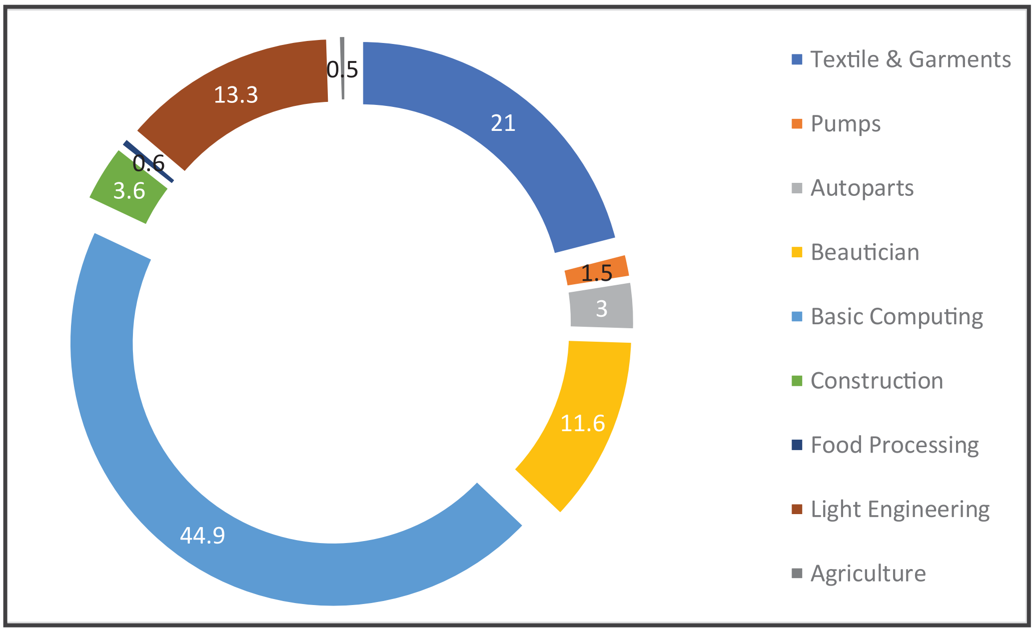
Figure 5.3: Spread of Trainings Provided by P-TEVTA (2014-18) (%)



Source: Punjab Skills Development Programme, Government of Punjab

Data shows a large number of beauticians, basic computer operators, dress makers and tailoring and basic electronic repairing skills being provided. While these are part of an affirmative action - as it builds the capacity of youth to become self-employed - these skills are hardly going to yield strong economic growth dividends. However, the operations in skills sector of Punjab show that there is significant delivery capacity and it is just that the interventions need to be more targeted. **The Government of Punjab, under its Growth Strategy, will continue to invest and support the skilling of Punjab's youth and will diversify from affirmative action delivery to a more growth-orientated strategy over the next five years.**

Figure 5.4: Spread of Trainings Provided by PVTC (2015-18) (%)



Source: Punjab Skills Development Programme, Government of Punjab

1. Issues & Challenges

The issue highlighted above in terms of trades selected for the delivery of trainings reflects a large supply side constraint. The TVET sector design in Punjab and Pakistan has evolved over time with a strong sense of affirmative action. The TVET has always operated as a way to empower the deprived with skills that can generate incomes for sustenance. The skills dimension has never incorporated high value added growth skills, and this has resulted in the lack of private sector ownership and realization of the value of public sector investments. The current provision of skills trains the youth in areas that are more relevant for self-employment as service providers. However, ironically, these trainings do not prepare the trainees to become self-employed; instead graduate them with a mind-set of finding employment. Consequently, a large number of those trained end up disoriented with skills that do not offer ready employment, and have no understanding on using the skill for self-employment.

Punjab's Workforce Value Chain lacks in delivery as there are gaps at all nodes. The section below summarises the key issues.

1.1 Policy & Institutional

Post 18th Amendment, the federal government is responsible for the setting of standards and regulations for technical and vocational education, whereas the provinces are required to deliver training and skills education. Institutionally, at the federal level, the Ministry of Education and Professional Training, and the Ministry of Overseas Pakistanis and Human Resource are two main institutions overlooking the development of skills and human capital. The National Vocational & Technical Training Commission (NAVTTC) under the ministry has the overall mandate to set the policy framework and develop and implement national standards on training.

In Punjab, delivery of skills is managed though the Punjab Technical Education & Vocational Training Authority (P-TEVTA), the Punjab Vocational Training Council (PVTC) and the Punjab Skills Development Fund (PSDF). Punjab in its existing setup also has two testing boards; the Punjab Board of Technical Education (PBTE) and the Trade Testing Board (TTB). At the moment, private sector institutes are required to be registered both with the PBTE and the TEVTA.

The current model suffers due to overlaps and coordination failures between the NAVTCC and the P-TEVTA, as both offer trainings that override on each other. However, there have been more serious issues within the province. The existing system has a large cost and disincentive for private sector-led growth in TVET provision. Private sector institutions are required to be registered with the P-TEVTA and the PBTE. The P-TEVTA regulates the registration process and also competes for the market with TVET institutions. Moreover, the private sector training institutes can only get certification for courses approved by the PBTE and developed by the P-TEVTA. This fairly limits the growth of private sector TVET institutions in Punjab.

1.2 Supply Side

As discussed above, the supply of TVET in Punjab is skewed towards providing skills relevant for self-employed service providers. While affirmative action is the responsibility of the government, the quality of and relevance of skills produced by TVET sector are questioned by the private sector. The lack of relevance to industry, agriculture and value added services, including ICT, has been highlighted a number of times and the response from the public sector TVET has been slow.

Moreover, the private sector raises concerns over the quality of training, and there is little value in the certifications being provided by the sector. The private sector also raises strong concerns about the lack of missing soft and employability skills in the workers. The workers coming out of the TVET training lack in basic, yet essential, employability skills such as workplace hygiene, workplace safety, punctuality, ethics, ability to work in a co-environment and general behaviour impacting productivity. The lack of employability skills and soft skills has been identified as one of the key detractors for export of human resource from Punjab.

Moreover, even with enhanced efforts, the TVET training capacity in Punjab reached 600,000 in 2018. However, the number of youths in Punjab is close to 30 million. Therefore, the supply is still fairly limited to the total coverage. The institutes are scattered all over and as a result no concentration of skills production has happened in the province and no major centres of excellence have emerged. Finally, the supply of skills at the moment consists of a large number of trades, but fails to demonstrate sequential skills pathway to the trainees and there are limited opportunities for proper career guidance.

1.3 Demand Side

The demand side is more complex than the supply of skills, as demand for skills is a derived demand based on firm performance and growth opportunities. The sectors that are growing require a large number of new intakes; however, in sectors where the business is declining, a limited demand for skills exists. Therefore, demand for skills is more dynamic and the supply capacity needs to have the flexibility to meet the changing demand for it to remain relevant. However, lack of supply in some cases also restricts businesses to grow or move up the value chain. Interviews with the private sector in Punjab reveal that in many sectors, firms shy away from making investments in new technologies, as they fear they will not be able to find appropriately trained manpower to work on the technology. In short, one dimension of demand side constraint results from low growth, where skills is not a binding constraint and the private sector is not willing to pay for it, and the second, where lack of faith in finding suitable skills results in limited investment in growth and new technologies.

Institutions in Punjab, like P-TEVTA, PVTC and PSDF, all have institutional mechanisms to systematically include the private sector in determining the skills provision; however, the success to date is not so strong.

1.4 Public Private Partnerships

A key mechanism to address the supply and demand side constraints identified above is the innovative use of public private partnerships. Experience shows that the government has struggled to attract the private sector for managing public sector TVET institutes in Punjab. However, direct industry partnerships have shown more promising results. The P-TEVTA has developed a Partnership Framework for Skills, which takes an extremely flexible approach to defining industry partnerships. The primary purpose of this arrangement is to create a role for industry in delivering skills and, therefore, addressing issues of quality and relevance. The PSDF has also engaged in a large number of industry partnerships and delivered a large number of trainings with co-funding from the industry. However, these industry partnerships are still at initial stages and need to be strengthened further.

2. Target Setting

The Growth Strategy has set itself the following targets for the skills sector over the period of five years.

1. Train a total of 2.5 million skilled graduates over the 5-year period to 2023. The trajectory is provided below:

2018-19	2019-20	2020-21	2021-22	2022-23
450,000	450,000	500,000	550,000	550,000

2. 10 percent of the skills trainings will be provided through industry partnerships by expanding both the PSDF interventions and enlarging the scope of the P-TEVTA industry partnership framework. The terms of these partnerships will be similar, and both efforts will be coordinated.

3. 30 percent of the skills trainings will be in industry-relevant trades for sectors that are growing, with a focus on export growth sectors. 10 percent of these trainings will be futuristic and will incorporate expected demand under the CPEC and resulting technological growth.

4. 35 percent of the target will be delivered by the P-TEVTA, 30 percent by the PVTC, 20 percent by the PSDF and 15 percent will be delivered by the private sector. The target for skills does not include department level trainings and these will be tracked separately.

5. 10 percent of skills trainings will be geared for overseas markets, especially the UAE, given the upcoming events like world-expo and Football World Cup in Qatar.

3. Strategy to Achieve Target

The above targets set an ambitious agenda for the provincial government and will require a strong institutional structure, improved governance and efficient use of resources and partnerships to deliver. The strategy of the government is presented below.

3.1 Policy & Institutional

- The government will develop and approve the TVET policy in line with the federal government's policy approved in 2018. The policy will focus on all pillars of improving supply by shifting to more demand-oriented and competency-based courses and strengthen the institutional capacity for certification and accreditation.

- The government will address the coordination and governance failures in the TVET sector by:

    - Creation of the Punjab Skills Development Authority (PSDA) as the regulator of skills sector in Punjab. These powers will be withdrawn from TEVTA. The bill for the creation of the PSDA has been developed and awaiting approval by the Punjab Assembly.

    - To strengthen the testing and certification regime in Punjab, the Punjab Skills Testing Agency (PSTA) will be established. A draft bill has already been developed and the agency will become operational in July 2019.

    - The P-TEVTA's institutional structure will be rationalised and will now be made responsible for provision of trainings only.

    - The PVTC will be moved under the Industries, Commerce and Investment Department to streamline coordination issues.

- The PSDF will be strengthened to move up the ladder by providing high value and growth skills with high market price. This approach will ensure the sustainability of the PSDF as it establishes its brand for providing key value added skills.

3.2 Supply Side

- The government will establish two TVET universities in DG Khan and Rawalpindi. The universities will be geared towards producing the workforce of tomorrow that is more productive and can work on enhanced value activities and can integrate better into the global knowledge economy.

- The P-TEVTA and the PVTC will review their entire range of courses and develop transition plans to upgrade courses to new relevant curriculums. The offerings will clearly demarcate the trades that are relevant for self-employment and those that are relevant for industrial employment.

- The P-TEVTA and the PVTC will work with the PSDF to start developing modular-based training programmes and curriculums. The modular approach will break down a trade into basic level 0 module and follow-on specialisation modules. Module 0 will cover the most common skills, and the follow-on modules will cover the more advanced industry-specific skills. For example, the skill of stitching is required by industries such as garments, football, sporting goods, footwear, leather gloves, motorbike gear and sportswear. The module 0 for stitching will cover only the very basics/common skills that are required. The trainee will also be provided soft skills at module 0 and a career path counselling on the type of industrial sectors he/she can grow into and the types of trainings that will be required. The modular approach will ensure consolidation at starting point and a larger intake reducing the cost of providing training. This will also help screen individuals to follow different skill pathways. The PSDF has already conducted a study that has identified 13 different skill trades covering 9 exporting sectors. The PSDF will work for the implementation of this new approach towards delivering industry-relevant skills[10].

- The government will work towards developing next generation skills courses in partnerships with large industrial players in Punjab. For example, Saphhire Group has recently started working with Hunar Foundation to develop a training programme on use of robotics on industrial floors. The group is financing the set of the facility and the equipment. The need is based on the industry realising that in order to stay competitive they will have to shift to newer technologies, and without appropriate skills the shift will not be possible. The government institutes and the PSDF will work to identify more such opportunities and invest to reduce the risk capital for private sector, besides developing capacities for skills of tomorrow. Moreover, CPEC-related skills will be factored in the programme.

- The government will increase the number and types of courses that are relevant for females. The agriculture sector provides a large variety of opportunities to train women in modern practices and the use of technology in farming and livestock practices.

- The government will facilitate private sector investment in the TVET sector by reducing the cost and entry barriers, and providing more freedom to offer higher value added courses that are more relevant to the needs of the industry. The government will look to establish state-of-the-art TVET centres in all of its large industrial estates under the PPP mode by providing land as equity.

- A strong component of soft skills and employability skills will be added at all levels of training.

- The P-TEVTA and the PVTC will review their training institutes and explore the options on consolidating the trades that are offered to move towards institutes specialising in certain trades and emerging as centres of excellence.

[10]Usman Khan, Turab Hussain, Nazish Afraz & Nadia Mukhtar; Common Skill Pathways in Key Exporting Sectors, PSDF 2019.

trades and emerging as centres of excellence.

- The P-TEVTA and the PVTC will develop courses for re-skilling the existing employed work-force with a focus on increasing productivity skills. These can be run in partnership with the private sector.

3.3 Demand Side & Industry Partnerships

- The government will increase demand-targeted and sector-specific courses that are offered in partnership with the industries. The government will initiate this programme by focusing initially on key export sectors. A recent study by the PSDF has identified the immediate demand by following sectors[11]:
  - 1,000 grinders and polishers required by the surgical industry, resulting in a growth of 20 percent every year.
  - 500 grinders and polishers required by cutlery sector in Wazirabad.
  - 15,000 workers required by the sporting goods industry of Sialkot, with a majority of these needed in football stitching and football hybrid technology.
  - Auto parts industry has identified a demand of over 50,000 workers over the next three years in tools and dies, sheet metal, metal casting, electronics and assembly departments.
  - The fan industry has identified a need of 500 workers in assembly line training.
  - The garments and made-up sector needs over 130,000 workers in the next five years. This demand is likely to triple as the government speeds up work on the colonisation of Quaid-e-Azam Apparel Park.
  - Footwear sector has identified a demand for shoe lasting.
- The P-TEVTA will refine its partnership framework and initiate an industry partnership drive more aggressively. The PVTC will also use the same framework to develop and increase industry-partnered training courses.
- The PSDF will seek partnership opportunities with MNCs and larger national players to identify their future demand and establish a mechanism to become a provider of these new skills in the market. The PSDF will explore the possibility of privately funded skills fund to next generation leverage private investment in the sector.

3.4 Information Failures

- The government will invest to strengthen the career counselling capacities and the optimal use of ICT for supporting job placements and linking employers with trainees of the TVET system. It will explore the opportunity of either strengthening the national portal developed by the NAVTCC or to set up a new one at the provincial level and start registering employers and feeding in data on trained graduates.
- The Job Asan portal will be scaled up across the province so that women can better integrate into the job market.

3.5 Next Generation Skills and the Knowledge Economy

- The government will enable the private sector to set up institutes and training facilities for next

[11]Usman Khan, Turab Hussain, Nazish Afraz & Nadia Mukhtar; Common Skill Pathways in Key Exporting Sectors, PSDF 2019.

skills, especially in the ICT sector. Courses on app development, use of AI, robotics, electronics, gaming applications, e-commerce, fin-tech and online entrepreneurship management will be designed. The government will provide cost-sharing opportunities for specialised courses that will upgrade the human capital of Punjab for next generation jobs.

3.6 Export of Human Capital

- The government through the PSDF, P-TEVTA and the PVTC will develop linkages with the large diaspora community in the UAE and the Middle East for determining the key demands/-future for skills in those regions and develop specific targeted programmes designed for export of human capital. The PSDF will lead this initiative.

3.7 Entrepreneurship, Self-Employment & Affirmative Action

- The government will establish a self-employment fund that will target the skills graduates in trades that have a natural path into becoming service providers. These graduates will be trained in entrepreneurship and offered small loans to start up their business. This will encourage more women to participate. A full design has been provided in the Private Sector Development Chapter.

3.8 Piloting and Expanding the Dual Training & Education System

- The government will pilot the dual education and skills training programme through its public schools with the intent of scaling up the system to increase human capital productivity of its future labour force.

Launching Punjab's Knowledge Economy and Digital Dividends

The Punjab's growth model shows huge dividends to human capital regardless of the economic sector in which it is employed. Accumulation of knowledge adds significantly to the productivity and quality of human capital. As the global economy becomes strongly integrated under the digital and AI revolution, it is no longer a choice for economies to stay isolated. Similarly, Punjab cannot afford to not become part of the rapidly expanding knowledge economy and digital market space. Punjab's economy will have to create, disseminate and use knowledge to enhance its growth and development. Punjab will have to create strong links between science and technology, place a greater importance on innovation for economic growth and competitiveness, and increase significance of education in all its interventions. It will have to create greater opportunities for lifelong learning and make greater investments in intangibles, such as R&D, software and education.

The Government of Punjab, under its Growth Strategy, will focus on all key pillars of knowledge economy, including entrepreneurship, innovation, research & development, education and skill levels. The government in its strategy will not only focus on technology, information and communication technology (ICT) but will make Punjab use appropriate knowledge to improve its productivity and increase welfare.

1. Impact of Knowledge in Punjab

As presented earlier in the strategy, Punjab can earn the greatest returns on its investment by building a more knowledgeable human resource. More specifically,

- Increasing ADP allocation to education by 10 percent from its current value will **add 1 percentage point increase in growth** over the 5-year period in Punjab and will **create 1 million extra jobs** over the same period.

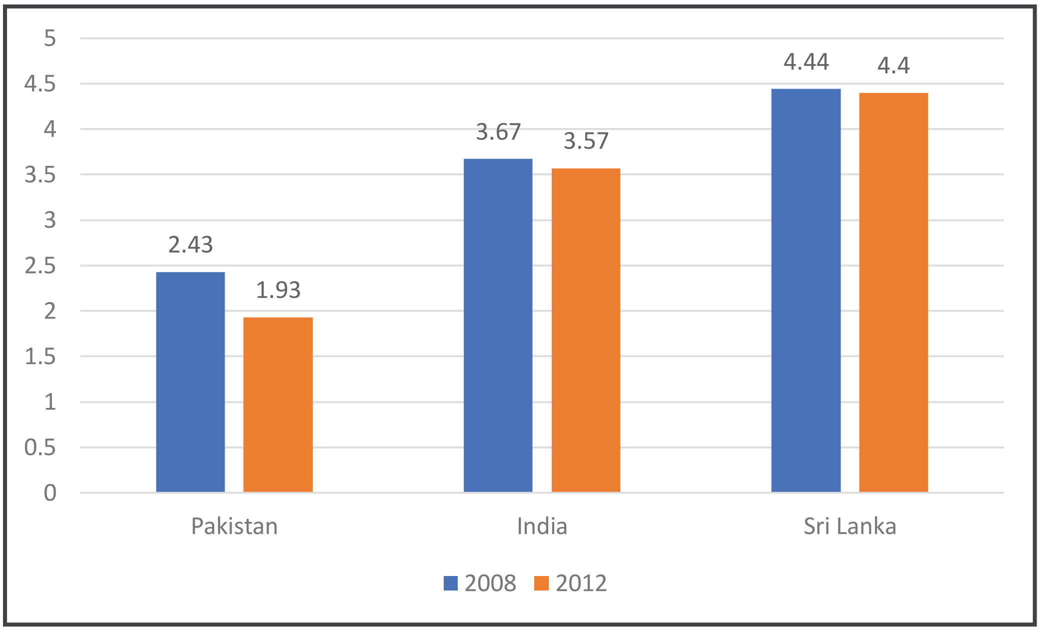
As increase in allocation alone can bring such a significant impact, governance and quality improvement will magnify these returns significantly.

2. Conditions for Knowledge Economy Led Growth

Knowledge economy-led growth requires certain enabling conditions that are necessary for achieving development and growth. Firstly, there is a need to create an enabling business environment. This requires an economic and institutional regime that creates appropriate incentives for effective creation, dissemination and use of existing and new knowledge. The areas of tariff and non-tariff barriers on flow technology, regulatory burden, safety and protection of property rights and rule of law are some key areas that enable the useful flow of knowledge for growth in the economy.

The World Bank Knowledge Economy Index scores countries on different measures of knowledge economy. One of the indictors informing the overall KE Index is Economic Incentive Regime score. Pakistan's score was 2.43 (Figure 5.5) out of a maximum of 10. India and Sri Lanka were doing better than Pakistan.

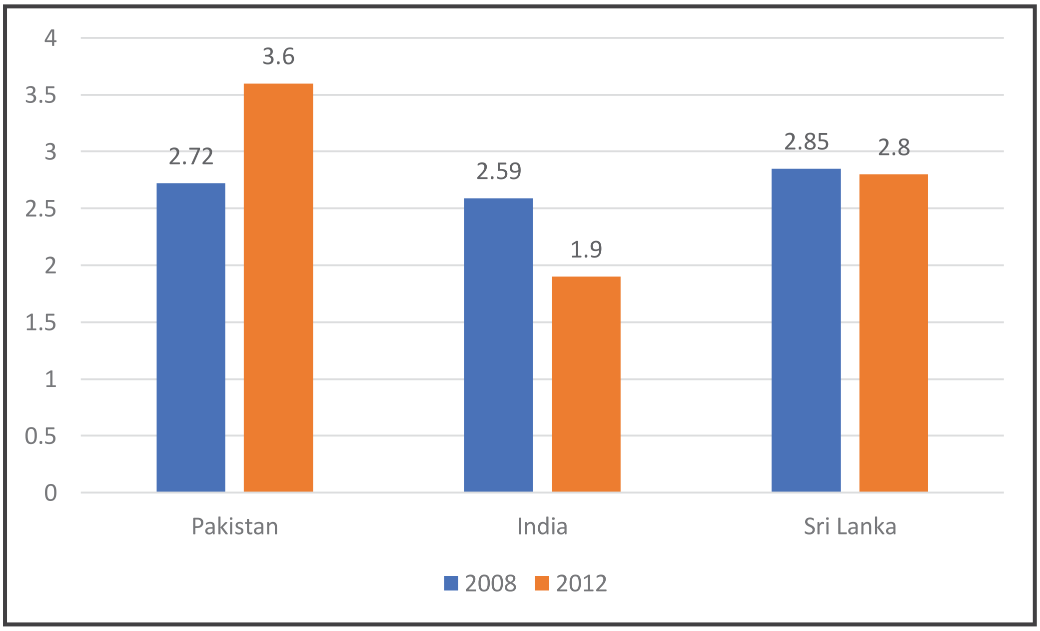
Figure 5.5: Comparative Ranking of Pakistan in Economic Incentives Regime



Source: World Bank Knowledge Economy Index

Secondly, there is a need for dynamic infrastructure that can facilitate effective communication, dissemination and processing of knowledge and information. This covers the communication and ICT networks, strength, access, cost and penetration. A higher level of access to smart phones at affordable prices is the key to triggering KE-driven growth. Moreover, this access should be universal and not segmented in terms of geography or gender.

Figure 5.6: Comparative Ranking of Pakistan in ICT

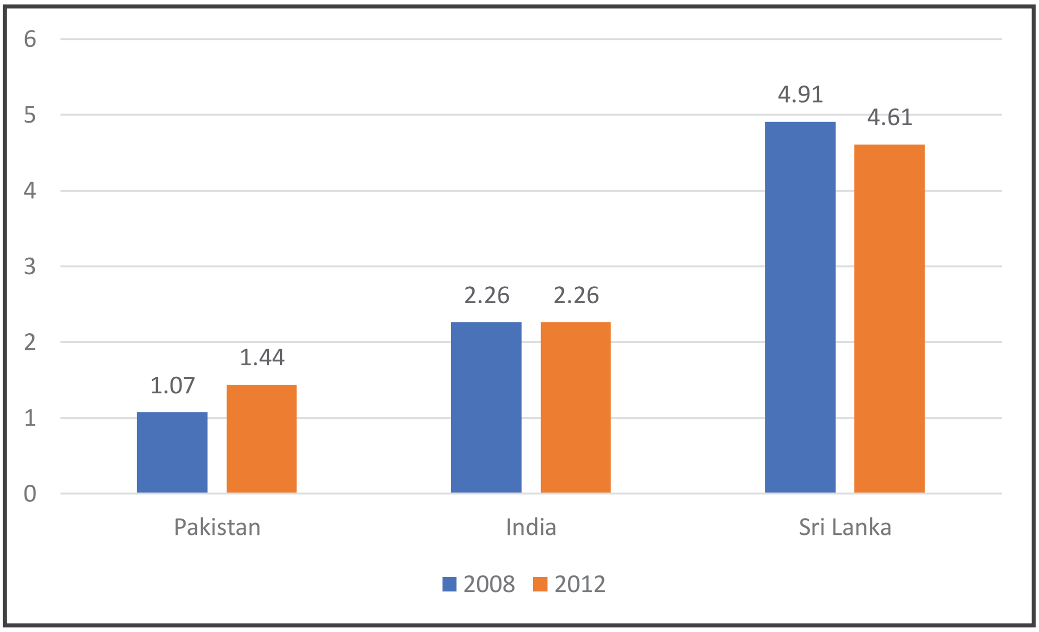


Source: World Bank Knowledge Economy Index

The World Bank Knowledge Economy Index captures this through the indicator on information infrastructure, which includes telephones per 1,000 persons, computers per 1,000 persons and Internet users per 10,000 persons. The performance of Pakistan in this indicator has improved and is better than India and Sri Lanka; however, still the performance has significant gaps (See Figure 5.6). The smart phone and Internet penetration is still low and the digital divide is a serious issue, where women are systematically more deprived of access to smart phones and the Internet.

Thirdly, human capital lies at the heart of a knowledge economy. An educated and skilled population is necessary for an economy to effectively produce and use knowledge. The World Bank KE Index uses an education sub-index to determine the country's positioning and relative advantage. Pakistan ranks extremely low on the education index with a score of less than 2 (See Figure 5.7 below).

Figure 5.7: Comparative Ranking of Pakistan in Human Capital

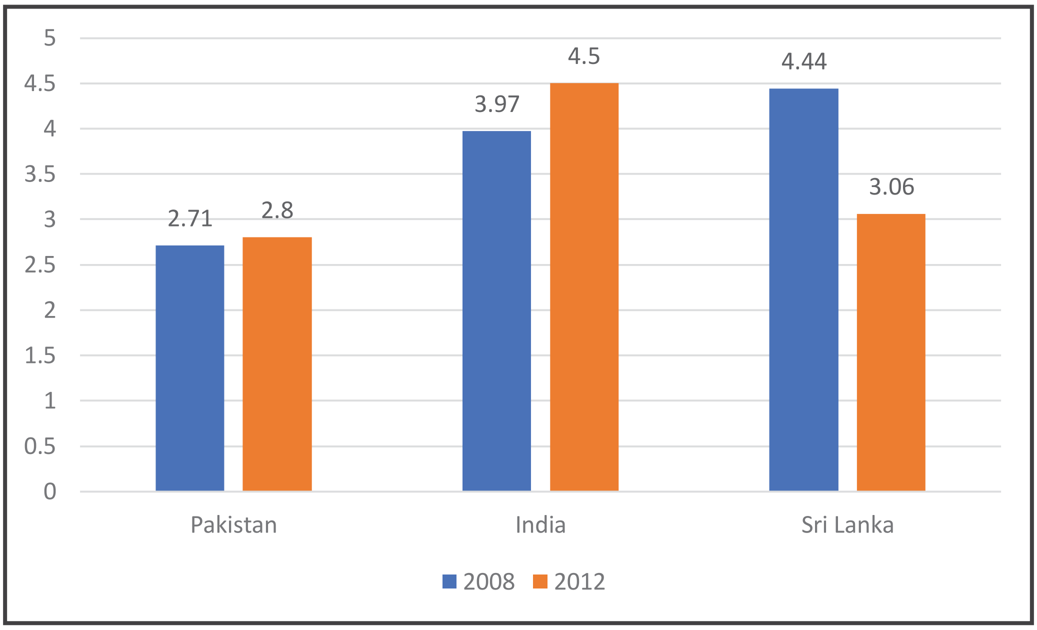


Source: World Bank Knowledge Economy Index

Although Punjab has made significant investments in the education and skills sectors over the last 5 years, it still lags in some key indicators (see chapter on Education). Moreover, the quality and quantity of scientific education is very weak in the province, and local environment is not conducive enough to attract such human resource from outside the country. There is a strong need to effectively invest in education and skills so that there is a general uplift of the human capital in the province.

Fourthly, a knowledge economy thrives on growth from innovation. The economy should provide an efficient innovation ecosystem for firms, research houses, universities and solution providers to be able to tap into the growing stock of global knowledge and successfully adapt it in local context. Pakistan scores low in the innovation sub-index and is ranked much lower than India and Sri Lanka (See Figure 5.8).

Figure 5.8: Comparative Ranking of Pakistan in Innovation



Source: World Bank Knowledge Economy Index

The R&D capacity, capability of firms to register patents and trademarks, and production of quality scientific research is non-existent in Punjab. There is a lot that needs to be done to improve the innovation space in the province. However, Punjab can also learn the lessons from the knowledge-driven growth success of Singapore. A key feature of the Singaporean policy and reform history was its ability to separate the government's autonomy from important interest groups, which enabled it to act in the national interest and implementation of policies that focused on growth rather than rent-seeking. Therefore, improving governance and separating out the rent-seeking lobby groups should lie at the heart of Punjab's Growth Strategy. Moreover, instead of focusing on regulations, Singapore managed to get access to foreign knowledge and technology through an incentive-based approach to attract foreign capital. For example, Singapore used economic incentives such as tax exemptions for training of workers and local suppliers by foreign firms. Similar incentives have been provided to build own innovations and technology rather than on import of readymade technologies. In short, Singapore achieved a lot through strong human capital development, infrastructure and investment ecosystem, and supportive economic policies[12].

3. Punjab's Response

The above discussion suggests that whereas it makes ample case for Punjab's leverage knowledge economy for growth, the necessary conditions and environment need a lot of rework and change. Nevertheless, the government sees value in changing the ways the government conducts business to improve the overall ecosystem that more effectively uses knowledge and creates new knowledge. The strategy is presented below:

- The government will create an enabling environment, in which there is an ease for the flow and security of knowledge. However, additional measures will be required to set the tone for knowledge economy. The government will work with the federal government for developing easy terms for technological transfer and transfer of knowledge through partnerships. The government will work towards strengthening the commercial courts and improving the rule of law and protection of property situation in the province.

- The government will increase its focus on education and skills. The government will not only focus on improving the access and quality of basic education but enhance the quality of outputs from technical and higher education. The government will have to provide an environment where it can produce a larger numbers of quality science graduates and build capabilities at local universities to produce scientific research. The province cannot jump the knowledge-driven growth model unless it begins to produce and house more PhDs in science and technology. The government will explore initiating foreign scholarships for PhDs in scientific education with conditionalities to bring all the trained and qualified human recourse back to the province. This will be done through setting consistent policies and setting appropriate incentives system.

- The government will use its investment policy as a key tool to attract knowledge transfer and localisation of knowledge generation and development. The government will provide incentives in the shape of land, provincial tax exemptions and cost-sharing activities to encourage indigenous technology development and innovation. The entrepreneurship section under the private sector development provides the government's strategy to support the start-up culture, especially for innovative ideas.

The ICT capacity, as mentioned above, is also a key pillar of the knowledge economy. Punjab's ICT landscape has improved significantly in the recent past. However, some critical issues still persist. The section below provides the government's strategy to further expand its ICT sector and growth.

4. ICT Sector

The ICT in Pakistan in general and Punjab in particular has been rapidly expanding and industry experts predict that the revenues from the sector are likely to double by 2020. The reported ICT exports exceeded USD 1 billion in 2017-18, while SECP data shows that the number of registered IT companies in the country increased to 5,753, growing by 19 percent in 2017-18. In Punjab, more than 800 new IT firms have registered over the last five years. "Ignite", a federal government-sponsored centre, estimates that the

[12]Growth & Innovation Policies for a Knowledge Economy: Experiences from Finland, Sweden & Singapore. Magnus Blomstrom, Ari Kokko and Fredrik Sjoholm, Working Paper 156, Stockholm School of Economics, 2002.

actual ICT exports are much higher than the reported number, as the reported number fails to take account of the USD 1.2 billion freelance earnings.

The expansion of ICT and digital marketplace in the country has also been facilitated by a rapid expansion of mobile telecommunication. The Pakistan Telecommunication Authority (PTA) reported that as of June 2018, there were 151 million mobile subscribers in the country, with 57 million of these having 3G/4G connectivity. Out of the total mobile subscribers, almost 83 percent of the users reside in Punjab. However, the MICS 2018 data shows a significant gender divide in mobile ownership. Around 87 percent of the mobile ownership in Punjab is with men, while 30 percent of the men use the Internet. The percentage of women Internet users is only 12.2 percent. These statistics present an important opportunity, as the GSMA estimates that a **10 percent increase in Internet penetration in a market, could result in a GDP growth of between 0.25 and 1.38 percentage points**[13]**.**

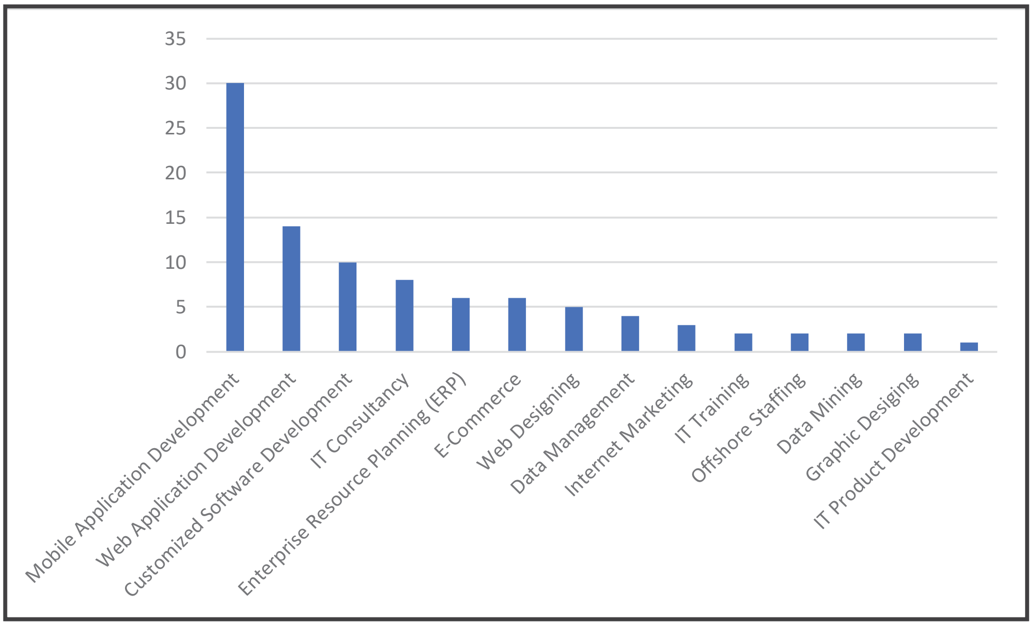
Moreover, the ICT sector also acts as a catalytic sector to spur growth in other key sectors of the economy. The drive towards knowledge economy is not limited to innovations and expansions in ICT, but more so on how ICT can transform and enable the regular business sectors to expand and become more competitive. The digital market space and e-commerce offer significant opportunities for Punjab and Pakistan. In the recent past, the country has seen a mushrooming of digital marketplaces. Even some of the bigger retail brands have shifted to online sales, which has increased their market access significantly and at a much lower overhead cost. This, however, is largely an unregulated sector in the country. However, going forward will present significant growth opportunities.

Finally, the federal government's 5-year national digital transformation initiative looks to establish Pakistan as a knowledge-based economy, reaching value added of $10 billion per year by 2023. **The Punjab Growth Strategy aligns the provincial government to fully support the digital transformation initiative of the federal government and to generate high growth and a large number of employment opportunities from the sector.**

4.1 Issues & Challenges

The ICT industry of Pakistan is diverse and is growing at a rapid pace. The Ministry of Information Technology conducted a survey of over 300 IT firms located in 10 cities of Pakistan (Ministry of Information Technology 2014). The diversity of the industry can be seen by almost 14 different growth areas identified in the survey (see Figure 5.9).

Figure 5.9: Areas of Future Growth in Pakistan's IT Industry (%)



Source: Pakistan IT & ITES Industry Survey 2014, Ignite

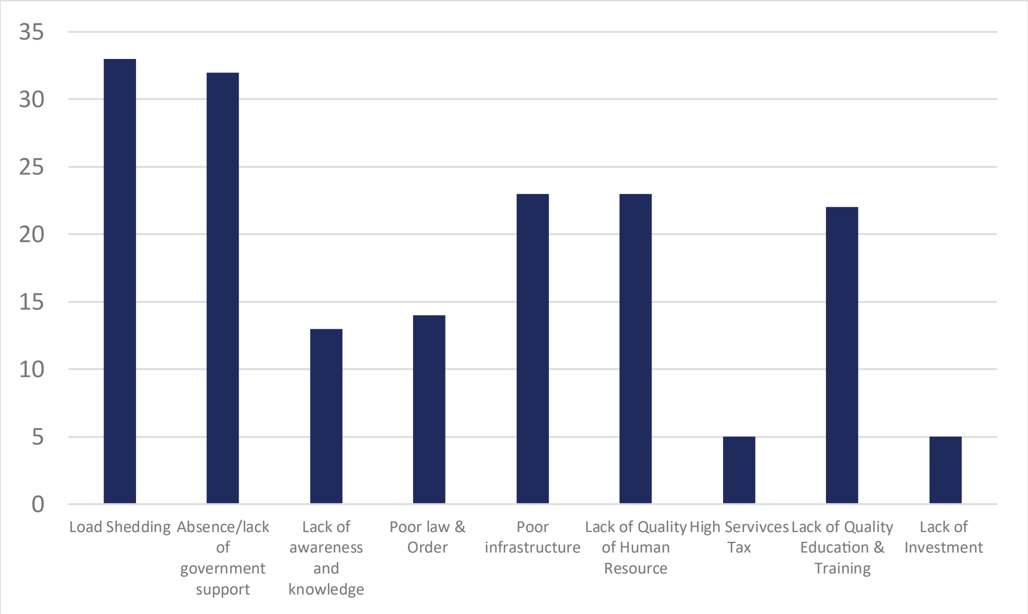
In terms of issues, the survey identified power load shedding and lack of government support systems as key issues faced by the sector (see Figure 5.10). The industry states that power outage is a big problem, as it results in loss of productive time, increases the cost and also increases the probability of faults devel-

[13]GSMA Connected Women - The Mobile Gender Gap Report 2018

oping in the equipment. In terms of government support and direction, the private sector generally feels that the government has no agreed policy on the ICT sector, and there is an uneven structure of duties and tariffs. For example, the devices that are needed for digital security are available at low prices; however, due to unclear duty structures, it is almost impossible to get these devices cleared from the Customs Department.

The IT survey also identified lack of quality human resources and lack of education and training as major issues faced by the sector. Firms stated that the root cause for this was the general weakness of education and training within the country. The IT & ITES industry is technical in nature and requires strong educational qualifications and skills. Compared to Bangalore only, which houses over 16 universities, 133 medical schools, 134 engineering colleges and 712 general colleges, Pakistan has a total of 160 universities that are recognised by the Higher Education Commission, and the share of Punjab is less than half of that. Only a handful of these institutions offer degrees in IT, computer science, computer engineering and other related disciplines. The top-tier universities offering qualifications in these disciplines include NUST, LUMS, COMSATS Institute of Information Technology and ITU in Punjab. However, all these universities are still far from holding a place on the international university rankings. The top-tier universities do not produce a sufficient number of graduates to meet the industry's demand; hence there exists a demand-supply gap for a higher calibre of human resource.

Figure 5.10: Key Constraints Faced by the IT Industry (% of respondents)



Source: Pakistan IT & ITES Industry Survey 2014, Ignite

To allow ICT to grow smoothly, the government will have to employ the following five enabling conditions[14]:

- **Human capital systems:** A labour pool with appropriate ICT skills as well as awareness and employability skills that give competitive advantage in the labour market.
- **Infrastructure systems:** Universal connectivity to ICT; access to electricity and transport; infrastructure to support innovation and adoption of technology by SMEs.
- **Social systems:** Networks of trust and recognition for workers and employers, social safety nets and measures to minimise possible negative outcomes of ICT-enabled employment. The digital policy should focus on this, and should strongly advocate for data safety policies.
- **Financial systems:** Efficient and accountable systems to ensure timely payments and access to finance to support innovation and entrepreneurship. The banking sector will have to keep up pace in Pakistan to understand the new dimensions of cash flows and credit requirements. The fintech industry is growing; however, more innovative products will have to be developed.

[14]The conditions are based on: World Bank 2013. Connecting to Work: How Information and Communication Technologies Could Help Expand Employment Opportunities. Washington DC. World Bank

- **Regulatory systems:** An enabling environment that eases the burden of doing business.

4.2 Punjab's Current ICT Policy

The Punjab Information Technology Board (PITB) developed the first IT Policy of Punjab in 2016. The policy covers a broad range of areas to develop the ICT sector in the province. In summary, the current policy covers:

- **IT legislation & conformity:** The policy identifies the need towards ensuring security of business, data and intellectual property. This is an important part, as it provides the confidence and trust to investors to start their innovative ventures.

- **Development of IT Industry:** The policy identifies the need for suitable infrastructure, incentives and a regulatory framework for the growth of businesses. It also recognises the value in fostering innovation and entrepreneurship, reducing urban and rural divide, creating diversity in employment opportunities and creating information systems and data analytics.

- **Use of IT for public sector service delivery:** The IT policy looks to bring efficacy and effectiveness in governance management in the province, and to facilitate the process of service delivery across the province.

- **Leveraging IT for private sector development:** The policy also looks at providing a stable and reliable IT infrastructure to support private sector growth.

The Punjab IT policy identifies key pillars that will be supported to develop the IT sector. However, the government will take the following strategic measures to improve the growth potential of the sector.

4.3 Focus areas for Growth Strategy

- The Punjab government will review the IT policy for its coverage and practicality of implementation. The revised policy will be set in line with the federal government's 5-year national digital transformation initiative. Moreover, the policy should emphasise more strongly on data protection and security of digital data. The Punjab government will ensure that data security systems are fool-proof and the legislation and penalties around data breach are strict.

- The government will create more space for the private sector to grow in the IT market. The government itself is a big spender on ICT solutions that are geared towards improving the lives of the citizens of the province. Historically, most of these investments have been made internally by the PITB. However, going forward, the Punjab government will be more open and source solutions from the market and will also engage in strategic PPPs to facilitate growth of the IT sector.

- The government will work on the feasibility of setting up IT parks as PPP ventures to attract foreign investment and technology to fuel growth via knowledge economy. The government will review the use of existing PITB building and work out the possibility of converting it into a technology park.

- The provincial government will launch innovation fund to provide grants to innovative and commercially scalable ideas, and the target will be second-tier universities in Punjab. The government will also develop a mechanism to provide quality business incubation and mentorship support to these start-ups.

- The government will review the performance of Plan IX and Plan X to identify the sustainable start-ups that have emerged from the facility and review the design as required, based on lessons learnt.

- PITB will jointly work with the private sector to ensure growth in high value areas.
- The government will work with the Higher Education Commission to ensure that a uniform quality IT education is imparted at all approved universities.
- The government will develop new vocational and technical courses for IT graduates to prepare them strongly for the rapidly changing IT industry.

Reforming Education to Harness Punjab's Human Capital

Education is fundamental to economic growth and development. The global economy is going through an extraordinary change, which requires economies to focus more on enhancing human capital to stay competitive. Global technological advances and the rapidly changing digital economy has completely altered the requirements raised by the new job markets. Large number of unemployed youth in developing economies such as Punjab, are therefore, more a result of a non-performing and a non-responsive education system, than a slow growing economy. For example, the evidence from the Punjab Growth Model shows that a 1 percent increase in education investment increases growth of large-scale manufacturing by almost 0.9 percent. **The Government of Punjab in its new growth framework has identified provision of quality education as the prime building block in the formation of productive human capital, which is the fundamental pillar of economic growth and productive employment creation in the province.**

1. Performance & landscape

1.1 School Education

Punjab houses an extensive school education network that supports 28 million students with more than 12 million studying in public schools. The public sector school education infrastructure in Punjab comprises more than 52,000 schools and employ over 400,000 teachers. The private sector is an equal if not a larger contributor towards both soft and hard school education infrastructures in the province (over 60,000 schools with more than 565,000 teachers). Additionally, non-profit sector in institutions such as Care Foundation and The Citizens Foundation have over time increased their foot print in provision of basic school education in the province. In terms of public sector focus, over the last five-year period investments were focused on building school infrastructure, increasing enrolments in primary and increasing the number of teachers and reducing absenteeism.

A critical area of deficiency in school education has been the funnelling of the available infrastructure post primary education. The net primary attendance rate of boys was 65.6 percent and for girls was 65.3 percent in 2017-18. The transition rate to secondary school is above 90 percent, however the net secondary attendance rate for boys is just 36.3 percent and that of girls is just 35.9 percent (MICS 2017-18). Moreover, Out of School Children continue to be a key problem, with 35.4 percent primary, 21.1 percent secondary and 53.5 percent upper secondary students being out of school. As a result of these defaulting indicators, the mean years of schooling in Punjab is still 5.5 years as compared to a value close to 7 years in India.

Moreover, due to the lack of a consistent policy the 'quality' aspect in education was not fully addressed over the last decade. The new government, as a first measure to address the education challenge has announced the first School Education Policy for Punjab, **'The New Deal 2018-2023'.** The strategic recommendations made in the growth strategy are fully aligned with the sector policy.

1.2 Higher Education

The higher education sector in Punjab includes 741 public colleges with an enrolment of more than 823,000 pupils. In addition, there are 26 public universities and 7 degree awarding institutions in Punjab (Higher Education Department). However, the unemployment rate of youth in Punjab with a degree or a higher qualification is as high as 18.9 percent. This is a clear indicator of the inadequate quality of higher education offered in the province, an area that needs urgent attention of the government to ensure creation of a productive human capital base for growth.

1.3 Other Sectors

The Punjab Government supports special education and has a literacy and nonformal basic education department. In addition, there exists a large number of deni madaras in the province providing semi-formal to non-formal education. These are all important aspects and the government will continue to focus on these as part of its affirmative action and for attaining compliance with SDGs. However, in the interest of brevity and relevance these topics are not discussed in detail in the strategy. Similarly, the area of technical and vocational skills has been captured in a separate chapter.

2. Key Multipliers of Investment in Education

The data on Punjab suggest the following growth and development outcomes from increasing investment in education sector.

- A 1 percent increase in the mean years of schooling in Punjab will reduce multi-dimensional poverty by almost 5 percent

- A 1 percent increase of public investment in education increases years of schooling by almost 0.2 percent; the impact of operation expenditure is also the same

- A 1 percent increase in public investment in education increases large-scale manufacturing growth by 0.9 percent, growth in construction by 1.1 percent and that in Finance and Insurance by 1.3 percent

Therefore, the focus of the current growth strategy for the education sector is to improve the mean years of education in Punjab and this will be achieved through greatly improving quality by not only investing more but by spending effectively.

3. Challenges & Issues

The school education policy identifies key challenges that the sector faces at the moment. The main issues faced by the school education sector include:

- The quality of learning is a significant issue. The teachers lack effective teaching and delivery capabilities and are still tuned to outdated pedagogical techniques. The efforts to increase the use of ICT tools do not still justify the investments that have been made. Only 50 percent of the 5-16 year olds are able to read in English and Urdu or perform basic arithmetic[15].

- The out of school children number is still very high and is estimated at close to 5 million. More than 50 percent of the 3-4 year olds in rural Punjab are not enrolled in any form of early childhood education. The speed on school infrastructure development has been exceptionally slow and retention of students is low.

- A significant amount of investment has gone in data capturing school education through the PMIU. However, the governance in the sector and HR capabilities are inadequate and this rich data is not being translated into effective policy making and designing initiatives.

- For higher education, the focus has just been on building huge infrastructure with limited emphasis on quality. The quality of scientific and relevant research quality is inadequate. The Higher Education Commission has recently lowered the bar for registration of foreign degree programmes externally taught in Pakistan. This has increased the number of low tier universities launching their programmes in Pakistan. This is a critical issue as these universities are charging fees in foreign currency, thus impacting the external account and are also not providing education that ensures productive training and knowledge building of youth.

- Significant regional disparities exist in the provision of education outputs in the province. The provinces in the South are particularly more deprived in all forms of education outputs as compared to central and northern Punjab. Detailed assessment is provided in the chapter on regional development.

[15] Punjab School Education Policy

- The ineffective devolution has left the issue of creating ownership of education assets unaddressed. The school quality and education provision is significantly compromised as the head teachers or the school councils or local authorities fail to take ownership and are not held accountable.

- Finally, for the private sector willing to invest in schooling the availability of appropriate and affordable land is a key concern. The private sector investors interested in school education state that both the cost of land, commercialization charges and suitability in terms of location are significant barriers to invest. Moreover, the general quality of higher education is poor and thus generate teachers with inadequate skills especially in subjects such as English and Mathematics.

The strategy to address this will be

- The government will significantly increase the total education expenditure in the province. More importantly it will increase the ADP allocation to more than 20 percent over the next five years.

- Quality of teaching and teachers is fundamental to addressing the learning challenge. The main reason why students drop out is not the poverty trap in fact they feel nothing of value is gained at school. The government over the next five years will focus significantly on the improving the quality of teachers and the teachings aids, materials and pedagogy. More specifically the government will

    - Improve pre-service teacher training in the province. The QAED will be supported to scale-up successful experiments done on teacher training involving ICT solutions, remote classroom training, better material, and training spread across the 'taleemi calender' rather than concentrated in large segments.

    - A teacher certification regime will be introduced under the Punjab Education Professional Standards Council. The Council itself will target attaining some international accreditation. The council will ensure that teaching quality and teaching material is benchmarked against credible international standards.

    - The number and types of in-service teacher training programmes and ICT enabled environment will be supported for continuous professional development and learning of new skills.

- The government will invest where required in school infrastructure and will effectively use PPPs to expand the capacity. The focus will be to increase the secondary and higher secondary schools in the province. Low cost land may be provided in underserved parts of the province to improve the provision of school infrastructure and quality teachers. The government will ensure that schools are gender sensitive and encourage female enrolment and retention by offering an conducive environment.

- The government will focus on reducing the OOSC in the Punjab. A major step towards this will be improving quality and thus improving the returns on education. The government will amend the Free & Compulsory Education Act 2014 to include legal obligations on parents to ensure their children go to school. The subsidy schemes of the government will be reformed and will focus more on learning gains and building interest of students to stay in school.

- The government will focus on building suitable capabilities in the public sector school education management. The HR capabilities at the moment are extremely weak and inadequate. This weak capacity translates in poor planning and budgeting and limited impact on public sector investments. The government under its new policy will devise mechanisms that will ensure that ownership of public schools is created. This will either come through the new local government system or incentivising head teachers to increase their interest and stake in good school performance. The issues of non-performing school councils will also be addressed. The government will develop transparent mechanisms that more operational budget is allocated directly at school level and spent well and effectively.

- The government's experience of contracting out low performing public schools to the private sector through the PEF has yielded good results. The programme will be further strengthened and more innovative partnership models will be tested by the department. The government will develop a comprehensive PPP strategy and implementation framework for the sector to ensure private sector investment and deployment of expertise.

- The government will also initiate programmes to include technical knowledge and skills in parallel with main stream education. The concept of STEAM in middle school will be piloted and scaled up based on the results obtained.

- The government will establish the Punjab Private Educational Institutions Regulatory Authority with the primary purpose to ensure quality of education, teachers' quality, teachers' welfare and cost of education. However, the authority will also advocate with relevant bodies to reduce the cost of education provision by the private sector. For example, the school fee bills attract a 5 percent tax, this increases the cost of provision of schooling - this may be reduced or eliminated. Similarly, the private sector is constrained in terms of finding suitable and affordable land for schools. The government will use its spatial mapping to identify appropriate lands that can be used for developing schools and to encourage investment through land use and zoning policies, pre-classify these areas for educational institutes and apply zero commercialization charges. The price of the land may be incentivised to encourage schools to move out of congested residential areas and move to these pre-allocated areas. This will reduce traffic congestion in big cities and will also result in better school infrastructure provided by the private sector.

- The government will work on its own and with private sector to address the mobility issues of girls. The government will scale-up innovative experiments for example girls bicycle programme or similar initiatives that can support safe and quick commuting options to girls. This is likely to increase retention of girls significantly post primary education.

- The government over the next five years will focus on improving the quality of higher education. The key initiatives will include the expansion of the bachelor programme to 4 years, establishment of model colleges and consolidation of subjects to develop centres specializing in certain subject areas. The strategy also includes increasing the focus on scientific education and entrepreneurship (this is covered in more detail in the knowledge economy chapter). The provincial government will advocate with HEC to raise the bar for universities so that graduates of employable qualities are produced. The government will target to at least halve the unemployment of 18.9 percent of degree holders in the Punjab.

- The government will further strengthen its scholarship programmes linked to top rated foreign universities and will work towards bringing back all the trained talent to positively contribute towards the development of the provincial economy.

Ensuring a Healthy Punjab

Ensuring a good healthcare delivery system can serve as a central input to bring about socioeconomic development and reduce poverty. A robust and thriving health sector can lead to the creation of human capital development and accelerate the growth of the economy. Therefore, being two sides of the same coin, the health sector and economic growth supplement the progress and development of each other.

The P&SHD is the key department entrusted with the fundamental responsibility of the health of communities and the entire population. Free of cost consultation, diagnostic facilities and medicines are provided to the patients, particularly focusing on the poor and marginalised segments of society.

The SH&ME delivers tertiary-level healthcare services, and includes tertiary care hospitals, medical universities, medical institutes, nursing schools, and affiliated organisations such as the Punjab Pharmacy Council and the Institute of Blood Transfusion Services (IBTS).

1. Key Determinants

- A 1 precent increase in the **ADP capital stock of health sector** reduces under-5 mortality rate by almost 1.5 percent in Punjab.
- A 1 precent increase in the per capita GPP reduces under-5 mortality by almost 0.6 percent in Punjab.
- A 1 precent increase in the ADP capital stock of health sector increases social and community sector's value added by almost 0.3 percent in Punjab.

Health reforms were introduced in the recent past to improve the health status and achieve the targeted health outcomes. But despite efforts, high infant, child and maternal mortality and the double burden of disease remain the major challenges. The Infant Mortality Rate (IMR) has decreased from 76 per 1000 live births in 2014 to 60 per 1000 live births in 2018 but is still very high as compared to the WHO-estimated global average of 32 and the SDGs target of 12 per 1000 live births. The under-5 mortality rate in Punjab has decreased from 93 per 1000 children to 69 per 1000 children while the WHO-estimated global average is 46 and the SDGs target is 25 per 1000 children. Currently, the antenatal care and skilled birth attendant coverage in Punjab is 87.3 percent and 76.8 percent, respectively which has been improved from 78.8 and 64.7 percent in 2014, respectively. Punjab has performed better in maternal health indicators, but maternal mortality is still one of the leading causes of death among women of reproductive age across the province. The maternal mortality rate is still very high in Punjab, as it stands at 180 per 100,000 live births[16].

The right of the new-born to survive and thrive appears to be violated during the intrapartum period, resulting in premature births and low birth weight in the first hour, the first 28 days of life, and into the first 1000 days of life. New-born girls and boys are dying of conditions that could be managed within households (low birth weight, hypothermia, sepsis) as well as other conditions that require interventions in health facilities (birth asphyxia, prematurity). Neonatal survival is further complicated by other poorly performing cross-sectoral family care practices and interventions, including sub-optimal breastfeeding, hygiene and sanitation. This has serious implications for overall Early Childhood Development (ECD) for affected children and could undermine the aspiration to develop a knowledge-based economy in line with the vision of the new government.

[16]MICS, 2014, 2018

2. Critical issues faced by the sector

2.1 Policy and Governance

- Healthcare Financing: Investing in primary and preventive healthcare is not a priority. There is a need for optimised healthcare financing through fiscal responses.
- Poor governance, accountability mechanisms and ineffective monitoring and evaluation.
- Lack of comprehensive, timely, accurate and functional information system which is usually not segregated by sex, age and disabilities.
- Non-regulated private sector even though it is a significant health services provider.

2.2 Service delivery

- Inadequate number of health staff at facility and community levels, especially female staff, to fulfil population health needs. There is also poor distribution and inappropriate deployment of health workforce. In addition, there is an apparent competition for limited human resources among different priorities - polio eradication, routine immunisation and dengue control. Skills gap among the available workforce is another challenge.
- Inadequacies in health infrastructure and inconsistent package of services resulting in inequities at all levels, especially related to new-born and child health.
- Limited and inconsistent logistic capacity for service delivery. There is inadequate/inconsistent supply of quality essential drugs/commodities for healthcare facilities and outreach workers. Poor storage capacities and logistics management for vaccines and other essential medicines is another big issue. This issue particularly affects the immunisation and family planning programmes.
- Inadequacies in the healthcare services provision due to a weak institutionalised referral system.
- Verticality of different programmes/projects and a weak integration/coordination.
- Lack of gender-responsive service delivery in health facilities and communities.
- High transportation costs and out-of-pocket expenditures as well as fee for services in the private sector.
- Rapid urbanization with haphazard and humongous growth of big cities leading to inadequate and inequitable quality services for the urban populations.

2.3 Demand Creation

- Limited government capacity and structures in the province and districts for social mobilisation, behaviour change communication (BCC) and demand generation for early and timely initiation of and continuity of health services. Lack of awareness among caregivers and low literacy rates add to the challenge. Preventive services, especially child immunisation and MNCH services, are not a priority for many of the segments of populations.

2.4 Quality

- Absence of standard operating procedures and minimum service delivery standards for all types/levels of healthcare.
- Poor implementation of available standard operating procedures and minimum service delivery standards, especially maternal, new-born care and immunisation.

- Inadequate attention to environmental health including hospital waste management.
- The Punjab Growth Strategy 2023 aims at the provision of comprehensive healthcare to the population of the province, especially the most vulnerable and deprived segments of the society, through addressing the above-mentioned issues.
- Annexure-A enlists the baseline targets to be achieved by 2023.

3. Strategic priorities

- Primary healthcare will be focused with special attention to immunisation, new-born and child healthcare.
- Optimising decentralisation and institutional autonomy.
- Strengthen the Punjab Healthcare Commission.
- Research on communicable and non-communicable diseases' trends and associated risk factors.
- An integrated health information system providing easy access to reliable data for evidence-based policy making and resource allocation.
- Standardised information system for public and private sector health facilities, having linkages with community-based information systems.
- Enhancement and acceleration of Civil Registration and Vital Statistics (CRVS), besides prioritising timely and accurate generation of vital statistics for evidence-based policy, planning, monitoring and evaluation.
- Regularisation of the private sector through the healthcare commission.
- A well-structured human resource planning and management policy for provision of quality services at all levels.
- Establishment of a human resource planning and development unit to ensure provision of adequate, skilled and gender-balanced human resource at all levels of healthcare delivery.
- Increase in number of LHWs/CHWs to have 100 precent coverage.
- Strengthen in-service capacity development structures/institutions for health care providers at all levels for continuous refreshers/trainings.
- Revise medical curriculum with a focus on preventive and promotive care.
- Provision of adequate health infrastructure.
    - Upgradation of Basic Health Units to function as BHU plus and/or 24/7.
    - Upgradation of RHCs.
    - Upgradation of THQ level hospitals.
    - Construction of specialised MNCH hospitals/
    - Vehicles for providing health services to remote/difficult to reach areas.

- Strengthening of tertiary health care infrastructure.

- Improved supply chain management for quality medicines, vaccines and other logistics at all levels
  - Strengthening procurement, storage and distribution of vaccines, medicines and commodities through restructuring of warehouses/medical store depots and automation of system for quantification, procurement and distribution. (LMIS).
  - Institutionalise regular reviews of Essential Drugs List.
  - Strengthen and enforce quality regulation for drugs.
  - Ensuring uninterrupted supply of family planning commodities to all the primary and secondary level health facilities.

- Strengthening of referral systems between various levels of health facilities and community.

- Development and implementation of Urban Health Strategy and urban sector plans. Special and innovative measures to reach marginalised and deprived urban populations, including provision of mobile health services.

- Integrated Communication Unit to be strengthened.
  - Development and implementation of standard operating procedures and minimum service delivery standards for all types/levels of healthcare.
  - Address the issues of environmental health, including quality hospital waste management.

4. Strategy for the sector

The following measures will be taken for ensuring improvement in the healthcare system at all levels:

4.1 Basic Healthcare

- Strengthening of the vertical programmes initiated by the primary healthcare department to improve mother and child health, while simultaneously upgrading programmes at the BHU level.

- The number of lady health workers will be increased to improve the basic healthcare indicators. A plan of action will be developed regarding food and nutrition intervention. Food safety and availability of micro-nutrients to the poor segment will be ensured.

4.2 Human Resource Development

- The HR planning and career management of healthcare practitioners will be improved to increase efficiency of the system.

- The DHQ Hospitals will be attached and affiliated with medical colleges as training centres for both public and private sectors.

- More nursing schools will be established to improve patient-nurses ratio.

- Tibb or homoeopathy councils will be made independent administratively and financially with their separate set-up for smooth functioning.

4.3 Reduce the Burden of Diseases

- Each district will have at least one hospital with complete diagnostic facilities and specialist of the required fields. The Coronary Care Units (CCUs) will be established in each DHQ/THQ hospital. Effective hospital hygiene and waste disposal programmes will be introduced.

- More cancer hospitals will be established. Prevention and control of non-communicable diseases will be incorporated clearly in the strategies at all levels. The establishment of the Non-Communicable Diseases and Health Promotion Unit at the provincial and district levels will be ensured. Aggressive educational campaigns will be launched to control diabetes, hepatitis, HIV and cardiac disorders, etc.

- Accreditation standards will be strengthened through the Pakistan Medical and Dental Council (PMDC).

- Healthcare Commission, which is the regulatory authority for all public and private sector healthcare delivery facilities, will be strengthened to avoid quacks in the healthcare system.

- In order to drive down mortality by non-communicable diseases (NCDs), development of the NCDs and cancer registry system, and awareness campaign based on standard Behaviour Change Communication (BCC) regarding modifiable risk factors will remain under focus.

- Medical colleges and teaching hospitals will also become fully autonomous bodies, managed by their respective Boards of Governors (BoGs) for professional and administrative autonomy. The government will be encouraged to provide an efficient medico-legal service. For this purpose, facilities for legal and forensic studies will be expanded to medical colleges.

- Tobacco use and tobacco-prevention interventions will be monitored at all levels in order to protect people from tobacco smoke in public places and workplaces, and help people stop using tobacco, while advising and warning them against its use.

4.4 Private Sector Engagement

- Private sector engagements will be enhanced for maximising health benefits for the population, specifically highly specialised care; and optimising their service delivery through the provision of a appropriate regulatory framework. Private practicing GPs or specialists are not engaged in case of emergencies in the public sector, especially in rural areas where patients have to travel a long distance in such a situation.

4.5 Trauma and Burn Centres

- Setting up of trauma and burn centres with communication links to paramedic services, security agencies and all major hospitals for better macro-management and appropriate distribution of casualties.

- Accreditation of trauma centres and the CCUs.

4.6 Healthcare Financing

- Healthcare financing will be improved during the strategy period through the following measures. The Provincial Health Service System will be financed with relatively high percentage to GPP to cover the whole population, particularly the poor.

- Sehat Insaf Cards will be introduced in all districts.
- There will be not-for-profit prepayment plans for healthcare, financed through private voluntary contributions with community control and voluntary membership.
- Social entrepreneurship and Public-Private Partnership will be promoted.

Focus on Water, Sanitation and Hygiene

The overall vision of the Government of Punjab is to provide safe drinking water and sanitation facilities to the entire rural and urban communities in an equitable, efficient and sustainable manner. Housing, Urban Development and Public Health Engineering Department (HUD&PHED) along with the Local Government and Community Development Department (LGCDD) in Punjab are the lead departments for planning, funding, service delivery, regulating and monitoring for water and sanitation sector in the province. For five major cities of Punjab, autonomous Water and Sanitation Agencies (WASAs) have been created that lead the development and management of WASH services. These WASAs have been delegated with optimum levels of administrative, financial and operational autonomy along with mechanisms for public scrutiny and accountability. In small and medium-sized towns and cities, responsibilities rest with municipal committees or local development authorities for the provision and maintenance of WASH services, mainly under the direction of the PHED and the LGCDD.

The previous government established Solid Waste Management Companies in seven cities, and these were expanded to the division level in 2016. However, the services of these companies were largely limited to urban areas. On the other side, WASAs and the Public Health Engineering Department, in collaboration with the local government, continued the provision of drinking water and liquid waste management, including improved sanitation with varied levels.

The Government of Punjab took a clean water initiative in 2014-2015, with a focus on establishing filtration plants in rural areas for the provision of safe drinking water. A key achievement was the development of the Water, Sanitation and Hygiene (WASH) Sector Development Plan 2014-2024 that proposed short, medium and long-term strategic objectives, and overall investments required to achieve these objectives.

1. Issues & Challenges

1.1 Access to Drinking Water

As per the Punjab Multiple Indicator Cluster Survey (MICS) 2018[17], about 98 percent of the population uses an improved source of drinking water, 98.2 precent in urban areas and 97.9 percent in rural areas. Furthermore, 18.7 percent of the population of Punjab has access to tap water, followed by 37.5 percent motorised pump and 25.3 percent hand pumps. Table 5.1 shows the overall distribution of improved water source to households (HHs) in the province.

Table 5.1: Access to drinking water supply by source in Punjab

All source of drinking water	Urban %	Rural %	Total %
Piped into dwelling	15.1	3.8	7.9
Piped into compound, yard or plot	4.0	3.9	4.0
Piped to neighbour	1.9	1.7	1.8
Public tap /Standpipe	7.8	3.5	5.1
Tube well	0.9	1.1	1.0
Hand pump (Mechanical)	7.2	35.7	25.3
Motorized pump (donkey/Turbine)	34.1	39.5	37.5
Tanker-truck	0.6	0.2	0.3
Cart with small tank/drum	24.9	7.2	13.6
Protected well	0.5	1.0	0.8
Protected spring	0.1	0.2	0.2
Bottled water (mineral)	1.1	0.1	0.5
Improved Water	**98.2**	**97.9**	**98.0**
Unprotected well	0.1	0.5	0.3
Unprotected spring	0.1	0.2	0.1
Surface water (river, stream, dam, lake, pond)	0.4	0.9	0.7
Water Kiosk	0.8	0.1	0.4
Other	0.4	0.4	0.4
Unimproved Water	**1.8**	**2.1**	**2**

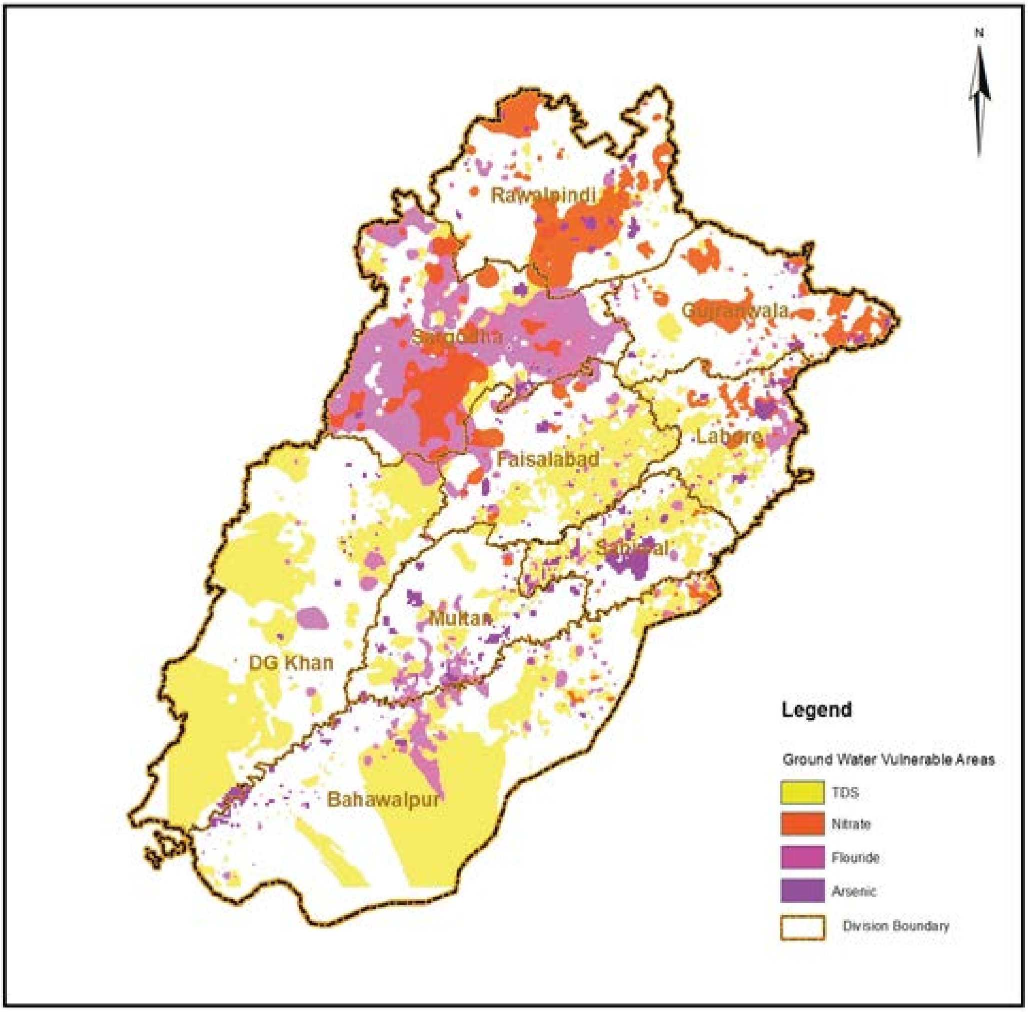
Source: MICS 2018, Bureau of Statistics, Government of Punjab

[17]Punjab Multiple Indicators Cluster Survey (MICS) 2018

1.2 Drinking Water Quality

Drinking water quality tests carried out in twelve districts of Punjab showed that microbes and heavy metals (arsenic) were major contaminants in almost 40 percent water sources in these districts[18]. The government has been addressing water quality issues through the installation of water filtration plants. Spatial representation of water quality of vulnerable areas in Punjab is presented in Figure 5.11.

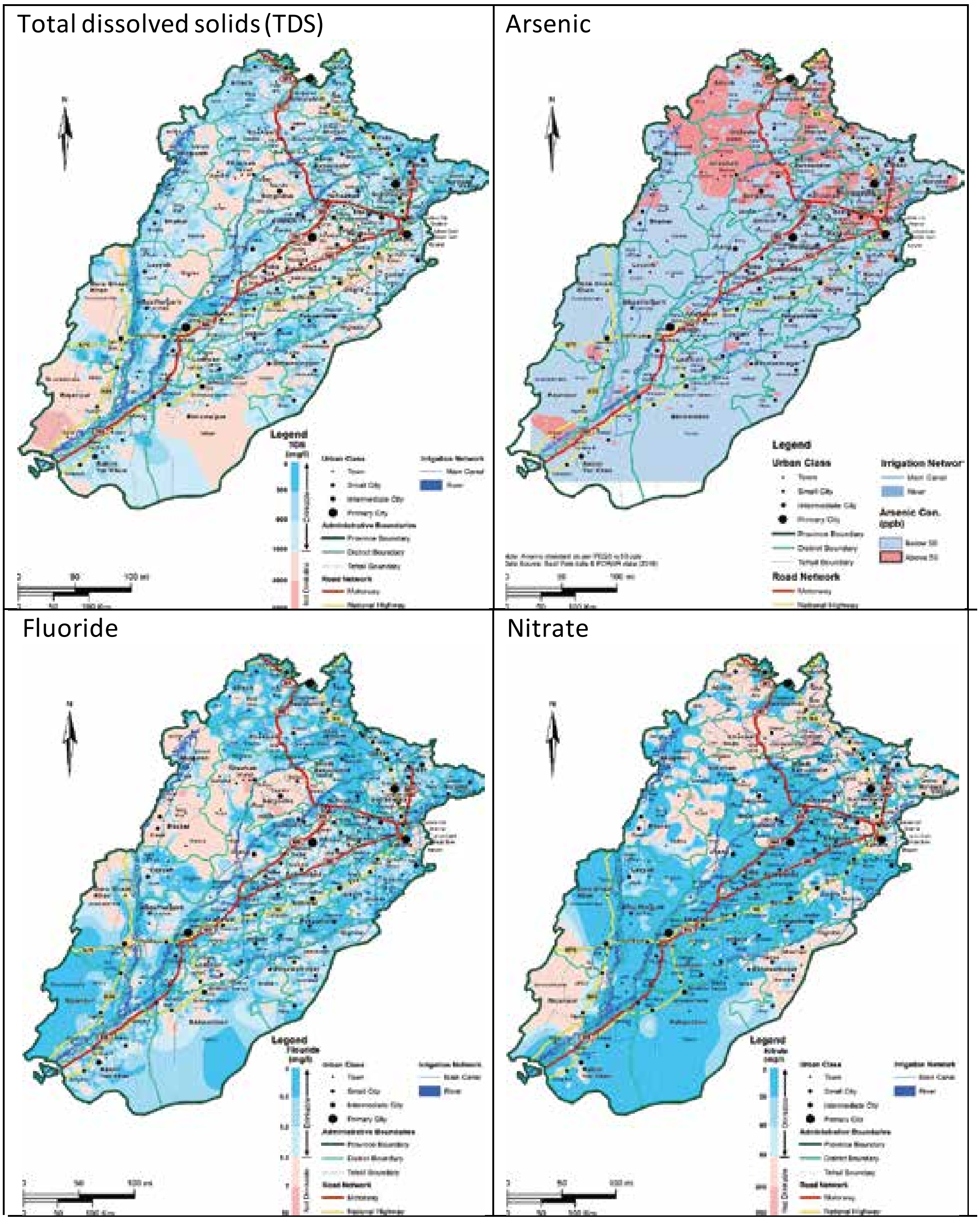
Figure 5.11: Water Quality Vulnerable Areas in Punjab



Source: PCRWR, Government of Pakistan

[18]Daud, M. K., et al. 2017. Drinking Water Quality Status and Contamination in Pakistan. BioMed Research International. pp. 6

Figure 5.12: Distribution of different contaminants in groundwater sources across Punjab



Source: PCRWR, Government of Pakistan

1.3 Safely Managed Water

As per the MICS 2018, 91.4% of the population has drinking water available in sufficient quantity when needed, 74.2% has water accessible on premises and 63.8% is without E. coli contamination in drinking water. Overall, 43.7% of household members with an improved drinking water source located on premises, free of E. coli, and available when needed access to improved water.

Table 5.2: Safely Managed Drinking Water

Punjab	Improved sources			Percentage of household members with an improved drinking water source located on premises, free of E. coli and available when needed
	Without E. coli in drinking water source	With drinking water available in sufficient quantities	Drinking water accessible on premises	
Overall	63.8	91.4	74.2	43.7
Rural	65.6	92.3	78.5	48.1
Urban	60.8	89.8	66.8	36.0

Source: MICS 2014, Bureau of Statistics, Government of Punjab

1.4 Access to Sanitation

As per the MICS 2018, a total of 80.1 precent of the population of Punjab is living in households that use improved sanitation facilities, which is higher in urban (92.8 precent) as compared to rural areas (72.8 precent). Of this, 70.4 precent have improved sanitation that is not shared. This is 61.8 precent in rural areas and 85.5 precent in urban areas. Around 13 precent of the population of the province (predominantly living in rural areas) is practicing open defecation as compared to 23 precent in 2011. Below is the break-up of the sanitation services in the province with urban and rural break-ups. Around 40.7 precent of households reported on-site safe disposal of human excreta, which is 50.5 precent in rural areas and

Table 5.3: Access to sanitation in Punjab

All source of Sanitation	Urban %	Rural %	Total %
Flush to piped sewer system	56.9	4.9	23.8
Flush to septic tank	32.0	50.0	43.5
Flush to pit (latrine)	2.8	15.4	10.8
Flush to unknown place / not sure	0.6	0.7	0.7
Ventilated improved pit latrine (VIP)	0.2	1.0	0.7
Pit latrine with slab	0.2	0.7	0.5
Improved Sanitation	**92.8**	**72.8**	**80.1**
Flush to Open Drain	5.5	6.6	6.2
Pit latrine without slab / open pit	0.0	0.3	0.2
Bucket	0.0	0.0	0.0
No facility, Bush, Field	1.4	19.7	13.0
Other	0.3	0.5	0.4
Missing	0.0	0.0	0.0
Unimproved Sanitation	**7.2**	**27.2**	**19.9**

Source: MICS 2018, Bureau of Statistics, Government of Punjab

1.5 Hygiene Practice

As per the MICS 2018, it was observed that about 98.3 precent of the households had a specific place for hand washing, while only 1.7 precent households could not indicate a specific place where household members usually washed their hands. Among households where a place for hand washing was observed, almost 92.1 precent had both water and soap (or another cleansing agent) present at the specific place, and this was higher in urban (96.7 precent) as compared to rural areas (89.4 precent).

1.6 Safely Managed Sanitation

Under the Sustainable Development Goals (SDGs), Safely Managed Sanitation services are defined as: population using an improved sanitation facility (including a hand washing facility with water and soap) that is not shared with other households and where the excreta are safely disposed or transported and treated off-site. Around 70.4 precent of the population in Punjab has improved sanitation, which is not shared with others, and around 92.1 precent population indicated hand washing with soap and water. Around 40.7 precent of households reported on-site safe disposal of human excreta, which is 50.5 precent in rural areas and 23.4 precent in urban areas. However, there are issues on understanding and reporting the effective faecal sludge management either on-site or off-site with the construction of septic tanks or sewer lanes.

2. Sector Strategy

The main objective of the strategy for the water and sanitation sector is to propose adequate policy, legal and institutional reforms in this space, and prioritise actions and development aspects to promote and increase access to safe water and improved sanitation services for the citizens of this country in the next five years to improve the quality of life and reduce waterborne disease burden.

The new draft Drinking Policy 2017 envisions that safe drinking water is accessible at premises, available when needed, and free from contamination on a sustainable basis to the whole population of Punjab, in addition to acquiring and adopting improved knowledge in their daily life. The policy underpins to create universal coverage and access to safely managed drinking water services by 2030.

The Punjab Municipal Water Act 2014 aims to recognise, regulate and manage present and future municipal water in Punjab, and define municipal water, cover water appropriation, water treatment, bulk supply and water services. The Punjab Sanitation Policy 2017 envisions developing a safely managed sanitation environment for all citizens of the province, contributing towards high quality life in Punjab. New revised policies are currently in the approval process, and are part of the water roadmap of the Punjab government. The policy for Water and Sanitation under the Punjab Growth Strategy will be to approve and notify the above-mentioned provincial policies and act that must be aligned with the National Water Policy 2018 and also prepare their implementation plan.

2.1 Guiding Principles for Water and Sanitation Services Under Development Strategy 2023

1. Recognise **water and sanitation services as a fundamental right** (implicit under Article 9 of the Constitution of Pakistan) through the provision of safely managed sanitation services.

2. Assure **inclusiveness** in terms of equitable distribution of resources and capacities to overcome geographical and gender disparities, vulnerability and income inequities.

3. Warrant **appropriate resource allocation** for safely managed water and sanitation services, with delegation of responsibilities and accountabilities to local bodies and institutes.

4. Implement a **multi-sectoral approach,** involving different government departments and other stakeholders.

5. **Involve and engage women and other vulnerable community groups** in planning, implementation, monitoring, operation and maintenance of water and sanitation services.

6. **Underpin the Sustainable Development Goals (SDGs)** with key emphasis on SDG 6, along with contributing other goals: No Poverty; Good Health and Wellbeing; Gender Equality; Reduced inequalities; Sustainable Cities and Communities; Responsible Consumption and Production; Climate Action; and Life on Land.

2.2 Targets for the Punjab Growth Strategy 2023

1. 60 precent of population in the province has safely managed water services.

2. 70 precent of urban population and 35 precent of rural population has access to piped water supply.

3. At least 40 precent of water supply schemes converted to solar energy.

4. 100 precent water metering in mega cities, 50 precent in intermediate cities and 30 precent in small towns - bulk flow meters and pressure gauges installed at 40 precent of tube wells of water supply.

5. At least 60 precent coverage of water quality testing for tube-wells and distribution system by every quarter.

6. Installation of chlorinators in 60 precent of reservoirs (or tube-wells where storage capacity does not exist).

7. Extend sewerage system lines to provide 70 precent coverage in cities and towns and 40 precent coverage in rural area.

8. De-silting and cleaning of 60 precent drains and sewers with safe sludge disposal per quarter in TMAs and zones in cities.

9. Achieve Open Defecation Free status by 100 precent population/area.

10. At least 50 precent of new schemes have in-built wastewater treatment facility. Each mega and intermediate city has at least one wastewater treatment plant functional.

11. At least 80 precent of solid waste generated is collected and disposed of per day.

12. At least 40 precent TMAs provide door-to-door collection service.

13. Village based solid waste management scaled up to 30 precent villages in Punjab.

14. Recycle at least 15 precent of solid waste by systematic separation.

15. At least 100 precent of first level health facilities have usable water and sanitation services, along with soap and hand sanitisers.

2.3 Proposed Strategic Actions for 2023

Reforms and Governance: By 2020, Punjab will introduce legislative measures and regulations to create an enabling framework for safely managed drinking water services.

Service Delivery: By 2020, develop standardised service delivery models for urban and rural areas; and by 2023, create 60 precent coverage and access to safely managed drinking services and 30 precent for safely managed sanitation services.

Water Quality and Effluent Monitoring & Surveillance: By 2020, develop regular drinking water quality and effluent monitoring and surveillance mechanisms; and by 2023, develop and implement mechanisms for reuse, recycle and recharge of wastewater

Women Development - Striving Towards Gender Equality

Gender inequality is one of the biggest detriments for realising the true economic potential of any country. Ensuring gender equality, providing equal opportunities and ensuring dignity of work and life for women are the key factors for sustainable economic growth and social development. In Punjab, women constitute **49 precent of the population**. Despite constitutional safeguards that guarantee equality to all, women's role in social, political and economic spheres of life and their relative status remains marginalised, and the opportunities offered to them remain limited, when compared to men.

Several "Punjab Women Empowerment Initiatives (PWEI)" have been approved in the past, leading to affirmative actions to ensure women empowerment and their socioeconomic development. These initiatives included interventions to address issues relating to violence and harassment, provision of women specific facilities and removing inequities. However, there is a need for a more specific approach to gender-based interventions, which is aligned with the goal of improving human capital and working towards the Sustainable Development Goal 5 related to gender equality. Moreover, women being half of the population constitute a major proportion of human capital, which has the most significant impact on economic growth of Punjab. **The Punjab government will strengthen its affirmative action to shift Punjab towards gender parity in all dimensions and build capable human resource that will add positively to the growth story of the province.**

1. Key Determinant of Gender Parity in Punjab

The Punjab growth model suggests that a **one percent increase in the overall employment level improves the gender parity index by almost 0.8 percent.** The gender parity index includes 4 dimensions of exclusion: education (4 indicators); labor force (3 indicators), heath (3 indicators) and employment (2 indicators). The critical message from the above statistic is that economically empowering women should be the main strategy of the government to attain sustainable gender parity in the province.

2. Issues & Challenges

Pakistan is ranked 133rd out of 160 countries on the Gender Inequality Index (GII) in 2017 and at a dismal 148th out of 149 countries in the world on the World Economic Forum's The Global Gender Gap Report. The weak performance of Pakistan on GII can be linked with underperformance on human development, as the index reflects three major indicators of gender inequality, which are empowerment, economic activity and reproductive health. Only 20 percent of the parliamentary seats are held by females, 27 percent have secondary education and 24.9 percent females participate in the labour force, as compared to 82.7 percent of men. For every 100,000 live births, 178 women die from pregnancy-related complications, and the adolescent birth rate is 36.9. Gender discrimination in the three GII dimensions is inferred as the loss in human development and the average loss due to inequality is 31.0 percent for Pakistan[19].

Table 5.4: Pakistan's GII for 2017 relative to selected countries

	GII value	GII Rank	Maternal mortality ratio*	Adolescent birth rate*	Female seats in parliament (%)	Population with at least some secondary education (%)		Labour force participation rate (%)	
						Female	Male	Female	Male
Pakistan	0.541	133	178	36.9	20.0	27.0	47.3	24.9	82.7
Bangladesh	0.542	134	176	83.5	20.3	44.0	48.2	33.0	79.8
India	0.524	127	174	23.1	11.6	39.0	63.5	27.2	78.8
South Asia	0.515	-	176	32.1	17.5	39.8	60.6	27.9	79.1
Medium HDI	0.489	-	176	41.3	21.8	42.9	59.4	36.8	78.9

*Maternal mortality ratio is expressed in number of deaths per 100,000 live births and adolescent birth rate is expressed in number of births per 1,000 women aged 15-19.

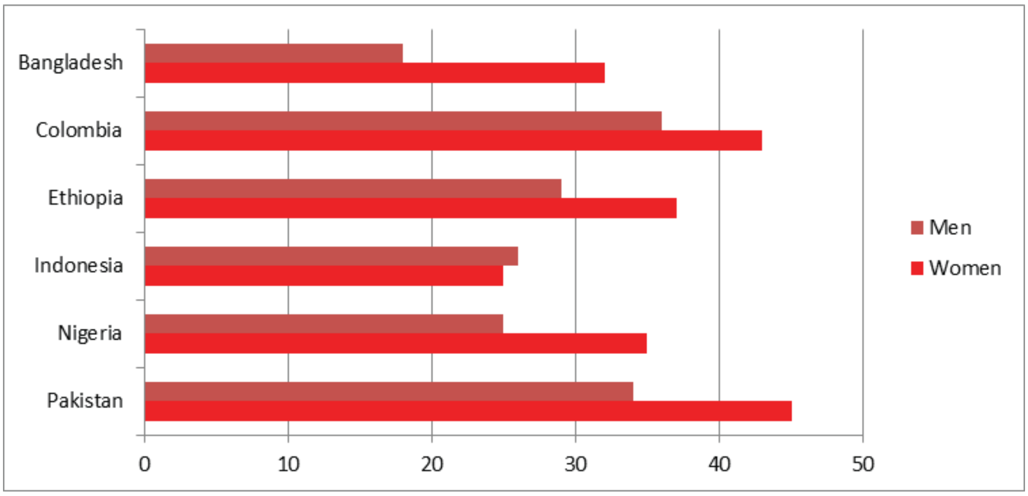
Source: UNDP, Pakistan

[19]Human Development Indices and Indicators: 2018 Statistical Update by UNDP

The Gender Development Index (2017), which measures gender parity on the basis of life expectancy at birth and disparity in years of schooling, shows strong dimensions of inequity. The disparity of the gross national income per capita is Rs 1,642 for women while Rs 8,786 for men. This indicates little or no control of women over economic resources, leading to little or no role in life choices and economic activity.

Similarly, the **Global Findex Database 2017** shows little or no financial inclusion for women in Pakistan. For example, "account ownership has doubled since 2011, though it started from a low base of 10 percent. But while it surged among men, it stagnated among women. In Bangladesh, Pakistan and Turkey, for example, the gender gap is nearly 30 percentage points[20].

Figure 5.13: Economies with half or more of adults unbanked



Source: Global Findex database, 2017

3. Women's Socioeconomic Status in Punjab

The prevalence of gender inequality in Punjab is similar to the national level, as the female Labour Force Participation Rate[21] (LFPR) in Punjab is 26.5 percent as compared to 70 percent for males. Similarly, in the case of employment status, the share of women in non-agriculture employment is only 7.7 percent as compared to 47.7 percent of men. The female literacy rate in Punjab is 57 percent as compared to the male literacy rate of 72 percent (LFS 2018). From 2013 to 2018, the Punjab Assembly had 20 percent representation of women, while only 4 (12 percent) women were nominated as ministers in Punjab.

Gender disparities in land ownership also remain significant. There is considerable variation between the number of male (68.7 percent) and female (31.3 percent) agricultural landowners in Punjab where women are restricted in their control of their landholdings[22]. Furthermore, protection of women at homes and at public spaces is also a major hindrance in women development. For example, 7,678 cases of violence against women were reported in 2017, which included cases of rape, acid attacks, beatings & sexual violence, etc.

Table 5.5: Women's Socioeconomic Status in Punjab

	Male (%)	Female (%)
Literacy rate	72.2	57.4
Labour Force Participation Rate	69	28.3
Employment status	71.7	28.3
Land ownership	68.7	31.3
Registered voters	31.3 million	24.5 million
Loan beneficiaries	87.5	12.5
Social security benefits	96.09	3.91
Ownership of inherited property	59	41

Source: UNDP, Pakistan

[20] World Bank, Global Findex Database, 2017
[21] Labour force survey 2018
[22] Land Record Management & Information System (LRMIS), 2017

On the government side, work needs to be done on reviewing legislation, strengthening of institutional systems and regular monitoring of existing interventions.

Reviewing Existing Legislation: The government will do a comprehensive review of existing policies and laws to address areas needing revision. The Protection against Harassment of Women at Workplace Act 2012 might need amendments owing to the increase in the harassment complaints on social media.

Another legislation that needs to be revisited after a thorough consultation process is disallowing women to work after nightfall. Hindering their participation in key areas (wholesale markets, trading) of employability leading to lower economic participation is a blow to the efforts of women's economic empowerment. Other laws of the Government of Punjab can also be studied for any discriminatory legislation that can be revisited.

Moving Towards Gender-Sensitive Budgeting: The government will make efforts to move towards gender-sensitive budgeting. Improving on the human capital development, unless it incorporates almost half of the population, would not be possible. For Punjab to move towards the true model of human capital development, women development and its related interventions need to be identified and brought up at the time when projects, especially in health, education, employment and skills are being planned and financed. Programmes for Women Empowerment and Women Development – that would eventually become part of the Annual Development Programmes of the province - should include gender-based observations. A two or three member strategic unit, either at the P&D Board or WDD, can help support these interventions until they become the norm for future planning and financing of projects and schemes.

Creating Safer, Dignified and Enabling Work and Public Spaces: The government will take key measures to make workplaces safe for women. This is important in order to move towards truly empowering women and their socioeconomic development, for which key strategic interventions need to be made. Awareness regarding code of ethics and harassment laws, and follow-ups on reported cases, will encourage more women to step out of their homes. The Punjab Ombudsperson's office will be further strengthened, as its role in resolving harassment-related cases is encouraging and provides the right kind of confidentiality that victims of harassment require. The duplication of efforts also needs to be addressed and the multiple helplines and interventions whereby women can report harassment should be clubbed under the ombudsperson's office. An efficient harassment reporting and redressal mechanism will encourage women to work and contribute to the economy.

Establishing Mechanisms for Gender Disaggregated Data for Effective Policy and Programme Interventions: A major constraint for developing gender programme interventions is the lack of gender disaggregated data in many areas. In areas that such data is available, the programmatic interventions are easier. For example, the gender disaggregated data in the labour survey gives useful indications for areas where female employability is low and action is required. The government will make a consolidated effort for collection and utilisation of gender desegregated data to support data-driven policy making, which is essential for justifying provision of public money to specific areas and programs.

Increasing/Retaining School Enrolment and Higher Education Opportunities: Quality education at the primary, secondary and higher level for girls and women can pay dividends. Getting elementary education increases women wages by 31.3 precent as compared to completing a degree, which increases earnings by 123.6 precent[23]. There is a clear tendency in the labour market that higher education is rewarded by higher marginal returns. However, for most education levels except degree, the returns have decreased between 2007-08 and 2014-15. This implies that low qualified women are working in the informal sectors and are earning less in real terms. Therefore, there is a need to push for increasing education levels and economic empowerment.

The government will support and encourage well-thought-out interventions in trying to retain girls in the education stream after secondary level and supporting them to attain higher levels of education with professional degrees.

[23]The Punjab Commission on The Status of Women, 2018. Government of Punjab

Incorporating STEM in the Schools' Curriculum, Especially Targeting Young Girls: Closely linked to the point on education, the incorporation of Science, Technology, Engineering and Mathematics in to curriculum and special higher education packages for women to be able to get higher education in these fields needs to be encouraged. The government will ensure that these subjects are incorporated at all levels of education to increase chances of better employment, hence better economic opportunities.

Establishing Incubation Centres for Women Entrepreneurship: The government will encourage women to be part of the entrepreneurial landscape through incubation centres, where they will be able to learn business development, financing and management skills. Ideally, these incubation centres will be housed at the Women Chambers in different parts of Punjab, and can provide women better access to potential opportunities and partnerships. Closely linked to this is encouraging women and providing them credit facilities for SMEs.

Bringing Informal Women Workforce to Formal Employment: Punjab will consider bringing in labour laws for ensuring welfare of a large number of women working in the agriculture sector, whose work, till now, is largely undocumented.

Skills development: Data on skills provision in the province shows that a majority of women train as beauticians or in basic computing skills. Whereas, provision of these skills support women to enter into self-employment, they fail to bring women into mainstream sectors. Moreover, these courses do not cover entrepreneurship, which results in lowering the economic impact. Furthermore, the type and amount of training courses in the agriculture sector are scarce, a sector that employs a majority of women. In order to address this issue, the government will introduce new courses in agriculture, especially catering for modern farming practices. The government, through its skills strategy, will expand the number of courses offered for women and develop in targeted programmes in partnership with industries. The women can contribute significantly to the services sector; therefore, the government will launch specific courses on soft skills, entrepreneurship, sales and marketing and e-sales only for women to increase opportunities and employment. The courses under the soft skills component will include training of men to work in co-environments so that workplaces in Punjab become more gender sensitive.

Utilising CPEC's Interventions for Women Development: The long-term plan of the China-Pakistan Economic Corridor has identified specific interventions that include a large number of activities focused on modernising agriculture, productivity enhancement techniques, improvement in seed quality and induction of technology. The government will ensure that all these programmes are implemented with inclusion of gender requirements and that the women of Punjab fully benefit from CPEC development.

Encouraging female participation in non-traditional sectors: Key sectors like construction, the services sector and especially the tourism and hospitality sector has very little women representation. The government will ensure skills training in these areas and initiate advocacy with key private sector players for employing women in these sectors, which can lead to economic empowerment and economic growth as a whole.

Banking the Unbanked and Microcredit Schemes: The government will support financial inclusion programmes for women to make them active members of the communities they live and work in, and provide them economic opportunities. This will support women to be included formally in the financial sector. This can also be clubbed with a programme on introduction of micro-credit schemes for rural women, which has led to substantial results in women economic empowerment in rural India and other countries.

Bridging the Digital Divide: The gender digital divide is one of the key challenges that keep women away from the opportunities that technology offer. The government will put a two-pronged strategy in place: one, to ensure laws and regulations that protect women in digital spaces from harassment and cyber bullying, including protection of their personal data; two, to have programmes and trainings that make the uptake of technology easy and accessible for women. The incubation centres for women entrepreneurs will also provide assistance in technology-based entrepreneurial projects. The government will act as a facilitator by connecting women to technology-based start-ups and relevant private sector partners or organisations like the PASHA for skills upgradation.

Protecting the Vulnerable: Key steps will be taken to economically empower women, which will also help in removing the vulnerability that women face that leads to gender-based violence against them. The launch of behavioural change communication campaigns by the government will ensure spreading awareness about preventing violence against women, while rehabilitating women survivors of violence by rebuilding their lives to make them productive citizens. Programmes that protect women against any sort of violence will pay dividends when it comes to women's participation in the workforce and contributing to economic activity.

Punjab will be right on target vis-à-vis women development if these legislatations, programs and other interventions are implemented with a strong monitoring and evaluation strategy. If executed accordingly, evidence-based policy making and implementation plans will result in making Punjab a province where women's socioeconomic empowerment is a norm and not an exception.

Population Welfare

The impact of high population growth on economic growth is generally negative because large proportions of funds are directed towards meeting the basic needs of the growing population. The high growth reduces the effectiveness of government programmes aimed at improving human capital, as government expenditures are spread out over a larger population.

However, there is an opportunity for economic growth in Punjab if a demographic dividend is created through a reduction in fertility and infant mortality, which will free up the economy's resources to accelerate development. Nevertheless, it is to be understood that the potential benefits of experiencing the dividend will likely only occur through investments in education, health, skills development and employment generation.

The Government of Punjab recognises the cross-cutting effects of population factor on the overall development. With the adoption of a focused population policy, the government aims to strike a balance between population and resources, which is consistent with its development goals.

Pakistan currently has the sixth largest population in the world at 207 million, with an average annual growth rate of 2.4 percent. Likewise, Punjab's population has grown from around 73.62 million in 1998 to 110.012 million in 2017, with a growth rate of 2.13 percent during this time period. However, Khyber Pakhtunkhwa and Balochistan, which are relatively less developed provinces, have had considerably high growth rates in their population.

Table 5.6: Population Count and Growth Rate, 1981-2017

Province	Population 1981 (million)	Population 1998 (million)	Population 2017 (million)	Annual Growth Rate (1981-1998)	Annual Growth Rate (1998-2017)
Punjab	47.3	73.6	110	2.64%	2.13%
Sindh	19	30	48	2.80%	2.41%
KPK	11.1	17.7	31	2.82%	2.89%
Balochistan	4.3	6.6	12	2.48%	3.37%
FATA	2.2	3.2	5	2.19%	2.41%
ICT	0.3	0.8	2	5.19%	4.91%
Pakistan	84	132	208	2.69%	2.40%

Source: Population Census, Pakistan Bureau of Statistics, Government of Pakistan

The urban share of Punjab has increased from 31.27 percent in 1998 to 36.38 percent in 2017. However, it is still the second most urbanised province after Sindh. Over all, the sex ratio is around 103, which indicates 103 men against 100 women. This ratio is slightly higher in urban areas at around 105 and slightly lower in rural areas where it is around 102. The overall household size is 6.432, which is slightly high in rural areas. The population density has increased from 358.525 in 1998 to 535.744 persons per square kilometre in 2017.

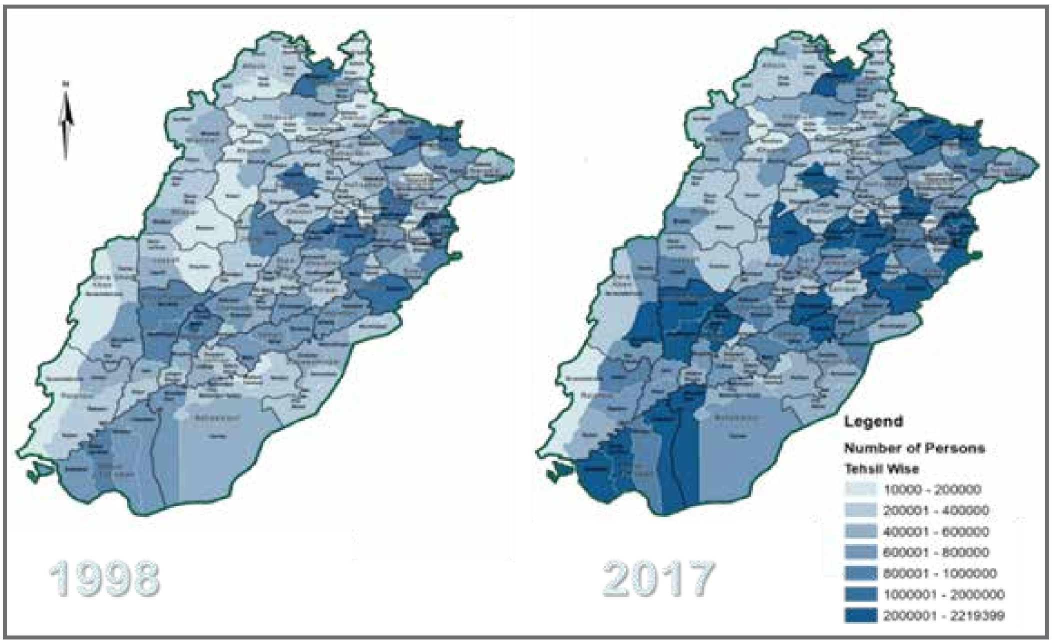
Table 5.7: Key Facts Regarding Population of Punjab, 2017

	Total Population (million)	Male (million)	Female (million)	Transgender (thousand)	Average Annual Growth Rate	Sex Ratio	No of House-holds (million)	House hold size
Punjab	110.012	55.96	54.04	6.709	2.13	103.54	17.1	6.432
Rural	69.625	35.2	34.42	2.124	1.81	102.25	10.71	6.498
Urban	40.387	20.76	19.62	4.585	2.74	105.81	6.39	6.321

Source: Population Census, Pakistan Bureau of Statistics, Government of Pakistan

In terms of population growth rate, the top 10 districts in Punjab with the highest growth rates include 7 from the western and southern regions of the province, which are relatively underdeveloped. The 10 districts with the lowest population growth rates belong mostly to the central, eastern and northern regions of Punjab, which are relatively well-developed. This pronounced difference is expected as higher fertility levels are associated with lower levels of income. This circular phenomenon of lower income levels leading to higher fertility levels, which in turn leads to lower income per capita levels, requires a comprehensive strategy on the part of the government to overcome.

Figure 5.14: Tehsil-Wise Population of Punjab, 1998 & 2017



Source: Pakistan Bureau of Statistics, Government of Pakistan

From 1991, impressive gains have been made: the province's total fertility rate fell from 5.4 births per woman to 3.5, accompanied by a documented rise in contraceptive use from 13 percent to around 40 percent, but currently the pace of fertility decline in Punjab appears to have slowed down. Since Punjab has a relatively young population, with 20 percent consisting of people aged between 15 and 24 years[24], the number of women of reproductive age has also risen, which could lead to an increase in population growth rate.

Figure 5.8: Key indicators related to reproductive Health

Indicators	2006-07	2012-13	2017-18
Total fertility rate (TFR)	3.9	3.8	3.4
Contraceptive prevalence rate (CPR) (%)	33.2	40.7	38.3
Modern contraceptive prevalence rate (MCPR) (%)	23.1	29.0	27.2
Proportion of women who want no more births (%)	54.0	54.0	-
Unmet need for contraception (%)	23.0	17.7	15.8
Percentage with teenage births (≤18)	7.0	7.4	-
Infant mortality rate	81	88	62

Source: PDHS, NIPS, Government of Pakistan

[24]Population Councils revised projections of 2015

In view of the substantial levels of unmet need for family planning in Punjab, and the limited resources available, a strong focus on improving access to quality family planning services is likely to be an effective and practical short-term strategy for increasing contraceptive prevalence. The ability of family planning to reduce maternal mortality can only be realised if the poorest individuals and those with unmet need are reached on a wider scale.

1. Sector Strategy

The Punjab Population Policy of 2017 provides a framework for advancing goals and prioritising strategies to meet the reproductive and child health needs of the people. The policy adheres to four basic principles to achieve its goals: equity, efficiency, volunteerism, and sustainability. The policy focus is to broaden the sphere of services to target the population with unmet need for contraception, with a special focus on the socially and economically deprived segments, new users (especially first-time mothers), low parity women, and to promote continuous users by reaching out to women and men with accurate motivational information, and extensive training of service providers in counselling and management of contraceptive services with care and understanding.

The policy warrants that contraceptive services are provided with comprehensive information, voluntary access and choice of the widest possible range of safe, effective, high-quality, affordable and acceptable modern methods of contraception.

1.1 Targets and Objectives

To achieve the targets and objectives of Population Policy 2017 and international commitments, the Government of Punjab planned a comprehensive programme based on a multi-sectoral approach of strengthening the existing infrastructure, building human capital capacity, expanding service delivery spread by working in coordination with other related sectors, raising awareness, reducing unmet need for family planning, improving coverage of family planning services particularly in under-served rural areas, peri-urban settings and urban slums during the period 2018-2021. The approach would include a special focus on improving the monitoring and evaluation of programmes through improved demographic research.

The government aims to improve its service delivery using a multipronged approach to accomplish the following targets:

- Raise Contraceptive Prevalence Rate (CPR) from 38.3 percent in 2017-18 to 55 percent by 2020 in Punjab.
- To reduce unmet need for family planning from 15.8 percent in 2017-18 to 10 percent by 2020[25].
- To decrease Total Fertility Rate (TFR) from 3.4 in 2017-18 to 3.3 births per woman by 2020.

This multipronged approach will include the following:

1.2 Strengthening the Public Health System to Deliver FP Services

Under this project, the government will engage more meaningfully with the public health system to deliver effective, safe and high-quality FP services to those most in need in a way that is acceptable to the individuals and communities through the involvement of tertiary care providers, improvement in coordination between gynaecologists and FHC staff, expansion of contraceptive choices, the introduction of trained healthcare providers at all PHC and SHC facilities and client centred services.

1.3 Strengthening male-focused services

Men will be approached with information and advice through mid-level providers, pharmacists, family physicians, religious leaders and through educational institutes and social mobilisers. The government will introduce Men Advisory Centres (MACs) which will provide services - to married youth and adult males - including vasectomy services, consultation and counselling regarding reproductive health problems and infertility.

[25]Projections based on CPR reported in PDHS 2012-13 and CPR target set in Punjab Population Policy 2017 & FP 2020 commitments

1.4 Engaging with the private sector to improve access to uncovered areas and among population with high unmet need

Expanding public private partnership through franchising and increasing coordination between NGOs and private sector entities to present clients with a range of options in service delivery.

1.5 Capacity Building of Existing and New Health and PWD Staff

The focus of this strategy will be on training all healthcare providers, through behavioural change training, which will increase information exchange between providers and clients to offer choices and information on potential methods, including their use, side effects and their management, and follow up requirements.

1.6 Developing multi-sectoral linkages with other line departments

To introduce a multi-sectoral approach, focal persons will be identified in the related departments that include health, social welfare, education, auqaf, labour and manpower. A multi-sectoral implementation committee will be formed, which will suggest and seek to deliver interventions that can contribute to meet the RH needs of Punjab's women and men.

1.7 Ensuring Contraceptive Commodity Security at All Service Delivery Outlets

During the proposed plan period, the provision of contraceptives for existing service delivery outlets and proposed new interventions shall be ensured. Various initiatives will be undertaken to ensure commodity security/efficient supply chain management of contraceptives.

1.8 To Improve the Social Approval of Family Planning/Birth Spacing Through Targeted Behaviour Change Communication and Advocacy

The aim of the BCC campaign is to sensitise the target audience in particular and public in general about the link between population and development in society, and the benefits of birth spacing to mother and child, the family, and society at large. The proposed BCC campaign will supplement and strengthen the on-going communication efforts, especially those introduced by the Public Awareness Campaign 2016-17.

1.9 Youth Involvement

Adolescence issues regarding hormonal changes and reproductive health deserve a special attention which remains a great challenge. A holistic approach toward this service is needed. Youth involvement will be enhanced through Adolescent Education Cells established in 17 Family Health Clinics in Punjab.

PWD would also work with the Punjab Textbook Board for inclusion of population issues and Life Skill Based Education in the curriculums.

2. Provincial Action Plan

High level Provincial Task Force notified as per the decisions of CCI will steer, provide oversight and take critical decisions to reduce population growth rate, lower fertility rate and increase contraceptive prevalence rate (CPR) through a planned Provincial Action Plan.

2.1 To Promote the Use of Evidence and Research in Service Delivery and Decision Making

Operational research will provide evidence for decision making in programme implementation, along with improved and robust routine monitoring and periodic independent evaluation mechanisms, to ensure that services remain responsive to the needs/objectives.

The government will also seek to improve the performance of Lady Health Worker (LHW) programme by improving their incentives, monitoring their activities and providing them with adequate supply of inputs.

To meet the growing need for family planning and for tackling inequality within the province, engagement of population welfare mobile units, community volunteers and subcontractors will also be considered.

Further strenghten the Population Innovation Fund, the government will bring innovation and scale up new technologies to improve the key indicators. The Population Welfare Department estimates that it will require approximately Rs 6.4 billion in development funds to implement the above-mentioned strategic plan.




URBAN DEVELOPMENT AND HOUSING

Urban Development and Housing

Rapid urbanisation brings both growth opportunities and risks to critical infrastructure, provision of health and education services and clean drinking water. As Pakistan has become the most urbanised country in South Asia, affordable housing, education services and clean drinking water have become emerging issues, particularly in large cities. According to the Population Census 2017, the share of urban population in total population is 36.4 percent. The urban population in other South Asian countries ranges from 18.4 percent in Sri Lanka to 19 percent in Nepal, 33.1 percent in India and 35.1 percent in Bangladesh[26]. Out of Pakistan's total urban population of 75.6 million, Punjab alone has a population of 40.4 million, which has increased from 23 million in 1998. Presently, five major cities of Punjab house half of the urban population of the province. This growing urbanisation is putting constraint on the government's efforts to provide basic public services of safe drinking water, public transport, affordable housing and sanitation.

1. Issues and Challenges

Rapid urbanisation in Punjab, with the lack of spatial planning, has led to a deterioration in quality of life and derelict cities - ranging from urban sprawl, housing shortage, deprived quality of infrastructure and public services, and inefficient urban land markets. An urban planning and housing strategy with strong tools, and capacity of local and provincial institutions alike, must be developed to resolve issues regarding the landscape of Punjab's cities.

The urban governance systems in cities of Punjab remain fractured because of multiple actors that administer the city without any clear mandates, spatial ambits and binding responsibilities. As per the Punjab Cities Growth Atlas, the urban extents of city limits for many district headquarters have spilled beyond the administrative boundaries, risking proper planning and the provision of effective urban services to all homes.

In larger cities, functions of the city administration are sliced between the local governments, cantonment boards, development authorities and private or cooperative housing societies. These jurisdictions have a significant footprint within the city boundary and have grown significantly in the absence of long-term housing policies or a unified master plan. This has resulted in deformed cities, segregated by income groups and plagued by traffic congestion and poor quality of environment at high costs.

Estimates based on the intercensal growth rate of housing units demonstrate a supply of 15.6 million housing units in Punjab. However, this housing stock is inadequate, as there is a shortage of 2.3 million units, which include an additional requirement (1.5 million houses) as well as replacement of dilapidated housing (accounted at 5 precent of existing stock). Based on these estimates, 14 precent of Punjab's population is affected. If the current trends of housing stock and demand continue, the housing shortage will increase to 4.05 million housing units by 2023.

Punjab's housing shortage does not point towards homelessness. In fact it identifies overcrowding as the main underlying issue. A house is said to be overcrowded if it occupies more than 3 persons per room or more than 2 adult persons per room[27]. Therefore, an objective of the housing policy should be to aim for 2 adult persons per room. Based on these findings, 56 precent of Punjab's housing units have more than 3 persons per room used for sleeping purposes[28].

The urban land and housing market's efficiency is pegged to a number of factors. Prime land in the city centres is locked by public land ownership. Weak property rights, high cost of acquisition and taxation, negligible tax on land and higher property tax on rented units contribute to the distortions in the land and housing market. Existing land use and zoning regulations may also limit, restrict and distort the supply of property units.

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[26]See Pasha, A. Hafiz (2018). Growth and Inequality in Pakistan. Friedrich Ebert Stiftung Pakistan. Available at http://library.fes.de/pdf-files/bueros/pakistan/14113.pdf
[27]World Health Organization's definition of overcrowding
[28]Source: Urban Unit analysis

2. Strategy

- Policy and legal reforms to leverage urbanisation and reap optimal benefits from planned cities' growth, agglomeration of economies and balanced regulation of land and housing market.

    - Punjab Regional & Spatial Planning Act

Pakistan in general and Punjab in particular lack any holistic urban planning laws or policies. A law is necessary to set clear mandates and responsibilities for each level of government and institution, and to set a clear trajectory for cities and urban growth. The law will necessitate the proper creation and implementation of comprehensive spatial regional and sectoral plans for integrated economic, urban, and infrastructure development of regions.

Currently, no legal framework exists to confer a conclusive title on the owners and maintain a comprehensive central database of land titles.

- The law must mandate a modernised system of cadastral maps.
- Computerise and centralise urban land titles and records.
- Aim for an efficient system for purchasing, transferring and selling land using the centralised database.

3. Punjab Multiple Ownership Premises (Condominium) Act

The act will safeguard ownership rights of each individual owning/occupying units in multi-storey buildings and ensure the efficient maintenance of these buildings. It allows for multiple ownership of units on a singular parcel of land i.e. an apartment building will have multiple owners, each with a secured title of their respective unit. Common spaces are shared, and the builder is responsible for their regulation and maintenance.

This act needs to be implemented on a priority basis in mega and large cities, particularly within dense urban areas. This will encourage apartment culture in large cities of Punjab, which is lacking and one of the reasons for urban sprawl, limited supply and high cost of property. It will result in medium and high-rise residential and commercial developments, and in turn the construction industry will also flourish. The law will facilitate the housing rental market and the supply of housing stock for lower- and middle-income groups.

4. Building Control Act

The act will streamline, centralise and enforce the building control function at the divisional level. This will eliminate overlapping spatial ambits of responsibility, confusion, corruption and inefficiencies.

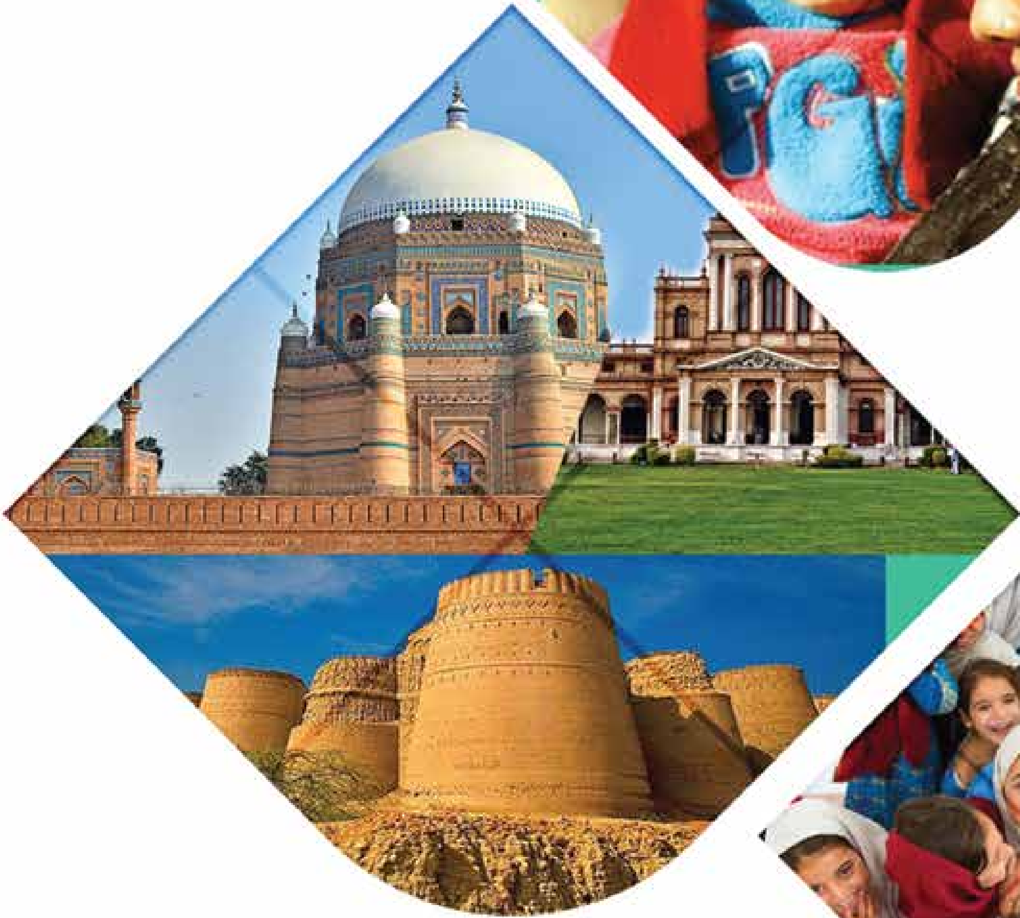
- This can be enforced by creating divisional building control authorities
- This can either be via divisional level building control authorities or a single building control authority with divisional directorates

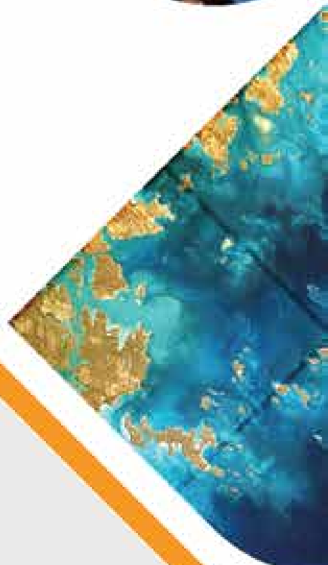
    - Land Use, Zoning and Building Regulations

Punjab requires a unified and adaptable set of regulations for all cities instead of fragmented by-laws specific for different locations.

The regulations must be a combined framework for guiding land uses and the urban morphology of each building by land use categories.

- Institutional reforms to empower and build urban planning capacity of the governments, including local tiers and cities.
  - Establish Divisional Urban Planning Authorities.
  - Establish Divisional Building Control Authorities.
  - Establishment of Regional Land Records Authority and Tribunals.
  - Establish a Computerised Urban Land Record System & Land Market Information System and facilitation centres.
  - Streamline and align realistic city limits with functional and operational boundaries of various institutions to improve city management and governance.
- Policy reforms to guide spatial development and investments, and achieve a higher contribution of urban economic growth to GDP
  - Develop and implement master plans for all cities of Punjab to define boundaries, regulate density, integrate land use, and direct city investments.
  - Follow an integrated approach for strategic and comprehensive development planning of cities, applying a system of cities where both regional and local lens are used, and includes the creation of new economic cities and focus on both the south and north of Punjab.
  - Improve land utilisation and use unproductive land for other uses in city centre.
  - Allow mixed land use classification and high-density multimodal transportation nodes via revised land use and zoning regulations.
  - Promote high density and vertical growth of cities (medium and high-rise buildings) instead of horizontal growth for efficiency gains to existing settlements/villages falling within the boundaries of private development.
  - Capacity building for better governance and management of urban centres
  - Provision of strategic land subsidies from the government in urban centres for low cost and affordable housing.
  - Draft policy framework to discourage land hoarding and speculation, and tax vacant plots after a specific period of time.
  - Invite PPP interventions for housing construction and finance





REGIONAL EQUALIZATION

Regional Equalization

Punjab today faces a critical challenge of imbalanced development. A key determinant of development is public investment, which improves the basic infrastructure and creates provision of necessary services, such as education, healthcare and water & sanitation. This then attracts private sector investment, which results in generation of productive jobs and income leading to growth. It is, of course, not possible that all regions are equal, as international economies have successfully gained growth on the model of dynamic cities. However, the provision of basic services for citizens has been on par. Punjab, unfortunately, due to past investment trends, currently faces stark regional disparities. In overall numbers, Southern Punjab can be seen as more deprived relative to Central and Northern Punjab. However, if patterns of deprivation are explored at sectoral levels, one finds that deprivation is more varied across the province. Punjab is committed to meeting the SDGs by 2030, and these stark disparities are a real cause of concern for the government. Moreover, large equity reduces opportunities for economic growth and results in urbanisation issues, as people tend to migrate towards developed regions for better services and economic opportunities. **The Punjab Growth Strategy will tackle this inequity between districts on a war footing and look to move towards regional equalisation.**

Impact of Reducing Inequity

Data of Punjab's growth and poverty patterns shows that **a 1 percent decrease in the inequity ratio reduces multidimensional poverty by almost 0.4 percent.** This is a strong result and the government's strategy will explore different options to reduce the previous inequities among districts.

1. Patterns of Inequity in Punjab

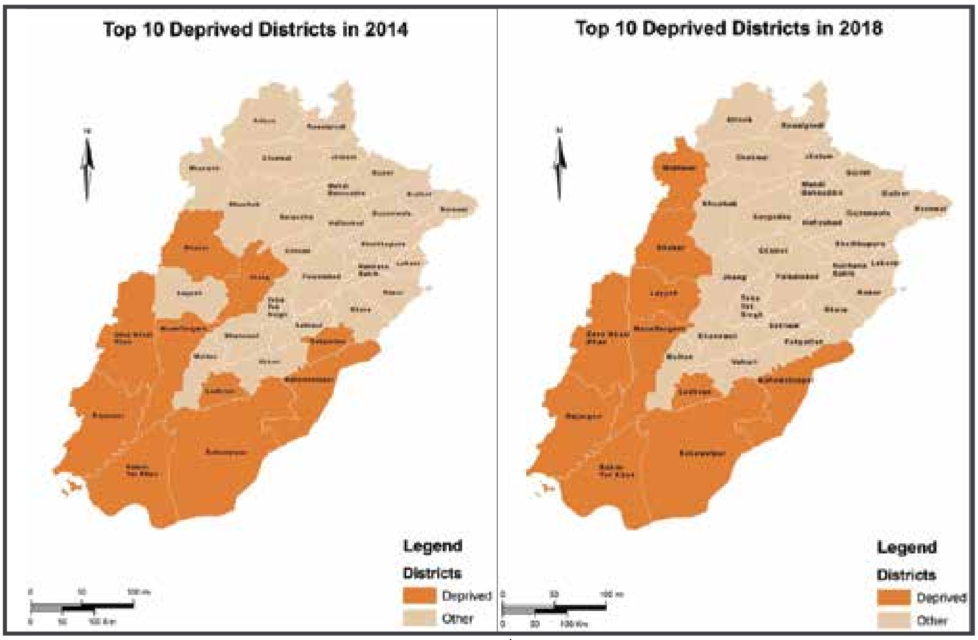
The multidimensional poverty index is a common tool to assess severity and patterns of poverty in a region. At the overall poverty level, the patterns of Punjab show that there has not been a change in Punjab and the poorer districts in 2014 remain poor in 2018. Figure 7.1 shows that in terms of overall poverty, southern Punjab has remained poor over the last 5 years. Breaking poverty further by districts and regions, over 42 percent of the households are poor in the south as compared to 19 percent for the rest of Punjab.

Table 7.1: Division/Region wise incidence of Poverty, 2017-18 (%)

Division	Incidence of Poverty	Region	Incidence of Poverty
DG Khan Division	52.25	Southern Punjab	42.03
Bahawalpur Division	42.66		
Multan Division	32.27		
Sargodha Division	30.36	Rest of Punjab	18.98
Sahiwal Division	32.62		
Faisalabad Division	23.96		
Gujranwala Division	11.55	Punjab	26.12
Lahore Division	16.21		
Rawalpindi Division	9.91		

Source: Author's calculations based on MICS 2018

Figure 7.1: Patterns of Poverty in Punjab



Source: MICS, Bureau of Statistics, Government of Punjab

This pattern of poverty is a direct result of previous public investment decisions in Punjab. A quick analysis of the disparities suggest that over the last four years (2014-18), if the government spent Rs 100 per capita per annum in Lahore on development, the second highest spending was only Rs 26 per capita per annum in Multan. Moreover, very quickly, the expenditure per capita falls down to under Rs 10 for at least 15 out of the 36 districts of Punjab, with regions such as Bahawalnagar, Layyah and Pakpattan just getting Rs 5 per capita per annum for development. The government will, therefore, increase its investment in these deprived districts over the next five years.

The multidimensional poverty is based on four main development indicators: education, health, living standards and water and sanitation. The analysis below provides the deprivation in terms of these individual sectors.

1.1 Education & Health

Table 7.2 shows that districts in southern Punjab lag in all key education indicators as compared to the rest of Punjab. There are some alarming statistics, such as almost 64 percent of higher secondary children being out of school in southern Punjab and female youth literacy of 43.6 percent in southern Punjab as compared to 63.4 percent for rest of Punjab. The overall adult literacy is much lower in the region.

Table 7.2: Education Indicators

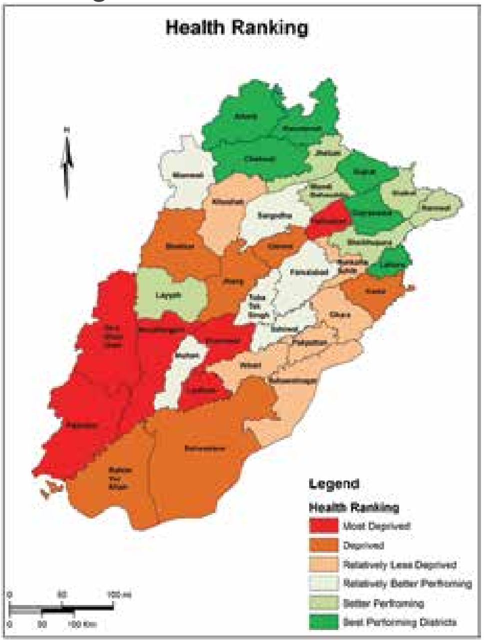
Indicator		Rest of Punjab	Southern Punjab
Adult literacy rate (%)		61.9	48.5
Youth literacy (%)	Male	74.6	62
	Female	63.4	43.6
Student teacher ratio		23.9	26.4
Teachers per school (No.)		8.64	6.88
Enrolment per school (No.)		201.25	181.7
Out of School Children (%)	Primary	28.9	44.4
	Lower secondary	16.1	31
	Upper secondary	48.7	63.8

Source: Author's calculation based on MICS 18 and PMIU, 2017

Figure 7.2: District-Wise Deprivation Rankings in Education

Source: 2018 Ranking tabulated using MICS 2018

Figure 7.3: District-Wise Deprivation Rankings in Health



Source: MICS 2018, Bureau of Statistics, Government of Punjab

Figure 7.2 above confirms the value of indicators, with the six most deprived districts in terms of education all being in southern Punjab.

The health numbers depict the same story. The south considerably poorly as compared to the rest of Punjab. However, the district pattern of health deprivation is more spread than education. Hafizabad, a central district, is one of the six most deprived districts.

Table 7.3: Health Indicators

Indicator	Rest of Punjab	Southern Punjab
Infant Mortality per 1000 live births	57	65
Under five Mortality per 1000 live births	65	75
Skilled Birth attendant (%)	82	63
Population per tertiary hospital	273,245	340,104
Population per bed in tertiary hospital	2,085	33,14
Population per health practitioner	2,555	2,835

Source: Author's calculation based on MICS 2018 and PDHS, 2018

Tables 7.4a and 7.4b show the expenditure differences between the south and the rest of Punjab. The deprivation patterns follow the pattern of previous spending in the province.

Table 7.4a: Percentage of Health and Education Expenditures (South vs Rest of Punjab)

Sector	Region	Type of Expenditure	2014-15	2015-16	2016-17	2017-18	2014-18
Education	Southern Punjab	Current	24.4	24.0	22.7	17.3	**21.9**
	Rest of Punjab		75.6	76.0	77.3	82.7	**78.1**
	Southern Punjab	Development	13.0	8.5	6.6	2.7	**6.7**
	Rest of Punjab		87.0	91.5	93.4	97.3	**93.3**
	Southern Punjab	Both	21.9	20.1	17.9	13.0	**17.7**
	Rest of Punjab		78.1	79.9	82.1	87.0	**82.3**
Health	Southern Punjab	Current	29.9	29.2	29.4	19.7	**28.6**
	Rest of Punjab		70.1	70.8	70.6	80.3	**71.4**
	Southern Punjab	Development	9.6	4.4	6.7	3.3	**5.8**
	Rest of Punjab		90.4	95.6	93.3	96.7	**94.2**
	Southern Punjab	Both	27.7	26.7	25.4	13.7	**25.0**
	Rest of Punjab		72.3	73.3	74.6	86.3	**75.0**

Source: Author's calculation based on data provided by the Finance Department, Government of Punjab

Table 7.4b: Health and Education Expenditures per million population (South vs Rest of the Punjab) (PKR)

Sector	Region	Type of Expenditure	2014-15	2015-16	2016-17	2017-18	2014-18
Education	Southern Punjab	Current	52344.7	65730.0	69727.5	52952.7	**240754.9**
	Rest of Punjab		74791.6	96226.2	109396.9	116773.3	**397188.1**
	Southern Punjab	Development	80.1	77.8	86.3	35.5	**279.8**
	Rest of Punjab		24797.8	38670.3	56498.8	58461.7	**178428.6**
	Southern Punjab	Both	603.5	735.1	783.6	565.1	**2687.3**
	Rest of Punjab		995.9	1349.0	1659.0	1752.4	**5756.2**
Health	Southern Punjab	Current	1559.5	1847.2	1467.3	336.2	**5210.2**
	Rest of Punjab		1685.3	2062.8	1627.1	630.7	**6006.0**
	Southern Punjab	Development	62.4	31.4	70.6	31.7	**196.1**
	Rest of Punjab		271.7	313.0	455.5	435.4	**1475.6**
	Southern Punjab	Both	1621.9	1878.6	1537.9	367.9	**5406.3**
	Rest of Punjab		1957.0	2375.7	2082.6	1066.2	**7481.6**

Source: Author's calculation based on data provided by Finance Department, Government of Punjab

1.2 Water & Sanitation Deprivation

Figure 7.4 shows pattern of water deprivation. The deprivation in water is much more dispersed as compared to education and health. Khushab, Faisalabad, Jhelum, Rawalpindi and Attock are the districts struggling most with clean drinking water.

Figure 7.4: District Disparity in Water

Source: MICS 2018, Bureau of Statistics, Government of Punjab

Figure 7.5: District Disparities in Living Standard

Source: 2018 Ranking tabulated using MICS 2018

1.3 Living Standards

Lack of provision of basic services and public investments has impacted the living standards and economic empowerment of households. Figure 7.5 shows the deprivation in terms of living standards. Again, the map shows a similar position with central and northern Punjab being better than the remaining districts.

2. Target Setting

The Growth Strategy sets the following targets for achieving regional equalisation in the province.

1. The government will reduce variance in development expenditures across the districts by at least 5 percent every year.

2. Reduce multidimensional poverty of deprived districts at 10 percentage points over the 5-year period.

3. Improve parity in education, health and water indicators by at least 50 percent over the 5-year period.

3. Strategy to Attain Targets

The government will make conscientious efforts to address the development disparities across the different regions of Punjab through increased funding, improvements in the governance structure, and capacity building measures. The strategy includes the following:

- The Government of Punjab, through the Planning & Development Board, will establish a District Development Fund. The fund will aim at designing need-specific development interventions which will be implemented to address the key dimensions of deprivation in the less-developed districts of the Province. The fund, initially to be launched for the ten most deprived districts, will target key SDG indicators in the health, education, and WASH sectors. Successful pilot interventions will also be scaled-up for multiplied impact. A targeted approach coupled with enhanced development funding will help bridge the development gap across Punjab.

- Separate Administrative Secretariat will be established for South Punjab which will augment the efforts to reduce development imbalances. Decentralized service delivery and development planning through dedicated Government departments for South Punjab will enhance the capacity of government machinery for optimum utilization of allocated development funds in the region. In addition, policy interventions will be made to ensure maximum public value generation for South Punjab through development funding. The government will also impose ban on re-appropriation of funds allocated for South Punjab to other districts.

- The government will adopt a scientific approach towards the sustainable development of the less-developed regions. Spatial mapping will be used to identify key infrastructure gaps, especially farm to market roads, education/TEVT institutions, and hospitals. The spatial planning strategy will also be used to integrate the southern districts with the rest of Punjab, with Multan as the hub for southern Punjab. It is expected that long term spatial planning will help achieve balanced development in the deprived districts of Punjab.

- Industrial estates have already been established in Vehari, Rahim Yar Khan and Bahawalpur. The government will enhance its efforts to develop the industrial sector in South Punjab. PEIDMC will be tasked to attain 100% colonization in the next five years, by developing technical institutes in the industrial estates and creating employment opportunities for the locals. Efforts will also be made to attract foreign investment through declaring parts of the industrial estates as SEZs. The government will also invest in connecting routes to the Lahore-Sukkur motorway under the CPEC to increase regional connectivity.

ALIGNING PRIORITIES WITH INTERNATIONAL COMMITTMENTS

Sustainable Development Goals

After adoption of Sustainable Development Goals (SDGs) agenda on 25th September 2015, the world environmental dimensions. The agenda is an expansion of Millennium Development Goals (MDGs), which interconnects 17 SDGs and 169 targets in a way that not a single goal or target can be achieved in isolation. The indivisible nature of targets makes it crucial for national and sub-national governments to focus on interlinkages and trades off and to ensure effective coordination mechanism within and across various sectors and departments to achieve SDGs by 2030.

In February 2016, the Government of Pakistan through the National Assembly, unanimously passed a resolution and declared Sustainable Development Goals (SDGs) as national goals. The Ministry of Planning Development and Reforms in collaboration with United Nations Development Programme (UNDP) launched "National Initiative" on SDGs. The National Initiative on the 2030 Agenda on SDGs supports the federal and provincial governments in their efforts to ensure early institutionalization of SDGs and adjusting this global framework by taking the local context into consideration.

1. Key Achievements:

- Institutional apparatus for SDGs Implementation in Punjab is the key driver for effective implementation of 2030 Agenda on SDGs. SDGs Support Unit is mandated to support Government of Punjab in mainstreaming SDGs into existing planning and budgeting processes by aligning provincial priorities with SDGs.

- With the institutional arrangement, the Government of the Punjab has undertaken the stock of existing development policies, plans, strategies and investments across social, economic and environmental dimensions of sustainable development. The process helped the Government of the Punjab in formulation of provincial SDGs framework which offers a unique opportunity to the government to determine its short term, medium term and long-term development priorities and translating those priorities into policies and actionable plans and strategies. The provincial SDGs framework also provides a mechanism to the government of Punjab for monitoring and performance management of SDGs and formulating evidence based public policies in future.

- The Government of the Punjab has taken specific actions to integrate SDGs in the provincial policy, planning and budgeting processes. These include: i) alignment of Annual Development Programme (ADP) with SDGs by aligning development schemes with specific SDG targets and goals; ii) review of existing budgetary instruments including PFC to examine the mechanism, timeliness and effectiveness of the transfers and the reporting systems for assessing the performance of local bodies; and, the allocation of PKR 66,576 million, under PM SDGs Programme, more than 30,000 development schemes in the areas of health, education, energy and water and sanitation for FY 2017-18.

- Good quality data is vital for governments, international organizations, civil society and private sector to make informed decisions and to ensure accountability for the implementation of the 2030 Agenda. Tracking progress on the SDGs requires the collection, processing, analysis and dissemination of an unprecedented amount of data and statistics at the national and provincial levels, including those derived from official statistical systems and from new and innovative data sources.

1.1 Provincial SDGs Framework:

Government of the Punjab's intends to further augment its existing approaches towards mainstreaming, acceleration and policy support for Agenda 2030. Based on Provincial SDG Framework, measures will be taken to develop a competitive environment in the province where all stakeholders should work together for achievement of SDGs in true spirit. Following are the key points of Government of the Punjab's approach to keep SDGs aligned with the Punjab Growth Strategy 2023:

- Strengthening the legislative patronage of SDGs in province will be a priority area for creating a momentum. Close liaison between Parliamentary Task Forces / Committees and SDGs Support institutions will be developed. This will help promote integrated policy making, develop enabling culture and collective commitment to the cause, and above all will help replace the traditional development approach with integrated sustainable development approach envisioned in Agenda 2030.

- Government of the Punjab is committed to invest on SDGs, however financing needs of implementation of SDGs is the biggest challenge worldwide. According to some estimates approximately $2-3 trillion of additional investments are required annually to make this ambitious agenda into reality. Therefore, firstly provincial government will collaborate with federal government for assessment of real estimated requirement of fund, particularly for the immediate SDGs priorities, and secondly private sector will be vigorously engaged in development of different sectors under Public-Private Partnership mode. In addition, innovative the successful practices of other developing countries to fund the SDGs will be tested.

- Proactive role of institutions and civil service is vital for realization of SDGs. Therefore, efforts will be made to bring institutional innovation capable to buy-in from all the stakeholders of SDGs. Capacity of institutions at provincial government and local government tiers will also be strengthened in order to enable them for policy coherence and mainstreaming SDGs. Similarly, measures will be taken to development understanding of SDGs among civil service for effective implementation of SDGs.

- Importance of local governments for SDG implementation is universally acknowledged. Therefore, government will take the SDGs to local governments as per new Local Government system. The strategy will range from outreach campaigns intended for local governments to the legislative and institutional frame work. This will help enshrine commitments to SDGs in environment of local governments. In beginning, district level SDGs strategies and plans will be finalized on common references that will provide a clear vision for SDGs attainment and will also develop competitiveness among districts.

- Comprehensive monitoring of the progress towards SDGs will be adopted as an active management tool to prevent veering off course. Monitoring, evaluation, and review of progress towards the SDGs will be strengthened mainly through institutions' capacity building for statistical analyses and collection of relevant and accurate data against each SDGs indicator.

- Stakeholder engagement is vital for achieving SDGs. The government will adopt bottom-up participatory approaches across level of administrative and financial decision making in order to address specific development needs of masses.

- Capacity of SDGs Support Unit will also be enhanced enabling it to manage demands of multiple stakeholders, to create awareness, strengthen institutional coordination mechanisms, address barriers, and create capacity for strengthening integration.

- Technological innovations, particularly potential of ICTs will be harnessed for mainstreaming and acceleration of SDGs. In this regard partnership will be developed with academia and tech companies.

China Pakistan Economic Corridor

The strategic partnership between Peoples Republic of China and Islamic Republic of Pakistan was initiated in July 2013 in the form of the China Pakistan Economic Corridor (CPEC) which comprises a fusion of multiple developments in the regional context, aiming to foster peace, prosperity and wellbeing of the two countries. The global economic landscape has changed dramatically due to a technological advancement, trade liberalization, free capital movements, modern communication and transportation infrastructure, and creation of cross border supply chains. Regional cooperation agreements have proliferated in recent times to capture this change especially in the global economic context. In order to prepare a clear roadmap to implement projects under CPEC, various joint working groups under CPEC have already been established. Eight Joint Cooperation Committee meetings have been held so far for mutual coordination and swift decision-making regarding CPEC between the two countries.

The initial phase of CPEC, ending in 2020, is focused on cooperation in energy, transport infrastructure (road, railways, and airports), Gwadar port projects and industrial parks; along with focus on addressing the major bottlenecks to Pakistan's economic and social development. The Long Term Plan for CPEC 2030 includes other priority areas of cooperation i.e. agriculture, industries, tourism, people's livelihood and financial cooperation. By 2030, an endogenous mechanism of sustainable development and the impact of CPEC in stimulating economic growth is expected to come into effect. The Punjab government is complementing the Federal Government's efforts towards fast paced implement of CPEC project.

Currently, CPEC projects under implementation in Punjab include the following

- M-3 Allama Iqbal Industrial City, Faisalabad
- Orange Line Metro Train Project
- The 2x660 MW Sahiwal Coal Fired Power Project and the 3x100 MW Solar Power Project have been completed and have started contributing to the National Grid

Industrialization and establishment of Special Economic Zones (SEZ) is the second phase of CPEC. The approved SEZ project of Punjab, M-3 Allama Iqbal Industrial City will spur growth investment opportunities in various sectors. The SEZ will bring an estimated investment of Rs. 357 billion and will generate estimated 242 thousand jobs. It will provide opportunity for local firms to operate side-by-side with Chinese and other international firms in textiles, pharmaceuticals, automobiles, light engineering and food processing. Since the priority sectors for the SEZ are Punjab's key sectors, the technology transfer and skill development within SEZ will give boost linked industrial clusters across Punjab.

Moving on from energy and infrastructure development, CPEC has entered a new phase of Socio-Economic Cooperation. In the recently constituted Joint Working Group on Socio-Economic Cooperation, both nations have agreed to implement socio-economic development projects in Pakistan supported by Chinese government with grants and interest-free loans under CPEC, covering major cooperation areas of education and vocational training, healthcare, poverty alleviation, agriculture and drinkable water supply sectors. Government of the Punjab has proposed different projects under CPEC socio-economic cooperation that will contribute to reducing regional disparity, poverty, social inequality and improve quality of life. About half of the Chinese support expected on these projects will be in South Punjab. The small projects with one-year implementation period, mid and long-term self-sustained projects with implementation period of two and three years respectively will be executed simultaneously.

1. Capturing the full potential of CPEC

The Punjab Growth Strategy 2023 is in line with the Long Term Plan (2030) of China Pakistan Economic Corridor. The key cooperation areas agreed in the LTP 2030 have been adopted and prioritized in the PGS 2023. To compliment the development plans under CPEC, Government of the Punjab will:

- **Promote ICT-enabled development in Punjab,** through IT Legislations, use of IT for public service delivery, leveraging IT for private sector development, development of e-government and e-commerce solutions.

- **Establish optimally located Special Economic Zones (SEZs)** to leverage investments through CPEC. The PGS 2023 has also prioritized the speedy establishment and initial colonization of M-3 Allama Iqbal Industrial City. The government also aims to encourage various forms of Chinese enterprises to enter Punjab's market.

- **Promote the industrial capacity cooperation in sectors such as:** chemical & pharmaceutical, engineering goods, agro, iron & steel, light manufacturing & home appliances and construction materials, and use efficient, energy-saving and environmental friendly processes and equipment. The PGS 2023 identifies key interventions to increase exports, manufacturing productivity, expand access to finance for industry, address specific governance challenges, optimize the use of Punjab's natural resources for attracting Chinese investments under Industrial Cooperation.

- **Focus on Agricultural Development and Poverty Alleviation** through strengthening production of agriculture inputs, upgradation of agricultural infrastructure, promotion of water efficiency in irrigation systems and strengthening cooperation in the fields such as crop farming, livestock breeding, forestry and food growing, and aquatic and fishery in the regions along the CPEC, with the highlight on technical exchange and cooperation in the fields of development of comprehensive agricultural production capacity, construction of farmland water conservancy facility and agricultural products circulation facility.

- **Strengthen social and economic development cooperation** within the CPEC coverage; make efforts to carry out skills development and vocational training to build Punjab's workforce and employment opportunities for CPEC , relying on higher education resources in Punjab to carry out design and R&D activities, strengthen exchanges and cooperation among educational and research institutions in technology transfer, providing medical assistance services and upgrade existing medical facilities based on actual needs.

Monitoring & Implementation Framework

Monitoring & Implementation Framework

The monitoring and timely intervention of the vast agenda provided in the Growth Strategy is essential for Punjab to meet its projected targets. The government will develop a multi-tier implementation and monitoring structure to ensure effective implementation, tracking of results and bringing about refinements to the strategy by incorporating results. The strategy has set some overall broader targets for the province, as well as key sector-specific targets. The prime responsibility of implementing the initiatives rests with the relevant line departments, with strategic guidance provided by the Planning & Development Board and the Finance Department. The responsibility for recording of results is split among PERI, BoS, DGM&E and line departments. The overall steering of the strategy will be provided by the Planning & Development Board, which will ensure that projects proposed by the department under the ADP are in line with the objectives of the Growth Strategy. The reporting of progress on the Growth Strategy to the Chief Minister will be done by the Planning & Development Board. This will be done through the creation of an electronic dashboard reporting on key indicators, key initiatives and significant results. To ensure robust monitoring and implementation of the strategy, the following steps will be taken:

- The government will strengthen the capacity of PERI and BoS to continue to tabulate provincial GPP numbers using the methodology developed under the Growth Strategy. The PERI will produce an annual table of GPP numbers, performance and sector allocations. It will also estimate, using the growth model, the predicted values of other outcome variables not directly observable.

- BoS will develop a comprehensive plan to expand the scope of MICS to include SDG-relevant indicators and also conduct short sector-specific survey to report progress on key indicators.

- PERI and BoS will produce district-wise poverty estimates after each MICS survey is available.

- Each line department will develop the sector strategies presented in the PGS into a well-defined set of projects for the ADP, and develop an action plan and timeline for implementing reforms for the reform areas. The departments will be supported by the Planning & Development Board to develop these projects. The reform agenda should include a comprehensive plan on implementing the reforms.

- The Planning & Development Board will work with the Urban Unit to transform the entire ADP portfolio on a spatial map using the GIS. This tool will be made available to the PDWP with support from the Urban Unit to take more informed investment decisions and identify spatial overlap and gaps to increase efficiency of expenditures.

- The DGM&E and the PITB will support in developing a high-level reporting dashboard, including link to GIS mapping, to report progress on key initiatives and results. The dashboard will be made available to the Planning & Development Board chairman with an automatic update system developed. This dashboard will be used to apprise the Chief Minister of progress made on the PGS and the performance of the province.

- The section below provides a matrix of key targets set under the PGS and their monitoring responsibilities. It also provides a list of key inputs and initiatives required to achieve the targets.

- The DGM&E and the PITB will support in developing a high-level reporting dashboard, including link to GIS mapping, to report progress on key initiatives and results. The dashboard will be made available to the Planning & Development Board with an automatic update system developed.

- The section below provides a matrix of key targets set under the PGS and their monitoring responsibilities. It also provides a list of key inputs and initiatives required to achieve the targets.

1. Targets for Overall Growth, Employment, Investment and Housing

The Punjab Growth Strategy has set the following targets to be achieved by 2023:

- Annual Growth of Provincial Economy to reach 7 percent by the terminal year.
- Achieve a 5.7 percent growth in private sector investment per annum on average
- Create 6 million jobs by 2023
- Increase housing units by 3 million by 2023

Table 8.1: Targets of Punjab Growth Strategy 2023

Indicator	2018-19	2019-20	2020-21	2021-22	2022-23	Monitoring Frequency	Monitoring Responsibility	Ownership
Economic Growth (%)	3.7	4.9	5.9	6.3	7.0	Annual	PERI & BOS	Chairman P&DB
Agriculture Sector Growth (%)	1.7	3.6	4.8	4.6	5.0	Annual	PERI & BOS	Chairman P&DB
Industrial Sector Growth (%)	2.0	6.5	8.4	8.5	9.7	Annual	PERI & BOS	Chairman P&DB
Services Sector Growth (%)	4.6	5.8	6.1	6.8	7.1	Annual	PERI & BOS	Chairman P&DB
Private Investment Growth (%)	1.6	5.0	7.2	6.5	8.2	Annual	PERI & BOS	Chairman P&DB
Increase in Employment (No. in million)	0.6	1.1	1.2	1.4	1.7	Annual	PERI & BOS	Chairman P&DB
Housing Units (No.)	560,000	570,000	590,000	630,000	650,000	Annual	PERI & BOS	Chairman P&DB

- PERI will work with the BOS to update these numbers based on the national GDP results published in July-August in the Pakistan Economic Survey. PERI will produce these estimates by September of every year.

2. Targets for Public Investment & Fiscal Effort

The Punjab Growth Strategy has identified the size of public investment required to attain the growth targets projected over the 5-year period. These estimates of investment include funding for development by donors and public private partnerships. The strategy has also set a target for the province to increase its own fiscal effort and increase its own sources of revenue over the five-year period. The strategy has also identified optimal sectoral allocation to maximise returns and contribution to growth. The table below provides the targets over the five-year period.

Table 8.2: Targets for Public Investment & Fiscal Effort

Indicator	2018-19	2019-20	2020-21	2021-22	2022-23	Monitoring Frequency	Monitoring Responsibility	Ownership
Size of ADP (PKR billion)	238	433	563	690	865	Annual	Senior Chief Coordination P&D Board	Chairman P&DB
Province's Own Source Revenue (PKR million)	297	355	427	518	630	Annual	DS Resources	Secretary Finance
Public Private Partnerships	PPPs projects to reach 10% of the ADP size					Annual	PPP Cell	Chairman P&DB
Targeted ADP Allocations for Key Sectors (%)	Development Portfolio Weights by 2023: • Agriculture – 4.8% → 6.0% • Industry – 4.0% → 6.5% • Irrigation – 8.2% → 11.0% • Infrastructure – 26.9% → 16.1% • Urban Development – 2.1% → 1.8% • Energy – 2.1% → 1.8% • Education – 13.8% → 23.8% • Health – 13.9% → 17.1% • Water Supply – 8.6% → 10.6% • Others- 15.6% → 5.3% • Total- 100.0 → 100.0					Annual Part of ADP Guidelines and Budget Strategy Paper	Senior Chief Coordination P&D Board	Chairman P&DB

3. Key Milestones & Targets for Private Sector Development

The overall target is to achieve an average annual growth in private sector investment by 5.7 percent per

Table 8.3: Key Milestones & Targets for Private Sector Development

Indicator	Timeline		Monitoring Frequency	Monitoring Responsibility	Responsibility
Develop and get approved relevant policies from the provincial cabinet	The PGS sets to approve the following policies by 30 June 2019 with a strong private sector development focus: • Agriculture Sector Policy • Punjab MSME Policy • Punjab Tourism Policy • Punjab Investment Policy • Tax & Revenue Mobilization Strategy • Land Lease Policy for Industrial Land in Estates		All Policies to be developed and placed in approval process by 30 June 2019	Economic Wing P&D Board	Overall Steering Provided by Chairman P&D Board Responsibility with Relevant Secretaries
Improving the Business & Investment Environment in Punjab	Activity with timeline	Resource Requirement	Monitoring/Indicators	Responsibility	
	1. Implement the Regulatory Guillotine by December 2019.	Yes / Possible Donor Commitment	Economic Wing P&D Board Number of regulations reduced.	Steering Provided by Chairman P&D Board. Implementation by PBIT and Industries Department	
	2. Expand Punjab Business Registration Portal to all major business cities including Faisalabad, Sialkot, Gujranwala, Multan, Rawalpindi by December 2019. 3. Develop a plan to expand the portal to all districts.	Yes / Possible Donor Commitment by World Bank J&C programme	Economic Wing P&D Board Number of firms registered per city.	Steering Provided by Chairman P&D Board. Implementation by J&C PIU under P&D	
	4. Conduct Sub-National Cost of Doing Business Survey	Yes / Possible Donor Commitment	Economic Wing P&D Board	Steering Provided by Chairman P&D Board. Implementation by J&C PIU under P&D	
	5. Operationalise Online Feedback Mechanism (OFM) by 30 September 2019 for strengthening Public Private Dialogue. 6. Policy/regulatory issues discussed and streamlined through OFM	Yes/ Possible Donor Commitment	Economic Wing P&D Board Number of topics covered and reforms initiated	Steering Provided by Chairman P&D Board.	
	7. Implement the Case & Court Management Strategy 2017 for aiding resolution of commercial disputes	Yes / Donor + Government	Law Department Number of reforms implemented Size of backlog of cases	Law Department / follow up with Lahore High Court	
	8. Support for entrepreneurship, enterprise development and innovation - Loans for entrepreneurship - Grants for start-ups, enterprise innovation and technology	Yes / Government + Donor	EA Industries Department	PSIC with support from Industries, Commerce & Investment Department	
	9. Marketing Punjab Internationally and establishment of Punjab Investor Platform	Yes / Government + Donor	EA Industries Department	PBIT	

4. Key Milestones & Targets for Productive Sectors

4.1 Industrial Sector

The Punjab Growth Strategy projects industrial growth to reach close to 10 percent by 2023. The other targets include:

Table 8.4a: Indicators for Productive Sectors

Indicator	2018-19	2019-20	2020-21	2021-22	2022-23	Monitoring Frequency	Monitoring Responsibility	Ownership
Contribution to Provincial GPP (%)	17.6	17.7	18.0	18.2	18.2	Annual	PERI & BOS	Secretary Industries
2.89 million jobs created by 2023	0.12	0.51	0.66	0.7	0.9	Annual	PERI & BOS	Secretary Industries
Existing Industrial Estates	Close to 100 percent colonization of established industrial estates					Annual	PEIDMC, FEIDMC, PSIC	Secretary Industries
Exports from Punjab	An average increase of 5% per annum over the period					Annual	PERI & BOS	Secretary Industries

Table 8.4b: Key Initiatives for Productive Sectors

Key Initiatives	Resource Requirement	Monitoring/indicators	Responsibility
Complete development and accelerate colonisation of planned industrial estates	Yes	6 Monthly, Status Stocktake on PSIC, PEIDMC and PEIDMC - Number of estates developed and sales initiated - Colonization rate per estate - Investment and employment estimates - QAAP colonized by 2023, component of Foreign Investment	Secretary Industries
Enhancing affordable credit to SMEs	Yes (Donor + Government)	Number of schemes launched Amount of loans forwarded at SMEs Number of SMEs benefitting	Secretary Industries PSIC to implement
Strengthening key export clusters	Yes (Donor + Government)	Number of clusters covered Number of initiatives Increase in exports from the clusters	Secretary Industries PSIC to implement
3 Industrial Corridors to be demarcated by 2023	Yes	3 corridors; Lahore to Sheikhupura, Manga-Raiwind and Sialkot-Daska notified	Urban Unit
Implement inspection free regime for Industries by June 2019	No	Number of inspections and fees reduced and streamlined	Secretary Industries
Consolidated mapping of mineral and coal reserves of Punjab with guaranteed PPPs	Yes	Number of PPPs and Investment in the sector	Secretary Mines & Minerals

- The Industries Department and Mines & Mineral Department will produce their annual plan with quarterly targets by June 2019.

4.2 Agriculture Sector

The Punjab Growth Strategy projects that the agricultural growth will reach close to 10 percent by 2023. The other targets include:

Table 8.5a: Indicators for Agriculture Sector

Indicator	2018-19	2019-20	2020-21	2021-22	2022-23	Monitoring Frequency	Monitoring Responsibility	Ownership
Contribution to Provincial GPP (%)	20.0	19.9	19.7	18.2	18.2	Annual	PERI & BOS	Secretary Agriculture
1.26 million jobs created by 2023	0.13	0.13	0.3	0.3	0.4	Annual	PERI & BOS	Secretary Agriculture

Table 8.5b: Key Initiatives for Agriculture Sector

Key Initiatives	Resource Requirement	Monitoring/indicators	Responsibility
Increase total factor productivity by efficient use of water and optimal use of fertilisers and other inputs with improved quality and variety of seeds	Yes	Number of programmes initiated for implementing modern farm practices	Secretary Agriculture
Improve the quality of extension research and create stronger linkage of extension research and training with core agriculture universities	Yes	Number of extension programmes initiated in collaboration with the universities	Secretary Agriculture
Strengthening key export clusters	Yes (Donor + Government)	Increase in exports Exports of key fruits and rice to China	Secretary Agriculture
Spatial transformation of cropping zones and cropping patterns	Yes	Change in cropping patterns based on climate and spatial advantages Impact on yields and quality	Urban Unit / Secretary Agriculture
Disease-free zones for livestock and 100% limiting of adulteration of Milk by 2023	Yes	Number of programmes initiated Number of disease free zones Quality of milk improved	Secretary Livestock
Increasing export of halal meat	Yes / private sector	Exporting units and export value of halal meat	Secretary Livestock

- The Agriculture Department and Livestock Department will produce the annual plan with quarterly targets by June 2019.

4.3 Services Sector

The Punjab Growth Strategy projects services sector growth to reach close to 5 percent by 2023. The other targets include:

Table 8.6a: Indicators for Services Sector

Indicator	2018-19	2019-20	2020-21	2021-22	2022-23	Monitoring Frequency	Monitoring Responsibility	Ownership
Contribution to Provincial GPP (%)	62.4	62.4	62.4	62.4	62.5	Annual	PERI & BOS	Secretary Industries
1.96 million jobs created by 2023	0.16	0.4	0.5	0.4	0.5	Annual	PERI & BOS	Secretary Industries

Table 8.6b: Key Initiatives for Services Sector

Key Initiatives	Resource Requirement	Monitoring/indicators	Responsibility
Creating and Apex Body/Focal Department for enabling the services sector by 30 June 2019	Yes	Department notified	Chief Secretary/ Secretary Industries
Complete census of service establishments by December 2019	Yes	Census completed	Secretary Industries
Harmonisation of provincial sales tax regime and rationalisation of the rate	No	Tax / revenue mobilization strategy Tax policy Number of Reforms	PRA / Finance Department
Development of tourist zones	Yes	3 zones by 2023	Urban Unit / Secretary Industries and Secretary Tourism

- The government will establish an apex department for the services sector, which will develop the services sector plan in partnership with relevant institutions and agencies.

4.4 Skills Development

The Punjab Growth Strategy has set the following target for the skills sector:

Table 8.7a: Indicators for Skills Development

Indicator	2018-19	2019-20	2020-21	2021-22	2022-23	Monitoring Frequency	Monitoring Responsibility	Ownership
Train 2.5 million youth by 2023	0.45	0.45	0.5	0.55	0.55	Six Monthly	PSDP	Secretary Industries, P-TEVTA, PVTC, PSDF
Structure of trainings	- 10% trained through industry partnerships, with total 20% trained in industry relevant skills - 10% trained in futuristic skills especially in light of CPEC by setting up training institutes in SEZs - 70% trained in standard trades, including those relevant for overseas employment							

Table 8.7b: Key Initiatives for Skills Development

Key Initiatives	Resource Requirement	Monitoring/indicators	Responsibility
Comprehensive institutional restructuring	Yes	Creation and operationalisation of PSDA Creation and operationalisation of PSTA	Secretary Industries
Implementation of Modular Approach by PSDF	Yes	Number of courses offered	PSDF
Establishment and operationalisation of two technical universities	Yes	Universities established Enrolments Number of Courses	PSDP / Secretary Industries
Increase in export of human capital	Yes – existing and Donor	Data from Overseas Employment Agency, collected by PSDP	PSDF, P-TEVTA, PSDP

- PSDP will coordinate with P-TEVTA, PSDF and PVTC for their annual training plans and selection of trades and courses to be established.

4.5 Social Sectors: Health, Education and WASH

The Punjab Growth Strategy identified strong and productive human capital as the key driver of growth in the province. The strategy makes a large number of strategic recommendations to improve the performance of the health, education and the WASH sectors. These sectors contribute significantly towards the growth of human capital. The strategy uses SDGs as the basis to track progress in these critical sectors. The key targets are provided below:

Table 8.8: Goals for Health

Goals	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Infant Mortality Rate (per 1000)	60.0	57.7	55.5	53.7	51.9	49.9
Child Mortality Rate (per 1000)	69.0	64.4	60	56	52.1	47.9
Immunisation coverage (%)	75.8	78.2	79.8	81.4	83.0	85.0
Stunting prevalence (%)	31.5	29.3	28.6	27.8	27	25.9
Wasting prevalence (%)	7.5	6.3	5.2	4.3	3.9	3.5
Percentage of Antenatal Care Coverage (at least once by Skilled personnel) (%)	87.3	89.4	91.1	93.3	95.3	97.3
Percentage of women of reproductive age suffering from iron deficiency anaemia (%)	27.0	23.2	22.4	21.6	19.9	17.9
Maternal Mortality Ratio (per 100,000)	180.0	176.0	173.0	167.0	162.0	154.0
Prevalence of Hepatitis B&C (%)	0.40	0.21	0.16	0.13	0.10	0.08
Prevalence of TB cases (%)	0.30	0.27	0.25	0.23	0.21	0.19

Table 8.9: Goals for Education

Education Indicators	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Literacy rate 10+ years	61.9	63.1	63.8	64.6	65.5	66.6
Adult literacy rate 15+ years	71.0	73.1	74.2	75.4	76.6	78.3
Adult literacy rate 15–24 years	76.2	78.1	78.8	79.7	80.6	81.6
Net primary attendance rate Boys (5–9 years)	65.6	66.4	66.4	67.3	68.4	70.3
Net primary attendance rate Girls (5–9 years)	65.3	66.3	66.1	67.0	68.1	69.7
Net secondary attendance rate Boys (10-14 years)	36.3	38.6	38.7	38.9	39.0	40.6
Net secondary attendance rate Girls (10-14 years)	35.9	37.2	37.5	37.7	37.7	39.4

4.6 WASH Sector

- 60 percent of the population in the province has safe/managed water services
- 70 precent of urban and 35 precent of rural population have access to piped water
- 100 precent water metering in cities, 50 precent in intermediate cites and 30 precent in small towns
- Sewerage system covers 70 precent in cities and 40 precent in rural areas
- Achieve open defecation free status by 100 precent population/area
- 80 precent solid waste is collected and disposed per day
- More than 90 precent schools have usable drinking water

The sectoral departments will work with BoS and PERI to track these indicators.

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