

**Research & Training Wing
Planning & Development Department
Government of Sindh**



RESEARCH HIGHLIGHTS 2019-20

'A Year in Review'



FOREWORD

With the aim of creating a holistic amalgamation of its research portfolio after its revitalization and restructuring in 2018-19, the Research & Training Wing has initiated a series of 'Research Highlights'. This publication delineates the key research undertaken by the Wing during 2019-20.

The Research Highlights comprise the research that culminated in reports and was subsequently published on the Research & Training Wing's website. The Wing provided analytical support to the P&D Department on the 'Five-Year Sindh Development Review', 'Karachi Development Review', and the Situational analysis of existing and proposed Quarantine, Isolation, and Critical-Care Facilities in all the districts of Sindh to cater to the emergent COVID-19 situation'.

The in-house research reports developed by the Wing during 2019-20 were the following:

- COVID-19 in Sindh: Macro-Economic & Socioeconomic Impact Assessment and Development Response Framework

The report is centered on analyzing the holistic impact of COVID-19 in Sindh and offers a development response framework to delineate the strategic prescriptions. The report was used as a frame of reference by the EU-PFM Advisor to further develop a strategy report for COVID-19 response that was presented to worthy Chairman P&D Board and was approved by Hon. Chief Minister Sindh as an actionable development to guide the medium-term responsive strategy of the provincial government.

- Charting the Course of Doing Business Reforms in Pakistan with Lessons from Top Global Performers

The report focuses on the ease of doing business reforms in Pakistan with the lessons from the top global performers as actionable recommendations for the country.

- The State of Food Security in Pakistan

This report provides an in-depth analysis of food security in Pakistan and Sindh using Agriculture Productivity Time-Series and Sensitivity Price Index Data

- Training Needs Assessment Report

This report utilized the data of 332 employees of P&D Department and Attached Offices to ascertain the training needs and identify gaps that need to be addressed by devising result-based training programs for P&DD employees.

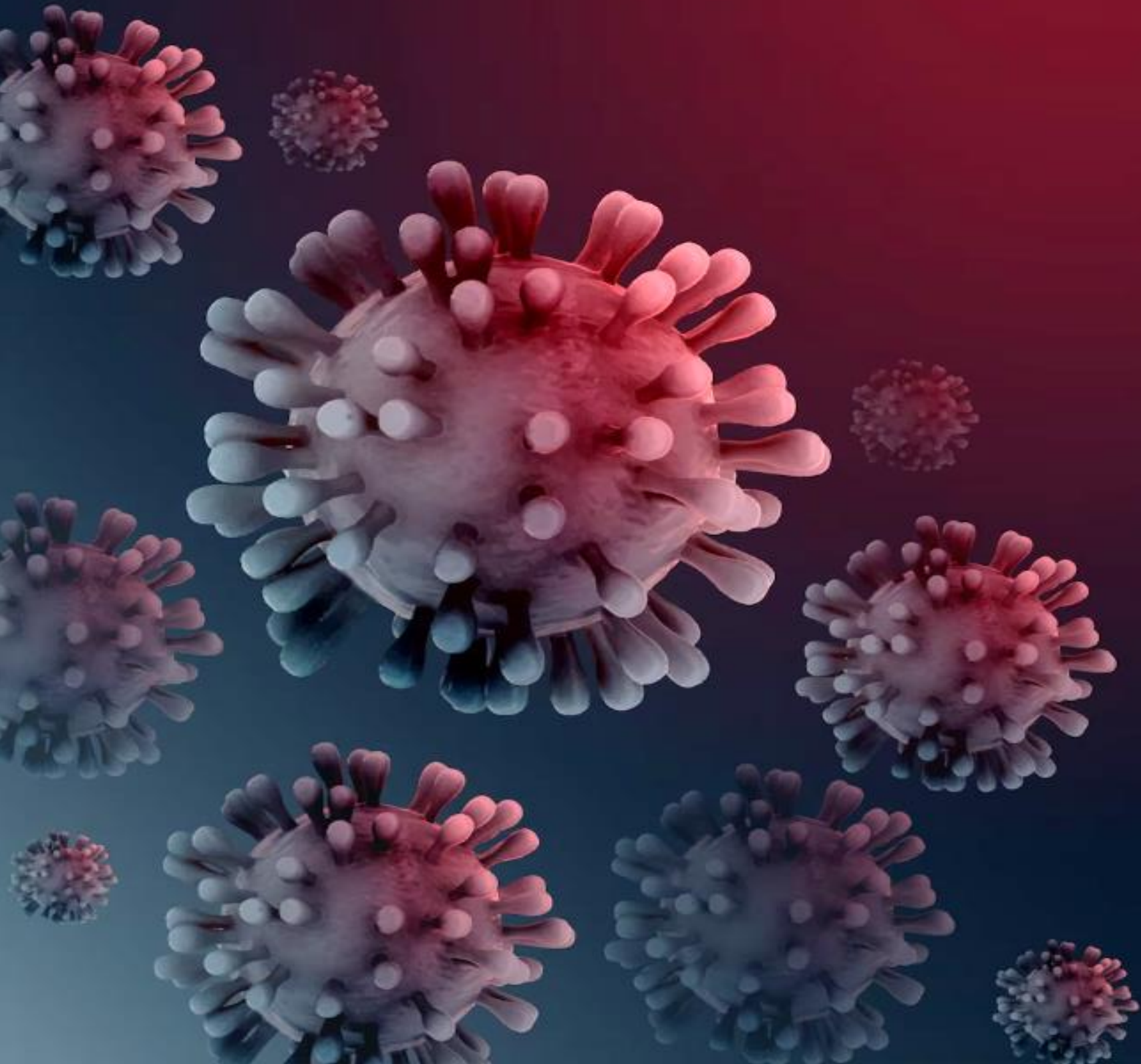
I would like to acknowledge the efforts of the research team of the Wing, especially Mr. Obaid Arshad Khan (Social Sector Advisor), who spearheaded the research initiatives under the strategic guidance of the Chairman P&D Board, Members of the P&D Board and Senior Management of P&D Department.

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COVID-19 In Sindh: Macro-Economic & Socio-Economic Impact Assessment and Development Response Framework



Executive Summary

With the constantly evolving situation of COVID-19, it is imperative for Government of Sindh to assess the estimated macro-economic and socio-economic impact of the outbreak to adopt evidence-based strategic planning and policy formulation. The overarching objective of this report is to assess the estimated impact of COVID-19 on key provincial macro-economic and socio-economic indicators in order to identify prioritized areas of intervention for the Government to guide economic recovery and social protection of the vulnerable segments of population.

Based on the preliminary macro-economic and socio-economic impact assessment of Pakistan by Sub-Committee of the National Coordination Committee for COVID-19 on Economic Analysis, provincial estimations have been done for Sindh. Overall national estimates are broadly defined into Scenario-I and Scenario-II based on the intensity of lockdown and implementation periods. National GDP growth is estimated to decline by 0.7% (Scenario-I) to 1.3% (Scenario-II). Similarly, unemployment is expected to increase by 12.6 million (Scenario-I) to 19.1 million (Scenario-II). Poverty Head-Count is estimate to increase by 4.7% (Scenario-I) to 9.2% (Scenario-II).

Provincial assessment of GDP losses for Sindh estimates that, in Scenario-I, GDP growth in services sector is expected to decrease by 0.54% while agriculture sector, growth pattern will reduce by 0.26%. The overall GDP will reduce from expected \$101.19 billion to \$100.12 billion. For Scenario-II, in Sindh, the greatest hit will be on industries sector with GDP growth reduction of 3.66%, followed by services sector growth reduction of 1.39% and agriculture sector growth reduction of 1.22%. Overall provincial GDP is expected to decrease from \$101.19 to \$98.94 billion in Scenario-II.

In terms of expected job losses in Scenario-I, it is estimated that 2.8 million people in the province will become unemployed. The sectoral shares would be 1.2 million for industries, 1 million for agriculture and 0.6 million unemployed people in services sector respectively. For Scenario-II, it is estimated that 4.3 million people will become unemployed. The sectoral shares would be 1.99 million for industries, 1.64 million for agriculture and 0.77 million unemployed people in services sector respectively.

In terms of provincial poverty impact, it is estimated that between 2.98 million (Scenario-I) and 5.69 million (Scenario-II) additional people could fall below the poverty line due to the COVID-19 impact. This essentially means that the total number of people below poverty line in Sindh could range from 18.03 million to 20.74 million people due to COVID-19 Impact.

The broad thematic areas to focus on in terms of economic recovery include supporting business (especially SMEs), developing sector-specific protocols, mitigating the effect of sectoral losses and wage support schemes. Social protection efforts need to be centered on social assistance, social insurance, labor market programs, social care services and targeted subsidies.

Introduction

Coronavirus (COVID-19) pandemic has impacted the entire world, including the lives of the people in Pakistan. With two confirmed cases on 26th February 2020, the country's total confirmed cases are 12,227 as of 25th April 2020 out of which Sindh has 4,232 confirmed COVID-19 cases.¹ The immediate risk of the virus is a public health concern; however, the severity of outbreak warrants scenario-wise assessment of the socio-economic impact to guide social protection, development response and other economic recovery efforts.

The prevailing situation demands the Government to prepare a dynamic framework of short-term, medium-term and long-term development plans. Given the evolving outbreak situation, the overarching development response must cater to address both the direct and indirect effects of the outbreak on people, especially the most vulnerable segments of the population of Sindh. A provincial socio-economic assessment would help estimate the quantifiable impact of COVID-19. Estimated impact can help the Government in evidence-based planning and resource allocations to cater to the affectees of the virus. Strategic development planning to effectively mitigate the adverse effects can be devised in terms of social protection and economic recovery. Formulation of plans to prioritize development priorities, guide economic recovery and social protection entails mobilizing resources through government own-sources, donors' assistance and engagement with development partners.

The total development budget outlay for Sindh for FY 2019-20 is Rs.284 billion. This includes Rs.208 billion for Provincial ADP and Rs.20 billion for District ADP schemes. Rs.51.15 billion are earmarked for the Foreign Projects Assistance (FPA) component. Rs.4.89 billion have been included in Federal PSDP for GOS executed schemes. According to release and expenditure position of dated 7th April, 2020, Rs.68.273 billion is spent on Provincial ADP schemes and Rs.4.524 billion is spent on District ADP schemes. There were 912 schemes which were provided 100% allocations and therefore likely to be completed (LTBC) in current financial year (CFY) however, there are 125 such schemes which have spent full funds and will be completed. In case the released funds Rs. 6.5 billion are un-frozen, additional 441 LTBC schemes would be completed during CFY. In addition, 26 major schemes, where re-appropriation proposals have been conveyed to FD, would be completed during CFY in case Rs. 2700 million are allowed for these schemes.

Planning & Development Department has been interacting constantly with development partners for addressing critical shortage of resources. On 3rd April, 2020 the Project of "Pandemic Response Effectiveness in Pakistan" (PREP) was approved by World Bank board. The project was approved in CDWP on 16th March, 2020 and on 21st March, loan was negotiated between World Bank and Federal and Provincial Governments. Provincial governments have been asked to do the urgent withdrawal of US\$ 5 million for COVID-19 related expenditures and Government of Sindh has filed the withdrawal application very recently.

¹ Government of Pakistan. <http://covid.gov.pk/stats/pakistan>

Government of Sindh has been discussing with World Bank to tap unused resources from World Bank funded projects which do not need restructuring or repurposing for the resources to be used for combating COVID. As a result, US\$ 36.2 million have been diverted from various current projects for COVID related expenditures. US\$ 10 Million from Sindh Resilience Project, US\$ 1 Million from Sindh Revenue Board, US\$ 11.2 Million from Sindh Enhancing Response to Reduce Stunting (AAP), and US\$ 15 million from Water Sector Improvement Project.

In addition to the aforementioned, rounds of deliberations have been done with World Bank to look into possible restructuring/repurposing of existing projects or creating of new project for COVID financing. As a sequel, Planning Commission conducted a detailed meeting with all Provincial Governments on 15th April, 2020. Provincial Governments apprised Planning Commission of their plans to combat COVID and resource constraints they are facing.

On 2nd April, 2020, a web meeting was held between Chairman P&DD and United Nations Resident Coordinator (UN-RC) Mr. Julien Harneis. The meeting was intended to apprise UNRC of GoS plans for COVID so that UN-RC office may coordinate between UN agencies to work with Sindh government smoothly.

Assessment Of Economic Impact

The economy of Pakistan was already passing through a slow growth trajectory and was expected to grow at a mere 3.3% in the current Fiscal Year (Planning Commission Jan 2020). After the COVID-19 shock, IMF lowered its forecast for Pakistan to a negative growth of 1.5% in real GDP². The sheer uncertainty regarding the length and severity of the COVID-19 crisis is fueling perception of risk and volatility in financial markets.

While it is significantly difficult to come up with the exact net impact of COVID- 19 on Pakistan’s economy, it is still possible to compute with some high-level assumptions. Some attempts have been made by Sub-committee of the National Coordination Committee for COVID-19 in estimating potential economic losses through two different scenarios. 3The same model has been adapted here to estimate the numbers for Sindh.

Following table shows two scenarios predicted by the model:

	Scenario I	Scenario II
GDP	2.6%	2.0%
GDP Reduction from Expected Growth	0.7%	1.3%
Unemployment	12.6 million	19.1 million
Increase in Poverty	4.7%	9.2%

² <https://www.imf.org/en/Countries/PAK#ataglance>

Sub-committee of the National Coordination Committee for COVID-19 on Economic Analysis

To compute the estimates of each of the above-mentioned scenarios for Sindh, the following assumptions have been made:

Assumptions for GDP Estimations

- Sindh's share in Pakistan's GDP is taken as 30%. [Pasha, Hafiz A. "Growth of the provincial economies." *Institute for Policy Reforms (IPR)*. <http://ipr.org.pk/wp-content/uploads/2016/04/GROWTH-OF-PROVINCIAL-ECONOMICS-.pdf> (2015)];
- Shares of each sector for Sindh are computed through 2014-15 data given in percentage (%). [Pasha, Hafiz A. "Growth of the provincial economies." *Institute for Policy Reforms (IPR)*. <http://ipr.org.pk/wp-content/uploads/2016/04/GROWTH-OF-PROVINCIAL-ECONOMICS-.pdf> (2015)]; and
- Overall GDP and sector-wise losses in Pakistan are computed through scenario-based analysis and simulation model implied by sub-committee of the National Coordination Committee for COVID-19 on economic analysis

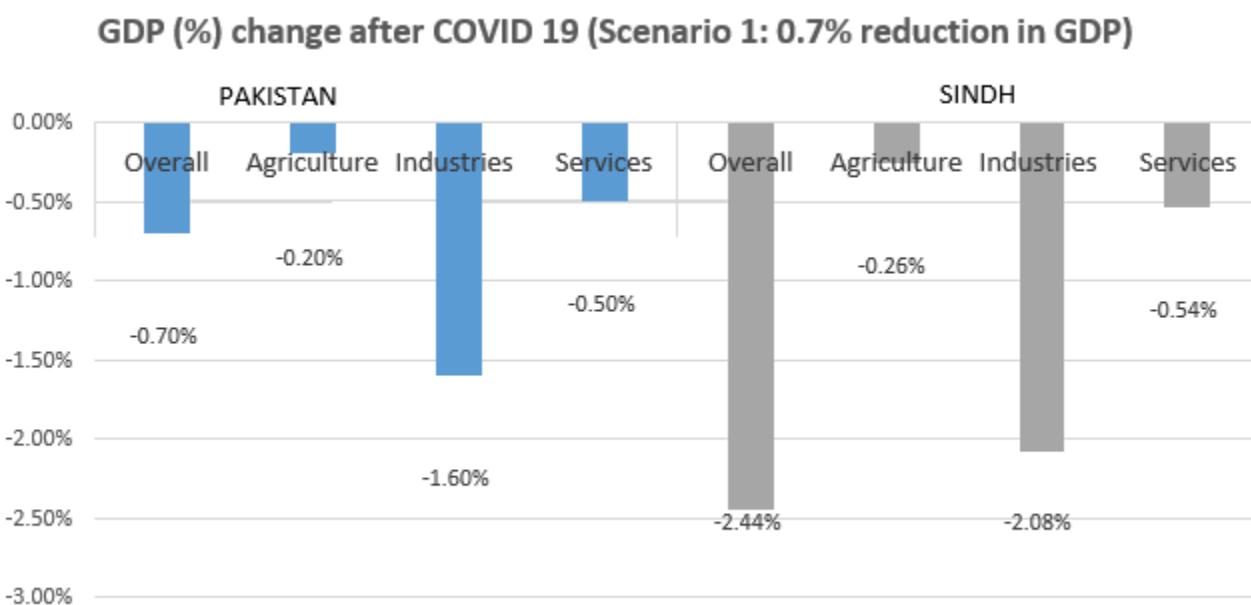
Methodology to compute GDP Loss

- Sector-wise percentage share in GDP for both Pakistan and Sindh has been compared (period used: 2014-15)^[1];
- Scenario-based parameters have been utilized, as economic analysis conducted by sub-committee established for economic analysis on COVID-19.
- For forecasting the overall GDP loss percentage in Sindh, the national level GDP loss has been used as the basis;
- Thereafter, the total GDP loss percentage has been divided by cumulative sectoral loss percentage (Socio-economic assessment by national sub-committee on COVID 19 economic analysis; and
- The derived ratio was then multiplied by cumulative sectoral loss in Sindh to determine Sindh level loss percentage.

^[1] Pasha, Hafiz A. "Growth of the provincial economies." *Institute for Policy Reforms (IPR)*. <http://ipr.org.pk/wp-content/uploads/2016/04/GROWTH-OF-PROVINCIAL-ECONOMICS-.pdf> (2015)]

Analysis of GDP Losses in Pakistan and Sindh due to slower GDP Growth: Scenario 1

In scenario 1, it is anticipated that GDP in Pakistan will decrease from 3.3% to 2.6%. In absolute numbers, the GDP is expected to fall from \$335 billion to \$332 billion. The highest predicted decrease will be in the industries sector (-1.60%) followed by services sector (-0.50%). The agriculture sector is expected to witness a reduction of 0.20% hence a lower growth. The aggregation of sector wise GDP losses will manifest into overall GDP loss of 0.70%.



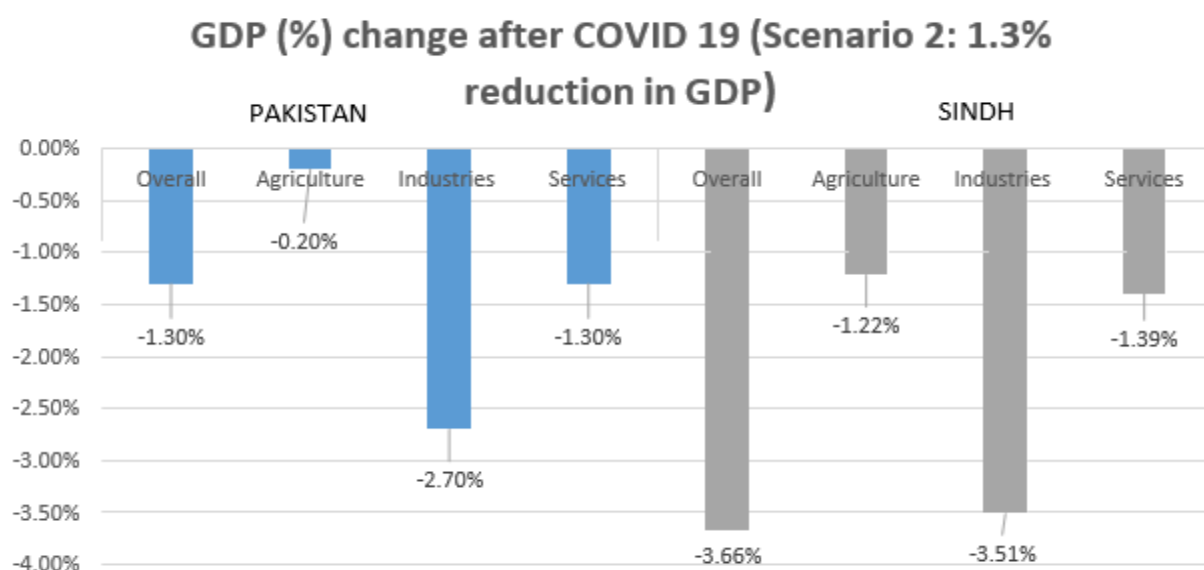
Due to the higher comparative share of industries sector in Sindh's economy, the net industrial losses are expected to be significantly higher (-2.08%) in the province, when compared with national losses. The negative growth in the industrial sector can be attributed to many factors such as fall in labor supply due to quarantine measures, fall in economic activity, supply chain disruptions, fall in demand (consumption + investment), etc.

GDP growth in services sector is expected to decrease by 0.54% while agriculture sector, growth pattern will reduce by 0.26%. The cumulative sector wise GDP losses will translate into net GDP loss of 2.44% in Sindh. The overall GDP will reduce from expected \$101.19 billion to \$100.12 billion.

Year	Region	Expected GDP at constant prices (World Bank & IMF estimates)- (3.3% Growth)	GDP Loss Percentage scenario 1 (0.7% reduction in GDP Growth)		
			GDP Percentage Decline after COVID 19	change in GDP (loss/increase)	Total Net GDP
2020	Pakistan	335	-0.70%	-3	332
	Agriculture	62	-0.20%	-0.12	61.96
	Industries	68	-1.60%	-2.76	65.15
	Services	205	-0.50%	0.60	205.67
2020	Sindh	101	-2.44%	-1.07	100.12
	Agriculture	16.25	-0.26%	-0.04	16.22
	Industries	30	-2.08%	-1.46	28.20
	Services	55.27	-0.54%	-0.07	55.20

Analysis of GDP Losses in Pakistan and Sindh due to slower GDP Growth: Scenario 2

In scenario 2, GDP in Pakistan is expected to decrease from 3.3% to 2.0%. Resultantly, GDP at constant prices will reduce from \$335 billion to \$331 billion. As depicted in the chart, a GDP (%) decrease of (-1.30%) is expected in industries sector, followed by services sector (-5.30%). On the other hand, agriculture sector is expected to witness a percentage reduction of -0.20%. In Sindh, the greatest hit will be on industries sector (-3.66%), followed by services sector (-1.39%). Therefore, based on parameters/principles defined for the Socio- economic assessment by sub-committee on COVID-19 economic analysis, the overall GDP losses in Sindh will be (-0.366%) and reduction from \$101.19 to \$98.94 billion.



Year	Region	GDP at constant prices (World Bank & IMF estimates) 3.3% Growth	GDP Loss Percentage scenario 2 (1.3% reduction in expected GDP)		
			GDP Percentage Decline after COVID 19	change in GDP (loss/increase)	Total Net GDP
2020	Pakistan	335	-1.30%	-5	331
	Agriculture	62	-0.20%	-0.120	62
	Industries	68	-2.70%	-3.48	64.43
	Services	205	-1.30%	-0.99	204.09
2020	Sindh	101.19	-3.66%	-2.26	98.94
	Agriculture	16.25	-1.22%	-0.19	16.07
	Industries	29.67	-3.51%	-1.89	27.78
	Services	55.27	-1.39%	-0.53	54.75

Assumptions of Job Losses

- Job losses figures for Pakistan have been derived from economic analysis conducted by sub-committee established for economic analysis on COVID-19⁴;
- Sector wise job losses for Pakistan have been computed through sectorwise employment shares given in the Labor Force Survey (2017-18)⁵;
- Job losses in Sindh have been estimated through Sindh share of employment (23%) in overall employment, as derived through Labor Force Survey (2017-18); and
- Sector wise job losses in Sindh are computed by applying sector wise employment percentage on total Sindh share of job losses using the Labor Force Survey.

Analysis of Expected Job Losses

In scenario 1, job losses in Pakistan are estimated at 12.0 million with the highest effect in industries (5.08 million) and agriculture (5.11 million), respectively. Sindh has a share of 23% in total employed persons in Pakistan which translates into expected job losses of 2.8 million in the province. The highest share again will be in industries (1.2 million) and agriculture (1 million), respectively

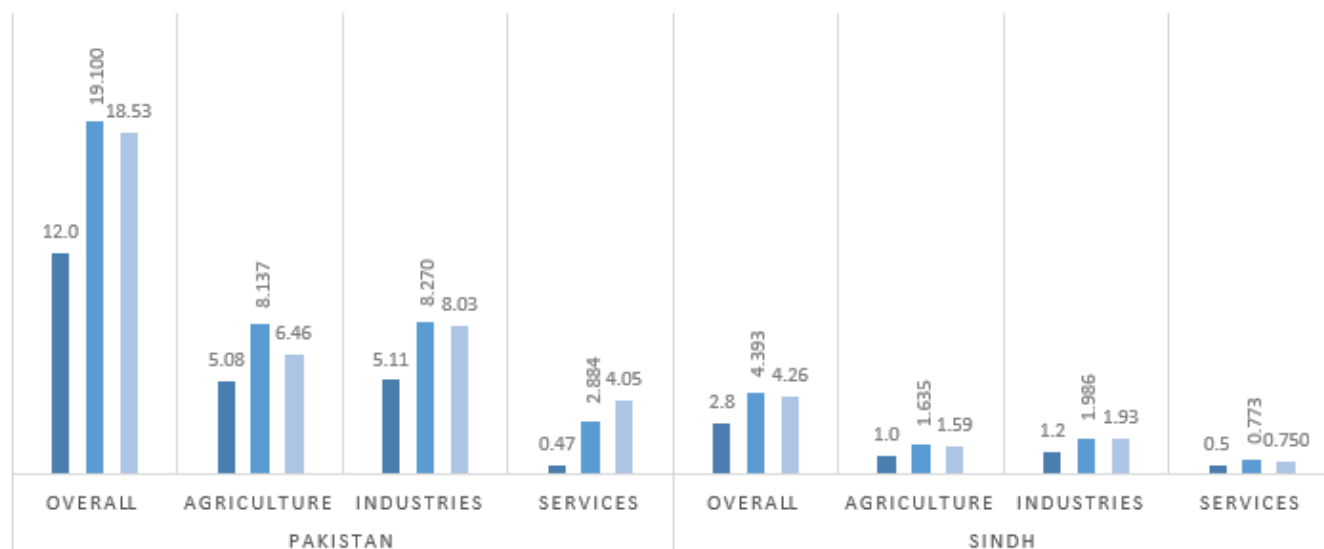
⁴ Ibid

⁵ Labor Force Survey (2017-18):

http://www.pbs.gov.pk/sites/default/files//Labour%20Force/publications/lfs2017_18/Annual%20Report%20of%20LFS%202017-18.pdf

JOB LOSSES IN MILLIONS DUE TO COVID 19 IMPACT

- Job Losses (millions) Estimates Scenario 1: Job losses (Moderate Slow Down of Economic Activity)
- Job Losses (millions) Estimates Scenario 2 Job losses by decrease in GDP share in relation to expected growth
- Job Losses (millions) Estimates Job Losses by PIDE Vulnerability assessment data



In scenario 2, job losses are expected to increase to 19.0 million in Pakistan and Sindh's share is expected to increase to 4.3 million from 2.8 million, as given in scenario 1. The highest increase in job losses will be in industries sector (1.2million), followed by agriculture (1.0 million). Pakistan Institute of Development Economics (PIDE) has also conducted a similar analysis on job losses based on Labor Force Survey (2017-18). Based on their estimates, job losses in the worst-case scenario are expected to reach 18.53 million in Pakistan. In Sindh, the resultant losses could reach 4.26 million. The table below provides comparison and analysis of different scenarios.

Region	Sectors	Job Losses (millions) Estimates		
		Scenario 1: Job losses (Moderate Slow Down of Economic Activity)	Scenario 2 Job losses by decrease in GDP share in relation to expected growth	Job Losses by PIDE Vulnerability assessment data
Pakistan	Overall	12.0	19.100	18.53
	Agriculture	5.08	8.137	6.46
	Industries	5.11	8.270	8.03
	Services	0.47	2.884	4.05
Sindh	Overall	2.8	4.393	4.26
	Agriculture	1.0	1.635	1.59
	Industries	1.2	1.986	1.93
	Services	0.5	0.773	0.750

Social Protection Assessment

In addition to the estimations of GDP and Employment losses, Social Protection Assessment is crucial in determining the segments of the population that would be affected by the outbreak. The vulnerable population would largely include people who are susceptible to economic shocks to an extent that it may drive them below the income poverty line.

Estimating the number of vulnerable people would help the decision-makers in devising social protection strategies that will help this population to cope with the shock by providing a social safety net to fall back on.

Methodology for Poverty Estimations

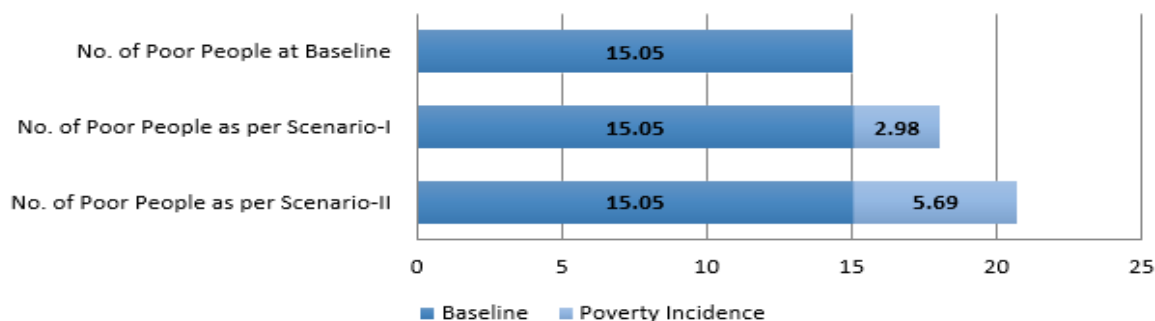
PSLM 2014 Data for Poverty Estimations⁶:

No. of Poor People-Pakistan	No. of Poor People-Sindh	Sindh's Poverty Share (%) in Total Poverty in Pakistan
47,092,000	14,048,000	29.8

Presently, 24.3% of population is living below the \$1.90 poverty line at PPP in Pakistan. This essentially means that 50.49 million out of 207.78 million people are below poverty line.

Assuming Sindh's share of **29.8%** in terms of total poor population in Pakistan, it means that **15.05 million** people in the province are living below poverty today (i.e., 29.8% of 50.49 million total population living below the poverty line in the country).

COVID-19 Impact on Sindh Poverty Incidence (Million People)



⁶ District Development Portal Data4Pakistan, <http://www.data4pakistan.com/map.html>

Estimated Impact of COVID-19 on Poverty in Sindh-Based on Sub-Committee of National Coordination Committee for COVID-19 on Economic Analysis:

Sub-Committee of NCC for COVID-19 on Economic analysis has estimated that the poverty headcount will increase from 24.3 percent to 29 percent in Scenario-I and to 33.5 percent in Scenario-II ⁷. The estimation is predicated on the assumption that aggregated consumption of households will fall by 5 percent (Scenario-I) and by 10 percent (Scenario-II). The number of **additional people who could fall below poverty line in Pakistan** ranges from about **10 million in Scenario-I** (29 percent headcount ratio) to **19.1 million in Scenario-II** (33.5 percent headcount ratio).

Assuming Sindh's share of 29.8% in terms of total poor population in Pakistan, following are the estimates for additional people that may fall below the poverty line in the province as per Scenarios 1 (i.e., 29.8% of 10 million) and 2 (29.8% of 19.1 million):

Additional Number of Poor People in Sindh	Scenario-1 (29 %Headcount)	Scenario-2 (33.5%Headcount)
	2.98 million	5.69 million

This essentially means that the total number of people below poverty line in Sindh could range from 18.03 million to 20.74 million people due to COVID-19 Impact.

⁷ COVID-19 Impact: Preliminary Macro-Economic and Socio-Economic Assessments, Sub- Committee of NCC, <https://www.thenews.com.pk/print/649600-covid-19-scenario-govt-fears- gdp-growth-to-go-down-by-1-3pc>

Monetary and Multi-Dimensional Poverty

Total number of poor people in Sindh was 14,048,000 which was 47,092,000 in Pakistan according to PSLM 2014.⁸ This means that 29.8% of the total poor people of Pakistan reside in Sindh. In Pakistan, 24.3% of population is living below the \$1.90 poverty line at PPP, (i.e., 50.49 million out of 207.78 million people).⁹

Assuming Sindh's share of 29.8% in terms of total poor population in Pakistan, it means that 15.05 million people in the province are living below poverty today. Sub-Committee of NCC estimate that number of additional people who could fall below poverty line in Pakistan ranges from 10 million in Scenario-I (29 percent headcount) to 19.1 million in Scenario-II (33.5 percent headcount). Extrapolating these numbers to Sindh would mean that an additional number of 2.98 million (Scenario-I) to 5.69 million (Scenario-II) people could fall below the poverty line as a result of the outbreak-related economic shocks.

It is worth mentioning that the income/consumption-related poverty rate is highly correlated with Multi-Dimensional Poverty Index in Sindh with a correlation coefficient of +0.94¹⁰. This means that people who are suffering from income poverty are also severely deprived in terms of health, education and standard of living indicators in the province. It is worth mentioning that Sindh's Multi-Dimensional Poverty Head-Count is 43.1%. Hence, the social protection measures should incorporate a comprehensive package to address the multiple deprivations faced by the vulnerable segments of population.

Food Insecurity Estimations using National Nutrition Survey 2018 and Population Census Data 2017:

According to NNS 2018, almost 47.1% of people living in Sindh are considered to be food insecure with 11.1%, 10.0% and 26.0% of households experiencing mild, moderate and severe food insecurity respectively. Following are the estimations of food insecure households out of a total of 8,585,610 households in Sindh as per Census 2017 data.

⁸ PSLM 2013-14, <http://www.data4pakistan.com/map.html>

⁹ Pakistan Economic Survey 2018-19, http://www.finance.gov.pk/survey/chapters_19/15-Social%20Protection.pdf

¹⁰ Multi-Dimensional Poverty in Pakistan 2014-15

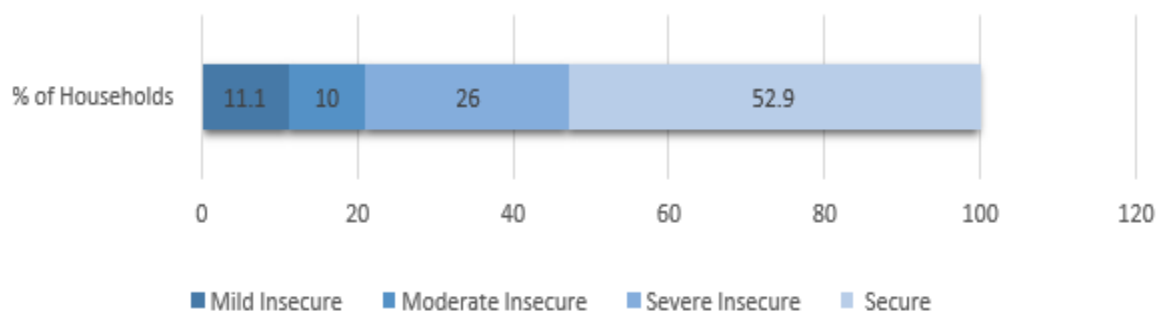
<<https://www.undp.org/content/dam/pakistan/docs/MPI/Multidimensional%20Poverty%20in%20Pakistan.pdf>>

Food Insecurity Level % of HHs Food Insecure No. of HHs as per Census 2017

Mild	11.1	953,003
Moderate	10.0	858,561
Severe	26.0	2,232,259
Total	47.1	4,043,822

According to NNS 2018, 4.04 million out of 8.59 million households in Sindh are food insecure. Out of the food insecure households, about 2.23 million households suffer severe food insecurity while 1.81 million households are mildly or moderately food insecure.

Percentage Level of Food Security in Sindh



State of Food Security in Sindh

Pakistan is considered a lower middle-income country and has the sixth largest population in the world. According to the World Bank, it is estimated that average adult should have at least 2,350 calories to meet its daily requirements and maintain a healthy body¹¹. However, within Pakistan there is a great dispersion in availability and accessibility to food between various income quintiles (groups) and also varies between regions. The average daily household caloric consumption per adult in Pakistan is equivalent to 2,033 calories¹², which is 13% lower than the officially recommended level of 2,350 calories per day defined by World Bank.

Sindh and Baluchistan are considered to be the most food insecure provinces within Pakistan. Almost 47.1% of people living in Sindh are considered to be food insecure with 11.1%, 10.0% and 26.0% of households experiencing mild, moderate and severe food insecurity respectively¹³. This essentially means that about 4,043,822 out of 8,585,610 households in Sindh are food insecure. Out of the food insecure households, 2,232,259 households suffer severe food insecurity while 1,811,563 households are mildly or moderately food insecure. Average caloric consumption of households in the poorest consumption quintile i.e. (bottom income quintile), at 1,570 calories, is 23% lower than the recommended level, and 27% lower than the average caloric consumption of households in the richest consumption expenditure quintile (the richest households), at 2,501 calories¹⁴.

According to the Integrated Food Security Phase Classification (IPC) report, the province of Sindh has been analyzed closely in terms of food insecurity where 7 most food insecure districts namely (Badin, Dadu, Sanghar, Tharparkar, Umerkot, Jamshoro, and Shahdadkot) were studied.

According to an analysis conducted by IPC, it is found that province of Sindh is prone to multiple hazards. Drought or drought-like conditions have been prevailing in parts of Sindh since 2013, particularly in the southeastern and western districts: Tharparkar, Umerkot, and Sanghar (along the eastern border with India) and Jamshoro, Dadu, Shahdadkot (along the Western border of the province). The areas impacted by drought are heavily reliant on monsoon rainfall and with repeated years of low or in some cases complete absence of rainfall, the drought conditions have significantly deteriorated. The land of these 7 districts is considered as Barren / Arid. This essentially means that the entire harvest is totally dependent on rain and monsoon systems.

¹¹ [Worldbank.org/PGLP/Resources/povertymanual_ch3.pdf](http://documents.worldbank.org/curated/en/810811493910657388/pdf/WPS8049.pdf)

<http://siteresources.worldbank.org/PGLP/Resources/PovertyManual.pdf>¹²

[Worldbank.com/Child Undernutrition in Pakistan What Do We](http://documents.worldbank.org/curated/en/810811493910657388/pdf/WPS8049.pdf)

[Know?/http://documents.worldbank.org/curated/en/810811493910657388/pdf/WPS8049.pdf](http://documents.worldbank.org/curated/en/810811493910657388/pdf/WPS8049.pdf)¹³ [National Nutrition Survey Pakistan/ 2018//https://www.unicef.org/pakistan/reports/national-nutrition-survey-2018-key-findings-report](https://www.unicef.org/pakistan/reports/national-nutrition-survey-2018-key-findings-report)

¹⁴ [World Bank / Child Undernutrition in Pakistan: What Do We Know/ 2017/http://documents.worldbank.org/curated/en/810811493910657388/pdf/WPS8049.pdf](http://documents.worldbank.org/curated/en/810811493910657388/pdf/WPS8049.pdf)

Analyzing the seven districts revealed that almost 57% population i.e., 1.27 million people were falling under severe to extreme food insecure population out of total population of 2.22 million people. Almost 60% of the Thar, Umerkot, and Sanghar's population were facing severe food crises and shortage of basic food commodities. However, Shahdaskot, Badin and Jamshoro are facing second highest incidence of food crisis i.e., between 50 to 55%. The crop area and production of major cereal crops has shown an overall reduction across all seven districts, and not just in the drought-notified areas. The crop area and production of wheat has reduced by 24% each since 2014-15 in these 7 districts. However, crop area and production in 2018-19 is estimated to be 17% (at 294,159 hectares) and 10% (at 960,701 metric tons) less than in 2017-18.¹⁵

As far as Sindh's diet-related food security is concerned, only one in seven children (12.6%) aged 6–23 months receive a meal with minimum dietary diversity, with at least four different food groups. One in four children (16.9%) receives the minimum number of meals a day. Complementary foods that meet the requirements of a minimum acceptable diet to ensure optimal growth and development for children aged 6–23 months are provided to less than one in 20 children (2.2%).¹⁶

According to NNS 2018, only 12.7% of Sindh's Population has been covered under the Social Protection Schemes to minimize the incidence of poverty and food insecurity. However, with the recent Corona Virus wave, social protection coverage would have to increase to address the vulnerable segments of population and to mitigate the economic impact of COVID-19.

¹⁵Integrated Food Security Phase Classification (IPC)/ Acute Food Insecurity Analysis/ October 2018 – October 2019// <https://reliefweb.int/report/pakistan/sindh-pakistan-ipc-acute-food-insecurity-analysis-october-2018-october-2019-issued>

¹⁶ National Nutrition Survey Pakistan/ 2018//<https://www.unicef.org/pakistan/reports/national-nutrition-survey-2018-key-findings-report>

Economic Response Plan of Government of Sindh:

Addressing Economic Vulnerabilities – Employment & Enterprises

To limit the fallout of the COVID 19 pandemic, Government of Sindh's response should include a stimulus package that includes support for business investments, and cash flow assistance for small and medium sized businesses and employees. A series of measures designed to stabilize markets, enhance liquidity and stimulate growth are already underway at both the Federal as well as Provincial level.

The economic stimulus package announced by the Federal Government contains a whole range of fiscal measures (tax breaks, financial support via utilities payment deferrals, fuel and transport subsidies, concessions and tax refunds) to protect exporters and business entities. The government has also announced a separate package worth PKR 100 billion (\$600.42 million) just for SMEs.

The State Bank of Pakistan (SBP) has announced a Temporary Economic Refinance Facility to fuel new investment. This will offer subsidized loans to the manufacturing sector and a Refinance Facility to allow banks to get loans at zero mark-up, which they can offer to hospitals at 3% for five years. Provincial governments are also preparing their own financial packages and they have some fiscal room to expand the federal government's cash transfer measures, and other fiscal instruments.

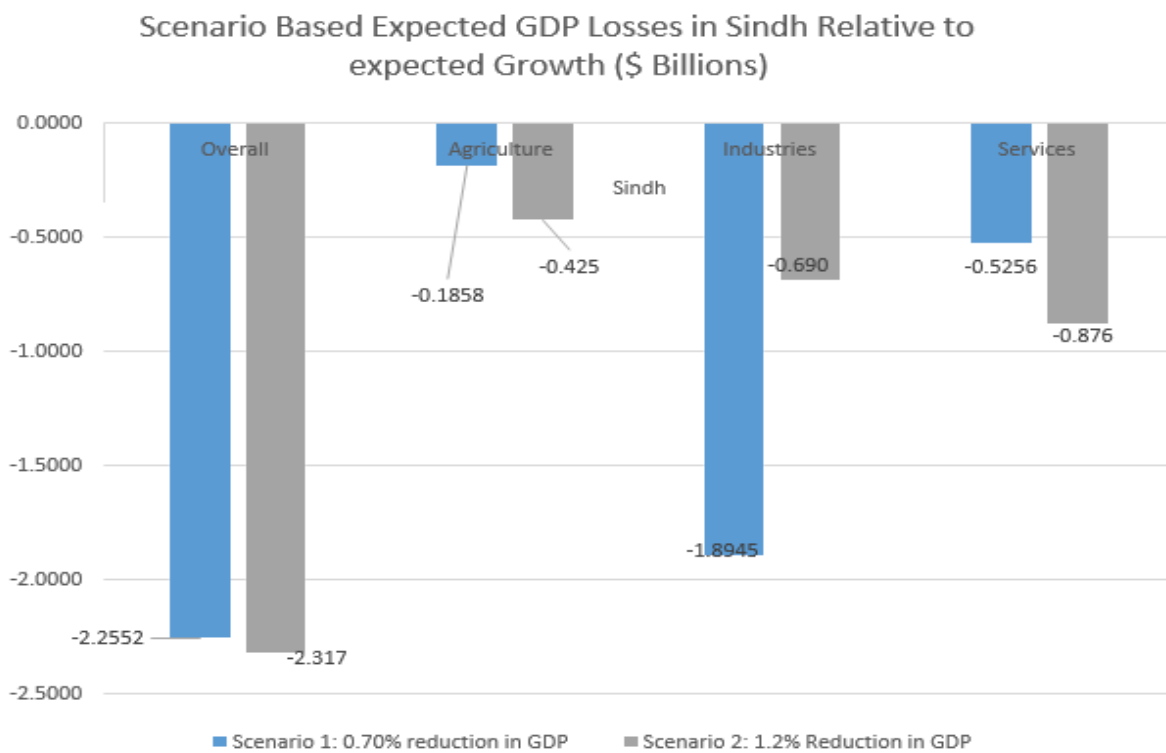
In the same context, it is also important that interventions mentioned above, and others being planned by the Government correspond with the rapid economic impact assessment. Prior to COVID 19, GDP for Pakistan was expected to increase by 3.3%. The rapid economic impact assessment reveals that Pakistan's GDP could fall from 0.7 to 1.6% in the current fiscal year. In Sindh, the greatest hit will be on industries and services sector, as Karachi is the hub of industrial sector in Pakistan. The overall GDP losses in Sindh are expected to range between \$2.25 billion to \$2.317 billion in two analyzed scenarios. In Industrial sector, losses will range between \$0.690 billion to \$1.8945 billion while in services sector losses will be around \$0.5256 billion to \$0.876 billion. In agriculture, losses will range from \$0.1858 to \$0.425 billion. To stimulate economic activity, provincial governments need to adopt multiple policy responses

The choices that governments make to restart their economic engine, including the long-term social, economic, and environmental co-benefits they seek to achieve through their stimulus investments, will be extraordinarily consequential in ensuring that they can build back stronger and better. For that purpose, World Bank has developed a draft sustainability checklist¹⁷ (to be refined in the coming months) that government ministries can use to assess or rank stimulus proposals. It is a useful tool that provides granular guidance for policymakers.

¹⁷ Link to the WB Checklist: <http://pubdocs.worldbank.org/en/223671586803837686/Sustainability-Checklist-for-Assessing-Economic-Recovery-Investments-April-2020.pdf>

Essentially, the Government should divide response in two timescales: short-term needs to deliver as many jobs, income, and economic demand as quickly as possible, and the longer-term need to deliver sustainable growth and prosperity. In the short-term, the focus should be on:

- Developing mechanism to regularly update and register unemployed workers
- Conducting rapid assessment(s) and undertake analysis to identify sector- specific needs
- Develop mechanisms for distribution of compensation package to support livelihoods of unemployed workers



Supporting Businesses

SMEs form close to 90% of all enterprises in Pakistan and generate 40% of non- agriculture employment. In Sindh 41% of employed persons are engaged in informal sector and 54.48% of individuals earn income of Rs.15, 000 and below. ¹⁸According to estimates of Pasha, H and Karder, S (2020) paper¹⁹, 10.5 million people will be temporary out of employment which includes daily wage and contractual workers. So, it is estimated that in Sindh (23% share of employment), 2.4 million people will be temporarily out of employment. Additionally, as impact of COVID-19 transpires, 2.8-4.3 million people will be out of jobs in Sindh ²⁰

To support micro, small and medium businesses in Sindh's agriculture value chain, wholesale funding could be extended to the Sindh Enterprise Development Fund. Other key players in essential consumable value chains should be identified and supported to give breathing space and generate economic activity. The table below summarizes the possible area of support, and the respective interventions and responsible government departments/entities.

Area of Support	Intervention(s)	Relevant Government Department(s)/Implementing Partner
Supporting Business	<p>Monitor the impact of the crisis on SMEs and enhance the governance of SME related policy responses;</p> <p>Identification of key value chains in agriculture and other consumables;</p> <p>Access to finance through grants, equity and debt instruments to support working capital, growth capital and wage subsidy to Medium Small and Micro Enterprises;</p> <p>Support Startups and entrepreneurs (especially in the technology, information and communication space) through the National Incubation Center, and other accelerators and incubators operating in Sindh</p>	<p>Sindh Enterprise Development Fund, Sindh Bank, Industries and Commerce Department, PPP Unit, Finance Department, National Incubation Center, Sindh Small Industries Corporation, Commercial Banks</p>

¹⁸ Labor Force Survey (2017-18)

¹⁹ Pasha, H and Karder, S (2020), Economic Impact of Corona Virus and the Relief Package

²⁰ Estimates for Sindh based on COVID-19 Impact: Preliminary Macro-Economic and Socio-Economic Assessments, Sub-Committee of NCC,

Sector Specific Protocols	<p>Government of Sindh to develop sector specific SOPs particular for high value added and vulnerable sectors</p> <p>Support e-commerce through implementing tax exemptions and other measures; Implement tax exemptions to e-commerce</p>	Public-health leaders, industry associations, and Planning & Development Department
Mitigate effect of Sector wise GDP Losses	<p>The expected GDP losses in Sindh will range between \$2.25 billion to \$2.317 billion.</p> <p>Particular focus should be on services and industrial sector in form of following interventions</p> <ol style="list-style-type: none"> 1. Strategies should be developed to mobilize funds and inject investments equating to at least 10-15% of GDP loss. 2. Develop phase wise subsidies schemes for vulnerable industries (transportation and retail industries included) 3. Permitting delays in the deposits of tax liabilities and reduction in tax rates (especially through the halving of the minimum turnover tax). This includes cement, iron and steel, fertilizer, chemicals, paper and board, 4. Tax refund and duty relief schemes to exporting industries 5. Deferment of appropriate share of loan balance. Cost to be picked up by Banks assuming there is no compounding of interest charges on the delayed servicing of the debt. 	<p>Sindh Board of Revenue (SBOR)</p> <p>Sindh Board of Investment (SBOI)</p> <p>Sindh Excise and Taxation Department</p> <p>Industries and Commerce Department</p> <p>Labor Department</p> <p>Finance Department</p>
Wage Support Scheme	<p>It is expected that 2.4 million people will be temporarily out employment in Sindh. So based on this estimate, actual identification of partial unemployment and working hour reduction in daily wagers and vulnerable employees needs to be undertaken</p> <p>Identification of partial unemployment and working hours reduction in daily wagers, particularly the vulnerable employees</p> <p>The government may develop a mechanism to finance temporary layoffs; and incentivize businesses to discourage layoffs;</p> <p>Leverage G2P Payment Infrastructure for cash transfers using solutions like mobile money and e-transfers, etc.</p>	<p>Finance Department, Industries and Commerce Department</p> <p>Labor Department</p>

Social Protection Response to Mitigate the Effect of Covid-19 Outbreak

To mitigate the effect of COVID-19 outbreak in Sindh on the vulnerable segments of the population, Social Protection measures need to be re-oriented towards identifying and addressing the needs of affectees who are susceptible to falling below the poverty line.

The provincial estimations, computed from the socio-economic estimations of Sub-Committee of NCC, posit that the additional number of people falling below poverty line in Sindh may range from 2.98 million to 5.69 million.

If estimations from Pakistan Institute of Development Economics (PIDE) are considered for Sindh, then a much worse situation would have to be confronted in terms of employment and poverty. PIDE estimates that expected layoffs among the vulnerably employed might range from 3.3 million to 4.2 million people. Similarly, the additional number of people falling below poverty line in Sindh may range from 6.26 million to 21.16 million.²¹

In terms of Government's Social Protection response to COVID-19, Federal Government's Ehsaas Program is in the process of disbursing Rs. 144 billion to 12 million families with Rs. 12000 per family. Government of Sindh launched a Corona-Virus Relief Fund of Rs. 3 billion on March 17 to fight the pandemic for which the contributions have exceeded Rs. 3 billion. Government of Sindh has released two financial tranches for procurement and distribution of ration bags that add up to Rs. 1.080 billion. Rs. 580 million was released on March 26 with Rs. 20 million released for each of the 29 districts and Rs. 500 million were released on April 6.

To cater to the COVID-19 impact through social protection measures, the Government of Sindh can expand the ambit of its Poverty Reduction and Social Protection programs to cater to three broad areas of **Social Assistance, Social Insurance and Labor Markets**. The Government has earmarked about Rs 12.3 billion for Social Protection and Poverty Reduction in ADP 2019-20.

Social Assistance is centered on non-contributory in-kind or cash transfers targeted towards the impoverished and vulnerable population. Government of Sindh has multiple social assistance programs executed through various Departments. For example, Zakat & Ushr Demand disburses education stipend, stipend to madrassas, marriage assistance, healthcare assistance, rehabilitation allowance, etc. Planning & Development Department through People's Poverty Reduction Program provides Community Investment Funds to impoverished women as a loan with flexible terms for income generating activities. Worker's Welfare Board provides assistance to workers' families including scholarships for students, financial aid for marriage and death grant for widows. Finance Department also provides assistance to the vulnerable people through its Sindh Social Relief Fund.

²¹ Pakistan Institute of Development Economics April 2020, <https://www.pide.org.pk/pdf/PIDE-COVID19-EBook.pdf>

For an integrated effort towards social assistance to COVID-19 affectees, the harmonization of social assistance programs can yield amplified impacts.

Recently notified 'Social Protection Strategy Unit'²² can serve as an umbrella organization to consolidate and rationalize social protection efforts. This includes rolling out rapid identification surveys to assess economic vulnerability due to the outbreak, identifying the coverage and funding gap to improve resilience and streamlining financing mechanisms for timely disbursement of social assistance. National Socio-Economic Registry Data can be used as a frame of reference for the impoverished households in Sindh. Rapid vulnerability surveys can be administered to augment the database and designing evidence-based social protection packages accordingly.

Social Insurance is centered on facilitating households and individuals for mitigation to ensure protection against risk factors like old age, disability, ill health and unemployment. In Sindh, social insurance is limited to old age pensions and healthcare for workers in the formal sector. Government of Sindh offers Employee Group Insurance for government employees and Health Insurance service for government employees to receive healthcare services from private hospitals in case of specialized medical treatment. People's

Poverty Reduction Program's (PPRP) Micro-Health Insurance is a social protection measure for the most destitute and vulnerable households (who lie in the 0-18 poverty band). The objective of the MHI is to protect impoverished families from health shocks that may push them deeper into poverty. MHI is for poor households covering parents, married couple with children up to 18 years old and the service package includes OPD, day care, diagnostic services, and hospitalization (for more than 24 hours' stay) and maternity care.

The ambit of social insurance in Sindh can be expanded considerably to include impoverished people, informal workers, daily wagers, piece-rate workers, street vendors and other vulnerably employed segments of population. Rural Support Programs (SRSO, TRDP, etc.) can be utilized to identify vulnerable households with existing poverty scorecards database along with rapid vulnerability assessment to offer health insurance services. Expanding the scope of MHI already being offered under PPRP can help reduce out of pocket expenditures considerably, especially for impoverished and vulnerable households. Active linkages with proximate health services, along with a pro-active awareness campaign to improve utilization by the impoverished communities, need to be pursued pro-actively. The provision of health insurance also needs to be expanded to urban impoverished communities who are disproportionately affected by COVID-19.

²² *Sindh Social Protection Policy Note, April 2019,*
<http://documents.worldbank.org/curated/en/941321557209507700/pdf/Sindh-Social-Protection-Policy-Note.pdf>

Labor Market Programs are centered on promoting employability and labor welfare to promote citizen's self-sufficiency through income generating activities and graduation from poverty. Sindh Technical Education and Vocational Training Authority (STEVTA) is the umbrella unit which comprises of Sindh Skills Development Project and Benazir Bhutto Shaheed Youth Development Programme (BBSYDP) (that is now Benazir Bhutto Shaheed Human Resource Research & Development Board). BBSHRRDB has trained 320,000 youth in 89 sectors till date. People's Poverty Reduction Program also has Vocational Training Program and Income Generating Grants to impart vocational training and give out small grants/loans to impoverished women.

Active Labor Market Programs (ALMP) are public sector labor market interventions that help the unemployed population find work. In Sindh's COVID-19 response effort, ALMP needs to be harnessed through STEVTA for the unemployed or vulnerably employed segments of population. Three broad areas of intervention would include public employment services, vocational training programs and employment subsidies. STEVTA is well-positioned to cater to the recently unemployed by providing critical employment-related information, augmenting skill-set of the unemployed (with monthly stipends) and engaging the recently unemployed in public-work programs. On the research front, STEVTA can initiate surveys to capture labor demand and supply dynamics through livelihood mapping, skills gap and employability analysis.

Other broad areas of intervention that fall under the purview of Social Protection include **Social Care Services and General Subsidies**. In terms of Social Care Services, Social Welfare Department has undertaken projects to rehabilitate street children, provide shelter to women victims of violence and rehabilitate disabled persons. Women Development Department has also developed projects to provide support through day-care centers to working women, skills development of women and alternate dispute resolution centers for women.

Government of Sindh already prioritizes providing subsidies to farmers, primarily through the Agriculture Department. These subsidies include wheat subsidy to maintain the support price and reduce fluctuation in the price of flour, subsidy on urea fertilizers to reduce input costs for farmers and subsidy to support small sugar-cane growers. Other subsidies include provision of tractors, solar- pumps/tube-wells and agricultural machinery at subsidized rates.

Government can build on the existing **social care services** to support the most vulnerable segment of population, especially women and children. Social welfare and women development projects can be expanded to bolster the relief efforts of the Government through identification of vulnerable women and children in need of cash, in-kind and social support services. Remedial education for children in vulnerable households can be initiated along with skills development program for marginalized women to cope with the economic impact of COVID-19. Behavior change communication programs and community awareness programs can be conducted to raise awareness on social distancing and other healthy behaviors. Psycho-social support can also be provided to the mentally stressed individuals with provisions of both remote and in-person consultations.

The scope of subsidies can be restructured with an 'equity' objective of addressing poverty and vulnerability. Targeted subsidies to support the impoverished and vulnerable households need clearly delineated identification criteria (e.g., economic vulnerability assessment) to help the marginalized segments of population cope with socio-economic shocks associated with COVID-19. Streamlined

process of identification and targeting can amplify the positive impact of subsidies without putting added pressure on the resource envelope. Seven most vulnerable districts in terms of food security (Badin, Dadu, Sanghar, Tharparkar, Umerkot, Jamshoro, and Shahdadt) can be prioritized in terms of provision of food subsidies. Provision of subsidies must be prioritized based on vulnerabilities and deprivations.

Development Priorities for Social Protection Response to COVID-19 Impact

Area of Support	Intervention(s)	Relevant Government Department(s)
Social Assistance	Identification of vulnerable households Streamlining disbursement of social assistance Harmonization of Efforts to address coverage and funding gaps	Social Protection Strategy Unit, PPRP, Ehsaas (PASS), Finance Department, Zakat & Ushr Department
Social Insurance	Expand the ambit of health insurance to include unemployed and vulnerably employed	Finance Department, Health Department, PPRP
Labor Market Programs	Active Labor Market Program: Public Employment Services Vocational Training Programs Employment Subsidies	STEVTA, Finance Department, Works & Services, Labor Department
Social Care Services	Bolster relief efforts by identification of vulnerable women and children Support remedial education to affected children Support skills development initiatives for impoverished women Social support service extension (e.g. mental health)	Social Welfare Department, Women Development Department, Social Protection Strategy Unit, STEVTA, PPRP

General Subsidies	Restructure scope of subsidies with 'equity' objective Conduct economic vulnerability assessment for identification and targeting Prioritize phase-wise provision of subsidies based on vulnerabilities	Agriculture Department, Food Department, Finance Department, PPRP
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Conclusion

The assessment of estimated GDP Loss, Job Loss and Poverty Incidence has been conducted with the intention of providing quantifiable macro-economic and socio-economic impact possibilities of COVID-19 on Sindh. The overarching idea of conducting the assessment is to ascertain the quantum of response to guide economic recovery and social protection efforts of the province. Possible economic recovery and social protection responses have also been provided to respond to the emergent situation. It is acknowledged that the COVID-19 situation is uncertain and dynamic, but this document can serve as a frame of reference for the provincial government to keep assessing the evolving situation and strategizing based on the evidence at hand.

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A high-angle photograph of a business meeting. Two people in blue suits are shaking hands. One person is holding a tablet, and another is pointing at the screen. In the background, there are documents with charts and graphs, including a bar chart and a pie chart. The overall scene is professional and collaborative.

**Charting the Course of Doing
Business Reforms in Pakistan
with Lessons from Top Global
Performers**

Introduction

The instrumental role of the government in providing regulatory environment to foster investments in business activities cannot be overstated. For sustainable economic growth in a country, it is imperative that the local and foreign businesses are provided sufficient institutional support to flourish. For businesses to thrive, the entire process of opening a business, getting a location, accessing finance, day-to-day operations and secure business environment needs to be adequately structured. Although the overall macro-economic environment and various exogenous factors play a contributing role in determining economic and business activities, the regulatory framework of a country needs to be tailored to address the needs of the business community. A business-friendly ecosystem can only be created if the government strives to provide end-to-end solutions to any constraints or potential problems that may be encountered by businesses. The 'systems' approach entails robust mechanisms that are dynamic enough to cater to the business community in a country. This report will focus on the Doing Business Reforms in Pakistan, particularly in Sindh, juxtaposed with the top performing countries in terms of ease of doing business index. The lessons drawn from globally recognized practices can help Pakistan in developing innovative solutions for catalyzing business growth across sectors.

Background

Before delving into the indicators used to determine the Doing Business rankings, it is necessary to briefly review its beginnings. The development of doing business index can be traced back to Joseph Stiglitz's stint as the Chief Economist of the World Bank in the early 2000s. The overarching objective of the initial research was grounded in determining the role of institutions in the development. World Bank Economist, Simeon Danjov, teamed up with professors Andrei Shleifer and Oliver Hart to formulate six doing business indicators for 133 countries in 2003. Djankov has documented the origin of the Doing Business Index in his report titled **'The Doing Business Project: How it Started'** The indicators included the procedures, time and costs associated with starting a business, enforcing contracts, getting credit and closing a business at that time. With time, the number of broad indicators has expanded to 12 reform areas as reflected in the latest **Doing Business 2020 Report**. These include starting a business, employing workers, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, resolving insolvency and contracting with the government. The obvious strength of Doing Business Index is the benchmarking the business regulations for comparability across countries. Standardization of indicators maybe helpful for scoring the business regulatory performance of countries, but the universality of these indicators might be predicated on one-size- fits all assumptions. Nonetheless, the utility of ease of doing business rankings help in gauging the country's overall performance relative to other economies and its own performance in preceding years. It might be argued that important determinants, like the macro-economic and socio-political variables, are not included in the index. However, with all its limitations, ease of doing business index is a useful indicator to examine how economies are faring in terms of overall regulatory environment for businesses.

The following sections of the report will focus on the recent Doing Business Reforms in Pakistan that have catapulted the country's ranking from 147 in 2018 to 108 in 2020. The case studies of a few top-performing economies will also be examined to draw lessons for Pakistan in catalyzing its progress in terms of improving overall business environment in the country.

Recent Reforms in Pakistan

In Pakistan, the Doing Business rankings had regressed over time from 85 in 2009 to 148 in 2016. However, recent doing business reforms have catapulted Pakistan's ranking from 147 in 2018 to 108 in 2020. Pakistan has been termed among the top 10 doing business reformers in the world. This reflects a pro-active approach by the government to create a sound regulatory environment for businesses in the country. Pakistan's performance improved considerably during 2019-20 in the six reform areas of starting a business, dealing with construction permits, getting electricity, registering property, paying taxes and trading across borders. Doing business rankings are a composite index of two largest cities in a country, which are Karachi and Lahore in Pakistan. In the overall ranking for the country, Karachi is given a weightage of 65% while Lahore is given a weightage of 35%. This essentially means that the persistence of concerted efforts of the Federal, Punjab and Sindh Government can yield amplified benefits in terms of further improving the doing business rankings. In a recent press release by the World Bank, the following reforms within Pakistan were lauded as contributing factors in jumping 28 places in the recent 2020 report:

“Starting a Business: Pakistan made starting a business easier by expanding procedures available through the online one-stop shop. This reform applies to both Karachi and Lahore. Furthermore, Pakistan (Lahore) abolished the Labor Department registration fee.

Dealing with Construction Permits: Pakistan (Karachi) made obtaining a construction permit easier and faster by streamlining the approval process and also made construction safer by ensuring that building quality inspections take place regularly. Pakistan (Lahore) also made obtaining a construction permit easier and faster by streamlining the approval process and by improving the operational efficiency of its one-stop shop for construction permitting.

Getting Electricity: Pakistan made getting electricity easier by enforcing service delivery time frames and by launching an online portal for new applications. Pakistan also increased the transparency of electricity tariff changes. This reform applies to both Karachi and Lahore.

Registering Property: Pakistan (Karachi) made property registration faster by making it easier to execute and register a deed at the Office of the Sub-Registrar. Pakistan (Lahore) made registering property easier by increasing the transparency of the land administration system.

Paying Taxes: Pakistan made paying taxes easier by introducing online payment modules for value added tax and corporate income tax, and less costly by reducing the corporate income tax rate. This reform applies to both Karachi and Lahore.

Trading across Borders: Pakistan made trading across borders easier by enhancing the integration of various agencies in the Web-Based One Customs (WEBOC) electronic system and coordinating joint physical inspections at the port. This reform applies to both Karachi and Lahore.”

As mentioned earlier, the dimensions of procedure, time and cost associated with each indicator and sub-indicator affect the ranking significantly. The common threads shared by top performers and reformers mentioned in the Doing Business Brief include “widespread use of electronic systems like online business incorporation processes, electronic tax-filing platforms, online procedures of property transfers & construction permits coupled with sound business regulations and a high degree of transparency.”

A pivotal shift in Pakistan is the utilization of information and communications technology (ICT) for simplification of procedures and reduction of time taken across several indicators. **Punjab Information Technology Board (PITB)** launched an integrated **business registration portal in Punjab** in 2018 and replicated the same **portal for Sindh** in 2019. This effectively means that businesses can register with social security, labor and industries department with a click of a button in Pakistan. Government of Sindh recently waived the labor registration fee to ensure hassle-free online registration of businesses through the portal.

From 2018-19, some notable reforms documented in the **Pakistan’s Doing Business Reform Journey** are as follow:

“Protection Minority Investors: Pakistan increased minority investor protections by making it easier to sue directors in case of prejudicial transactions with interested parties. This reform applies to both Karachi and Lahore.

Resolving Insolvency: Pakistan made resolving insolvency easier by introducing the reorganization procedure and improving the continuation of the debtor’s business during insolvency proceedings. This change applies to both Karachi and Lahore.

Registering Property: Pakistan (Lahore) made registering property easier by streamlining and automating administrative procedures, and by increasing the transparency of its land administration system. Pakistan (Karachi) made registering property easier by increasing the transparency of the land registry.

Starting a Business: Pakistan made starting a business easier by enhancing the online one-stop registration system, replacing several forms for incorporation with a single application and establishing information exchange between the registry and the tax authority. This change applies to both Karachi and Lahore.”

Pakistan’s doing business reform journey should continue on the current trajectory to improve the regulatory environment for businesses to thrive and contribute to the country’s economic growth. A blend of institutional support, technological innovations and multi-sectoral collaboration can bring Pakistan in the limelight as the top 25 doing business performs in the world. A robust system with feedback loop can result in real-time monitoring, evaluation and course correction of the procedures. From a purely economic standpoint, the investments made today in improving the business eco-system will yield enormous socio- economic benefits. In the next section, the report focuses on the recent (post-2020) Doing Business Reforms in Karachi (Sindh).

Recent Reforms in Karachi (Sindh)

With the launch of Sindh Business Registration Portal in February 2019, the Government of Sindh has undertaken a series of reforms to further improve the doing business rankings. Furthermore, a dedicated Doing Business Reforms Implementation Unit (DBRIU), housed in the Investment Department, has been operationalized for the execution of doing business reforms. Some of the notable initiatives which may be reflected in the Doing Business 2021 Report are mentioned below:

“In **Dealing with Construction Permits**, the number of procedures to obtain construction permits has reduced from 15 to 7. Sindh Building Control Authority (SBCA) has reduced the time to grant construction permits from 60 to 30 days, time for completion certificates from 45 to 30 days and has exempted three No- Objection Certificates (NOCs). Unscheduled inspection has also been reduced considerably.

In terms of **Registering Property**, the overall time required to register property in Karachi has been reduced from 208 days to just 17 days. Board of Revenue (BoR) has eliminated two procedures in registering property; reducing the number of procedures from eight to six. The cost has also been reduced from PKR 360,058 to PKR 342,058. Karachi Water & Sewerage Board (KW&SB) has abolished the requirement of PT-1 form to reduce the process of NOC issuance. The application form for commercial connection has also been reduced from 18 pages to 2 pages.

In terms of **Starting a Business**, the summary of labor fee registration fee waiver has been approved by Sindh Cabinet which will reduce the cost, time and procedures for business registration in Karachi. Similarly, Sindh Employees Social Security Institutions (SESSI) has completed the online registration process to operationalize three-payment of employers' contributions.”

With Pakistan making considerable headway in terms of Doing Business rankings, it is recommended that laudable initiatives to bolster businesses around the world are also considered and studies to implement similar initiatives in Pakistan's context. The next section will examine thematic case studies to draw potentially imitable practices. These practices can serve as benchmarks for Pakistan to emulate the most suited models.

Global Examples

The role of training in facilitating entrepreneurship and property rights: Even though capacity building is the cornerstone of initiating and sustaining reforms, the World Bank team has found that in economies surveyed for Doing Business 2019 report and case studies “only 24% of the economies measured for this case study legally require professional training for business registry officers.” In terms of the effectiveness of mandatory trainings the team found that “mandatory training for business registry officers is associated with higher business registry efficiency while annual training for land registry officers is also associated with higher land registry efficiency.” This warrants a need for comprehensive capacity building programs to be mandated for officers who are at the service delivery front to catalyze the doing business reforms that are pushed at executive level to improve the rankings.

Enforcing Contracts and Resolving Insolvency Training and efficiency in the judicial system: When discussing the reforms across all indicators that are being pursued proactively, the importance of enforcing contracts cannot be overstated. Judiciary can play an instrumental role in Pakistan to improve

contracts enforcement in commercial cases vis-à-vis dedicated commercial courts and effective alternative dispute resolution mechanisms. In the economies surveyed for Doing Business 2019 report, the team found that “only 101 of the 190 economies measured by Doing Business have a specialized commercial jurisdiction in place; only 31 have a specialized court handling insolvency case.” It is worth reiterating that capacity building initiatives would be the cornerstone of introducing and sustaining meaningful reforms for the contract’s enforcement indicator. The Doing Business team found a strong association between training and implementation of contracts enforcement reforms. “Training formed a central part of the United Arab Emirates’ strategy to modernize its judiciary and has been instrumental in the successful creation of specialized commercial courts, the introduction of electronic case management systems and the implementation of a new insolvency regime.” Similarly, “Institutionalized training programs for judges in Indonesia supported the successful implementation of reforms establishing small claims courts and the successful adoption of new insolvency laws, decreasing the time to resolve insolvency cases.” Operationalization of court-annexed mediation courts and dedicated commercial benches coupled with effective & transparent case management system can go a long way in improving contracts enforcement score in Pakistan.

Paying taxes: Transitioning from manual to electronic filing and payment: In terms of paying taxes, Pakistan’s ranking is quite low at 161 and needs measure improvements. The most important potential areas of improvement include the number of tax payments per year and the post-filing index which comprises of VAT and corporate income tax refunds & audits. Even though the Federal Board of Revenue (FBR) has introduced e-filing and e-payments systems online platform, the readiness of both taxpayer and administrative staff in transitioning from paper to electronic system from end-to-end taxation process remains a challenge. According to the paying taxes case study for Doing Business 2019 report “Factors inhibiting the adoption of technology by tax administrations and taxpayers include low literacy levels, unreliable information technology (IT) infrastructure, and poor availability of suitable accounting and tax preparation software.

The case study of China in improving the paying taxes indicator can be instructive for Pakistan. According to the Doing Business case study “In Doing Business 2006, businesses in Shanghai spent 832 hours per year on average to prepare, file, and pay taxes, and they had to make 37 payments. By Doing Business 2020, these metrics have been reduced to just 138 hours per year and 7 payments.”

China has leveraged existing social media platforms for user-friendly taxpayer services. According to the case study: “In 2014 China integrated taxpayer services functions through a mobile tax application and launched official accounts on the two main Chinese social media platforms (WeChat and Weibo). In 2015, the Internet Taxation Initiative unlocked the potential of big data for taxpayer services, such as data sharing among government bodies, online training, and e-invoices. The State Taxation Administration launched the Golden Tax III system in 2017, which facilitated e-filing of different stamp duty taxes.”

Pakistan can learn from China in introducing user-friendly taxpaying and compliance services. Punjab Information Technology Board has recently introduced an **E-Payment Gateway** for businesses to pay various taxes through a single click of button. Similar initiatives can be replicated in Sindh through easy-to-use ICT solutions in simplifying the tax payments and compliance procedures. The role of capacity development initiatives in this regard cannot be overstated.

Way Forward for the Government of Sindh

From the perspective of Government of Sindh, the roadmap for Doing Business reforms action plan requires concerted efforts along the lines of institutional strengthening & capacity building, user-friendly technological solutions and multi-sectoral collaborations. The recently formulated Provincial Steering Committee and a dedicated Doing Business Reforms Implementation Unit can be instrumental in carrying out necessary reforms that result in a business-friendly environment in the province, especially Karachi.

With time, Government of Sindh can greatly benefit from an in-house Information Technology Board similar to the Punjab Information Technology Board which has helped replicated quite a few technology-driven doing business initiatives of Punjab in Sindh. Similarly, **Karachi Neighborhood Improvement Project** has facilitated SBCA in automation of construction permits and development of Single-Window Facility for Category-I buildings which will be extended to other categories too. World Bank assisted mega project '**Competitive and Livable City of Karachi**' project would also extend technical and technological solutions to promote ease of doing business in Karachi. However, an in-house technology board can roll out e-solutions in real time for Sindh-specific initiatives that will help reduce time, cost and procedures facing the businesses in the province.

It should be noted that technology is not a first-order problem when it comes to the doing business reforms. The readiness of technology usage requires mandatory trainings of the relevant officers and community at large to improve the uptake of technological reforms. If an e-Payment Gateway is introduced, the relevant government officers and the business community should be well-aware of how to use the updated systems effectively. This entails comprehensive and mandated programs with digital literacy modules to improve the readiness of adopting technological solutions.

The role of transparency and effective grievance redressal mechanisms cannot be overstated. For example, the commercial cases pending in court should be made public so that the status of any proceeding can be followed-up without any hassle. Similarly, the status/statistics of complaints resolution by relevant departments should be publicly available in real-time to show the effectiveness of grievance redressal mechanisms of different departments. Transparent practices instill confidence in businesses that any complaints are being proactively pursued for resolution by the departments. Such simple practices can yield monumental gains for the country in terms of improving the overall business environment.

In terms of enforcement of contracts, Pakistan still has a long way to go in implementing serious judicial reforms that can circumvent the longstanding litigations when it comes to commercial disputes. Although the Governments of Punjab and Sindh have made amendments in the Code of Civil Procedure 1908 to introduce the provision for alternative disputes resolution, much needs to be accomplished to expedite commercial disputes resolution mechanisms. Government of Punjab has already operationalized the mediation center and has also recently introduced a stand-alone Alternative Dispute Resolutions Act 2019 to make headway in circumventing the problems of longstanding commercial litigations. Government of Sindh should work with the judiciary to introduce court-annexed mediation centers along with dedicated commercial benches for expediting the commercial disputes resolution. Sindh Judicial Academy is well-positioned to impart quality trainings for ADR and other requisite modules that may catalyze progress in terms of the contract enforcement indicator of Doing Business.

Conclusion

To develop a business-friendly ecosystem, there needs to be a continuous interaction between government, businesses and other relevant stakeholders to identify and address any bottleneck. From the Government's point of view, rigorous monitoring and evaluation tools with real-time data must be available for proactive corrective actions. Grievance redressal mechanisms need to be robust for expeditious complaint resolutions of the businesses. Similarly, judicial reforms are the need of the hour to operationalize mediation courts and dedicated commercial courts to resolve commercial disputes and avoid tedious litigations.

Ultimately, a dynamic system needs to be in place for ensuring that the prescriptive reforms ranging from execution of property deed, expansion of single-window facility to category II, III & IV buildings to operationalization of mediation centers and case management system are being implemented as envisioned by the key stakeholders.

Pakistan must not restrict itself to the indicators developed by the World Bank team when devising strategic plans for improving the business environment in the country. To reinvigorate economic growth, business activities and investments in the country, structural macroeconomic changes are required by Ministries of Commerce, Investment, Finance and the State Bank of Pakistan. In the digital age, Pakistan is among the top economies of the world in terms of exporting freelancing services. An extremely dynamic regulatory framework is required to foster Pakistan's young cohort of freelancers to sell their services globally that would translate into increased inflow of foreign currency (especially dollars) in our economy.

A unified macroeconomic framework is imperative to send the right signals to potential investors and businesses. Government's role must be to introduce flexible regulatory regimes that foster innovation & entrepreneurship rather than complex procedures that results in penalizing businesses and causing capital flight. Ultimately, a coherent business policy framework that is implemented in its true spirit will culminate into a vibrant eco-system of businesses in Pakistan.

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STATE OF FOOD SECURITY IN PAKISTAN

**An In-Depth Analysis of Food Security in Pakistan and Sindh
Using Agriculture Productivity Time-Series and Sensitivity
Price Index Data**

Abstract

The problem of food security is multi-dimensional which is directly and indirectly affected by overlapping issues such as insufficient food supply, inadequate purchasing power, unaffordable housing, social isolation, and chronic or acute health problems. In Pakistan, rising prices coupled with unexpected droughts, and hoarding has worsened the situation of accessibility and availability to food. The recent outbreak of the global COVID-19 pandemic and Locust attacks may have substantially compounded the food crises problem within Pakistan. The report tries to capture the present state of food security in Pakistan and Sindh through a time-series analysis of agricultural productivity and also using Sensitivity Price Index (SPI) to analyze variation in production and distribution of crops. Pakistan is a developing country and faces various socio-economic issues, including extreme poverty and food insecurity. According to National Nutrition Survey 2018, 36.9% of the total population in Pakistan is food insecure and Sindh fares even worse at 47.1%. District-level food security analysis of Sindh showed that almost 60% of the Thar population was facing severe food crises and shortage of basic food commodities. District Umerkot showed almost 0.1 million people are facing severe food crises and less than 40% of the district's population is facing intense yet relatively milder level of food crises. During the last decade, almost 25 to 50 % decline was recorded in production of vegetables and almost 300% decline was recorded in production of essential grains like Moong, Masoor and Mash. A substantial decrease was witnessed in yields overtime in tandem with rising prices of essential commodities. Food security requires a holistic multi-dimensional approach that focuses on water-efficient agriculture productivity enhancement, targeted subsidies tied with technological upgradation, effective price regulation mechanisms, nutrition-specific and nutrition-sensitive interventions, and comprehensive social protection programs.

Introduction

It is estimated that globally, an average adult consumes around 3,000 kilocalories per day, and people who live in industrialized countries have been reported to consume even more. Globally, sufficient food is produced to feed the entire human population; however, still approximately 820 million people are living on daily diets that are significantly lower than the minimum recommended amount for a healthy body. This clearly indicates that distribution of food is uneven.

Pakistan is considered a lower middle-income country and has the sixth largest population in the world. According to the World Bank, it is estimated that average adult should have at least 2,350 calories to meet its daily requirements and maintain a healthy body¹. However, within Pakistan there is a great disparity in availability and accessibility to food between various income quintiles (groups) along with variability across regions. The average daily household caloric consumption per adult in Pakistan is equivalent to 2,033 calories², which is 13% lower than the officially recommended level of 2,350 calories per day as defined by World Bank. It is important to understand that if people don't receive sufficient number of calories from food that they have access to, then they are considered to be food insecure. According to the Food Agriculture Organization of United Nations, food security is defined as following.

*"Food Security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life"*³

(FAO 2000)

Dynamics Of Food Security

Pakistan, having a population of 210 million people, is blessed with cultivable land and a sizeable small-holders and agricultural labor population. The mainstay of the country's employment is agriculture and subsistence farming. More than 39% of the entire population is dependent on agriculture with a contribution of 19% to the total GDP (gross domestic product)⁴. It is alarming that a country which employs a significant population in the agriculture sector comprises of 41.4 million people who are either under-nourished or food insecure. There are four pillars that collectively contribute to a country's food security and if any of these pillars is missing, it will lead to a state that is generally known as food insecurity.

Availability Of Food (Pillar I)

The availability of food is the first and the most important pillar of food security in any region. According to the National Nutrition Survey 2018, more than half of households (63.1%) are "food secure" on the Food Insecurity Experience Scale (FIES) measure. However, over a third of population (36.9%) remains food insecure. In a country of more than 210 million people, that percentage is a large number. A larger percentage of households are food secure in Gilgit Baltistan (75.6%) and Khyber Pakhtunkhwa (70.9%) and experience less severe food insecurity in contrast to Sindh and Baluchistan.

¹ Worldbank.org/PGLP/Resources/povertymanual_ch3.pdf

² [Worldbank.com/Child Undernutrition in Pakistan What Do We Know? //](http://Worldbank.com/Child%20Undernutrition%20in%20Pakistan%20What%20Do%20We%20Know?)

³ Food Agriculture Organization of United Nations

⁴ Ministry of Finance /survey/chapters_19/2-Agriculture.pdf

Sindh and Baluchistan are considered to be the most food insecure provinces within Pakistan. Almost 47.1% of people living in Sindh are considered to be food insecure. Average caloric consumption of households in the poorest consumption expenditure quintile i.e. (bottom income quintile), at 1,570 calories, is 23% lower than the recommended level, and 27% lower than the average caloric consumption of households in the richest consumption expenditure quintile (the richest households), at 2,501 calories.⁵

The indicators for availability of food are primarily concerned with the supply side economics. **Agricultural productivity** inside Pakistan has significantly decreased over time; however, Pakistan is still ranked at 8th position in producing wheat, 10th in rice, 5th in sugarcane, and 4th in milk production throughout the world.

Through a time-series analysis, it could be observed that agriculture productivity of Sindh has decreased significantly in a decade's time. Wheat is Pakistan's staple food with a consumption of 124 Kgs/person per annum with an increase of roughly 9% over the last decade (**Refer to Annexure-I Table 2**). This is a significant amount of wheat intake and it should be noted that any shock to its supply affects a large segment of population which eventually leads to food insecurity. Similarly, Sindh is considered to be the largest producer of chilly across all provinces. However, in recent years its production has decreased by more than 35% which clearly shows that productivity is decreasing overtime. The production of all major grains had declined by almost threefold i.e., nearly 300%, with major decline observed in Mash, Masoor, Moong lentils that are essential grains for the bottom quintile income group. In addition, almost all the major crop's production has decreased not only in Sindh but across the country (**Refer Annex-I, Table 1 & 2**).

Currently, water productivity of most of the crops in Pakistan is lower than the desirable level. For instance, sugarcane and wheat use around four times the global average of irrigation water, while rice consumes more than six times the world's average. Going forward, growing water shortages are expected to drag down yield of different crops on a considerable scale.⁶

⁵ World Bank / Child Undernutrition in Pakistan: What Do We Know// 2017 /

⁶ Dawn/SBP report shines light on food insecurity//

Economic & Physical Access to Food (PILLAR II)

Adequate supply of food doesn't guarantee adequate food security at household level. Access to food depends on Income, expenditure, markets and prices stability to achieve food security objective. According to a report of State Bank of Pakistan, almost a quarter of Pakistan's population lives below the poverty line (set at Rs3, 030.3 per adult equivalent per month). This means that around 50 million people in the country are unable to access basic needs, given their income levels.

A high population growth, and unfavorable water and climatic conditions in the country mean that food insecurity may increase manifolds over the next two to three decades. Pakistan is naturally blessed and self-sufficient in producing agricultural and livestock commodities to levels that are used as essential foreign trade commodity. However, it is surprising to know that, in Pakistan, per capita consumption of food products with high- nutritional value like beef, chicken, fish, milk, vegetables and fruits are almost 6-10 times lower than that of developed countries.

The quarterly report of Pakistan Bureau of Statistics on Sensitivity Price Index (SPI inflation) is used to monitor price changes on weekly basis of essential food commodities. The latest figure stated by the report mentions that the prices of food commodities have risen by 18.3 %⁷ since last year. However, if measured through Consumer Price Index method, almost 23.65 % rise had been seen since last year in all food commodities including non-alcoholic beverages. Given that SPI only takes into account 52 essential food commodities and CPI aggregates all food commodities, it is surprising to know that CPI's inflation counter showed a greater increase in comparison to SPI. This proves that a higher rate of increase was witnessed in all food commodities, more than essential food items like (Rice, Pluses, Wheat, Tomatoes and Potatoes etc.) which showed relatively less increments. SPI through month-over-month analysis showed an increase by 0.5% in January 2020 as compared to a decrease of 2.0% a month earlier and an increase of 0.4% in January 2019 (**Refer Annex - I, Table 3**).

The bottom 60% of households in the country spends a substantial part of their incomes, almost 45% on food⁸. Even if prices are relatively low and stable, poorest families still lack the purchasing power to buy food.

The first or the bottom quintile income group has been affected the most in recent years by the current economic condition of Pakistan that is termed as 'stagflation' in economics. Stagflation is a phenomenon whereby people face sever unemployment crisis coupled with rising prices and declining gross domestic productivity. According to the statistics, least sensitive income group to the price change in essential commodity is the 5th or the highest income quintile group. This essentially means that the richer households are least susceptible to price variations in essential commodities.

⁷ http://www.pbs.gov.pk/sites/default/files//price_statistics/weekly_spi//

⁸ <http://www.sbp.org.pk/reports/quarterly/fy19/Third/Special-Section-2.pdf>

Through a time-series analysis using SPI data set between years 2008-2017, it was observed that the rising inflations has caused the purchasing power of the poor to shrink. Almost 75% increase in prices has been witnessed in last 10 years. The SPI in year 2008 was recorded at 121.11 points and in year 2017 it was recorded at 223.35 points⁹. This shows a significant increase within a decade. Since SPI considers 52 essential good's prices on weekly basis, the variations in terms of inflating SPI figures are much higher than in nominal incomes and gross domestic productivity. As a result, real income/purchasing power decreases which translate into reduced food accessibility.

Food accessibility is also highly vulnerable to economic and environmental shocks. This means that the behavior of market has a great impact on people and the way they consume things. Pakistan's food security has declined since the 2000s, due to a succession of environmental disasters, conflicts and economic crises etc.

Food availability is as important as food production for food security. Pakistan has been facing food crisis not just due to constant price rise, increased import bills and declining productivity, but also due to natural calamities and shrinking incomes coupled with large- scale hoarding. These factors lead to reduced access to food that ultimately translates into food insecurity.

Food Consumption (PILLAR III)

Another important pillar that determines food security is "Food Utilization". This means that adequate food supply and its consumption, in terms of sufficient quantity, diversity & nutritional value, is an essential component of food security in any country. It is surprising to see that a food surplus country, like Pakistan, has a stunting prevalence of 40% among the children under 5 years (low height-for-age) and two in ten have been suffering from wasting (low-weight-for height) in the country¹⁰.

In 2019, Pakistan was ranked 94th among 117 countries¹¹ surveyed for the Global Hunger Index, and has been characterized as facing a "serious" level of hunger. In fact, Pakistan is among those seven countries that cumulatively account for two-thirds of the world's under- nourished population (along with Bangladesh, China, Congo, Ethiopia, India and Indonesia).¹²

⁹ http://www.pbs.gov.pk/sites/default/files//price_statistics/weekly_spi//

¹⁰ Nation Nutrition Survey Pakistan 2018//

¹¹ Global Huger Index / Pakistan // 2019

¹² Food and Agriculture Organization of the United Nations//

From an equity perspective, food utilization has been characterized by the availability of nutritious food for the underprivileged population. This means that every individual must receive a diet that is balanced and provides sufficient amount of nutrition to carry day to day activities. However, in Pakistan, around 50 million people are unable to access basic needs given their incomes. This is a clear indicator that over a third (36.9%)¹³ of population remains food insecure and is unable to access high energy and nutritious food.

People in the rural part of Pakistan, particularly Sindh, are completely reliant on crops, like wheat and vegetables, for consumption which are not considered adequate in providing all the essential nutrients to the body. Each year, Pakistan is estimated to have an economic loss equivalent to 2.35% of GDP (US\$ 7.6 billion)¹⁴ due to malnutrition and its associated outcomes. In particular, high child mortality rates, prevalence of zinc and iodine deficiencies, stunting, and anemia, lead to deficiencies in physical and mental development that reduces labor productivity and loss of future effective labor force in the country.

According to the National Nutrition Survey 2018 figures, Pakistan lags behind the universal levels of Minimum Dietary Diversity. The Proportion of children aging from 6-23.9 months of age who receive foods from 4 or more food groups which includes grains, roots and tubers; legumes and nuts; dairy products (milk, yogurt, cheese); flesh foods (meat, fish, poultry and liver/organ meats); eggs; vitamin A rich fruits and vegetables; other fruits and vegetables are considered to be a mere 14.2% in Pakistan and the condition of Sindh is even worse at 12.6%.¹⁵ Complementary foods that meet the requirements of a minimum acceptable diet to ensure optimal growth and development for children aged 6-23 months are provided to less than one in 20 children (3.6%). These are seriously low levels of nutrition outcomes for a lower-middle income group country.

The major hurdle that explains the poor levels of MDD inside Pakistan and Sindh revolves around complementing factors like lack of purchasing power for high nutritious food, price, access & availability. Other factors may also include nutrition-related awareness at rural and sub-urban levels.

Stability In All Dynamics (PILLAR IV)

Stability in all the above dynamics/pillars is essential to ensure food security within Pakistan. All 3 pillars of food security are interconnected. Because agricultural productivity is the primary driver for supporting availability of food, its production has to be maintained at a pace that must increase over time to match or outstrip the increase in population. Pakistan is a water-stressed nation; therefore, increasing agricultural productivity warrants prudent planning. To increase agricultural productivity, it is inevitable to use conservation methods like Drip Irrigation, Hybrid Seeding, Laser Leveling and Flood Water Storing. This will not only help in meeting the increasing demand for food but will also help in reducing stress on water availability throughout the country. Factors that contribute to food insecurity in a country include import dependence for certain items, which is partly responsible for significant variations in their prices.

¹³ National Nutrition Survey 2018/
<https://www.unicef.org/pakistan/sites/unicef.org.pakistan/files/201907/Final%20Key%20Findings%20Report%20019%20%281%29.pdf>

¹⁴ Report on "The Economic Consequences of Undernutrition in Pakistan: An Assessment of Losses" (2017), launched by the Pakistan Scaling Up Nutrition (SUN) Secretariat at the Ministry of Planning, Development and Reform, in collaboration with UN's World Food Program.

¹⁵ National Nutrition Survey 2018

In particular, serious attention must have to be paid to the local production of minor crops, such as pulses, fruits, vegetables, nuts & oilseeds, and livestock produce which jointly contribute to around 50 percent of dietary energy. Furthermore, prices of meat and dairy products have increased significantly which shouldn't be the case because Pakistan is considered self-sufficient in raising its livestock without relying on significant imports. In contrast, a large physical and financial infrastructure of government-run commodity operations works in the country to implement the support/ indicative prices for major food crops (especially wheat) to ensure their availability. Although these operations entail a large fiscal cost, these have proved helpful in maintaining commodity stocks and stabilizing the prices of these commodities over the years. But the measures taken by these agencies are not sufficient to ensure stability in prices, availability, access, and also provision of all essential food commodities.

Analyzing Sindh's Food Security Position

According to the Integrated Food Security Phase Classification (IPC) report, the province of Sindh has been analyzed closely in consideration to food insecurity where 7 most food insecure districts namely (Badin, Dadu, Sanghar, Tharparkar, Umerkot, Jamshoro, Shahdadkot) were studied.

According to a latest study conducted by IPC, it was found that province of Sindh is prone to multiple hazards. Drought or drought-like conditions have been prevailing in parts of Sindh since 2013, particularly in the southeastern and western districts: Tharparkar, Umerkot, and Sanghar (along the eastern border with India) and Jamshoro, Dadu, Qamber Shahdadkot (along the Western border of the province). The areas impacted by drought are heavily reliant on monsoon rainfall and with repeated years of low, or in some cases, complete absence of rainfall, the drought conditions have significantly exacerbated. The land of these 7 districts is considered Barren / Arid which means that the entire harvest is primarily dependent on rain and monsoon systems.

Due to the current dry spell, along with the inadequate availability of irrigated water, almost all the crops have shown a decline in the yields since last year. Therefore, inadequate food availability in these areas has contributed to the food insecurity. The entire rural population is heavily dependent on food that they grow because they tend to use their domestic crop for their own sustenance.

Analyzing the aforementioned seven districts revealed that almost 1.3 million people out of total population of 2.3 million people faced severe to extreme food insecurity. Almost 60% of the Thar population was facing severe food crises and shortage of basic food commodities. Similarly, in district Umerkot almost 0.1 million people are facing severe food crises and less than 40% of the population is facing intense yet relatively milder level of food crises. The crop area and production of major cereal crops has shown an overall reduction across all seven districts, and not just in the drought-notified areas. The crop area and production of wheat has reduced by 24% since 2014-15 in these 7 districts. Crop area and production in 2018-19 is estimated to be 17% (at 294,159 hectares) and 10% (at 960,701 metric tons) less than in 2017- 18.¹⁶

¹⁶Integrated Food Security Phase Classification (IPC)/ Acute Food Insecurity Analysis/ October 2018 – October 2019//

Impact Of Pandemic & Locust Attack

According to Global Huger Index, Pakistan ranks at 106th position out of 119 countries worldwide. The major chunk of country's population faces a widespread malnutrition and it is even worse in young and feeding children. Pre-COVID-19 figure states that almost 37% of the 220 million population is considered food insecure in Pakistan and 47% in Sindh. Food insecurity levels are alarmingly high in Pakistan even when compared to extremely food stressed nations like Yemen, the Democratic Republic of the Congo, Afghanistan, Ethiopia, Syria, Sudan, South Sudan and northern Nigeria.

Pakistan was already coping with issues of food security, but the recent COVID-19 pandemic has adversely affected the economy and disproportionately affected the vulnerably employed segments of population. The COVID-19 pandemic has resulted in increased poverty and unemployment in Pakistan. As a result of lockdown, Sindh may witness unemployment of more than 3 million labor force, and may push 3 million additional people below poverty line.¹⁷ It is inevitable that food crisis will exacerbate as a result of the recent pandemic if pro- active measures are not undertaken.

As the nation was struggling due to the impact of COVID-19, locust attacked a large proportion of crops. However, paddy crop was fully harvested and large parts of wheat and summer maize crops were reaped so the damage to the crops remained limited. This may or may not be the case in FY 2020-21. According to a recent Bloomberg report¹⁸, in Sindh locusts have already damaged wheat, oilseeds, pulses, fodder and vegetable crops on 166,701 hectares or 13.8% of the province's total cropped area. The production of major pulses and crops in Sindh were already on a declining trend before the attack, however, the locust attack may prove to be alarmingly detrimental to the production. The combined crisis of COVID-19 and Locusts attack also presents an opportunity to harness innovative sustainable solutions to ensure food security in the country.

It is evident that the state of food security would further deteriorate in the on-gong fiscal year i.e., 2020-2021 at national as well as provincial level. However, recovery from the aftershocks of locust and pandemic would require serious institutional reforms to mitigate the impact on food crisis.

¹⁷ Figures are extracted from "COVID -19 SINDH'S MACRO-ECONOMIC AND SOCIO-ECONOMIC IMPACT ASSESSMENT AND DEVELOPMENT RESPONSE FRAMEWORK" The computations have been estimated on the works of Hafiz Pasha and Shahid Kardar.

¹⁸ [Bloomberg/articles/2020-06-08/Locusts Pose A Bigger Economic Threat to Pakistan Than the Virus//](https://www.bloomberg.com/news/articles/2020-06-08/locusts-pose-a-bigger-economic-threat-to-pakistan-than-the-virus/)

Recommendations

Considering the intensity of food insecurity within the country following recommendations might help in reducing it, if not completely eradicating it.

- To ensure sufficient food production it is necessary to adopt modern and efficient cropping techniques and patterns. Pakistan is a water-stressed nation and the soil found here is not suitable for the production of Rice and Sugarcane. These cropping patterns must be revisited and stringent policies must be enforced to cultivate low water-intensive crops. This strategy will eventually help in maximizing the yields with efficient water-conservative techniques. World Bank suggests that Promoting farming systems that use climate-smart techniques may produce a more diverse mix of foods that will eventually improve food systems' resilience, increase farm incomes, and enable greater availability and affordability of nutrient-dense foods.
- Hybrid farming must be introduced in Pakistan so that yields can be maximized. Like globally followed practices, imported seeds along with drip sprinkler must be used that guarantees twice the yields so that adequacy of availability to food is ensured. Lack of detailed technical guidance, inputs and advice at a large scale limit the adoption of highly viable and tested technical improvements such as High Efficiency Irrigation Systems (HEIS), alternate energy, scientific orchards management, and better post-harvest handling, value chain management, processing and marketing. To tackle the current food security issue, it is important to adopt the aforementioned remedies at a rapid pace.
- Programmes like BISP (Benazir Income Support Programme) Bait-ul-Mal (PBM) and Social Security & Welfare, Pakistan Poverty Alleviation Fund (PPAF), Employees Old- age Benefit Institution (EOBI), and Workers Welfare Fund (WWF) have substantially provided relief to a large number of recipients. However, the safety net programs are working in a fragmented, isolated and often duplicative manner with limited coverage, covering approximately 4.9%¹⁹ of the total population as compared to a poverty rate of about 25%. Through independent research²⁰, it was found that over 80% of cash transfer beneficiaries of BISP prioritized food expenditure, prioritizing (High Nutritious) quality food intake for their household and particularly children. Many beneficiaries were found to be subsisting on ordinary staples (mostly wheat flour) with the extra cash providing them an additional buffer of security, and also enabling many to slightly diversify their diets. Ehsaas Program at federal level is a needful addition to move towards horizontal and vertical integration of the existing social safety net structure of the country. The program is effectively disbursing approximately 1% of total GDP nationwide in form of cash transfers. Intra- governmental coordination is required at federal and provincial level to eliminate fragmented efforts and work on integrated Social Safety Nets that are mostly reliant on cash transfers. The coverage of these SSNPs must also be increased to sustainably address poverty and food security-related issues in the country.

¹⁹ Nation Nutrition Survey Pakistan 2018

²⁰ Social Protection in Pakistan/ Asad Sayeed/SARNET Working Paper No. 2/2015/

- FAO has developed various food security-based programs for Pakistan like Zero Hunger Healthy, Safe and Nutritious Food for All, etc. Targeted Food Distribution Scheme(s) at national level, with counterparts at provincial level, must be established to ensure that basic food needs of the population are met, both in terms of overall calorie intake, as well as provision of essential micro-nutrients. The scheme can draw lessons from international experience, such as that of the Zero-Hunger Programme in Brazil; as well as national experience, such as that of the Benazir Income Support Programme. Food Security Assessment can become a part of National Socio-Economic Registry that can be updated at rapid intervals for a dynamic analysis of food security status at household level.
- Price regulation is a primary tool to control food crises. Federal and provincial governments must be capable enough to restrict price hikes and at the same time ensure availability of essential food commodities in the market. It must also be noted that the Price regulation must be done to reduce price variability. Distortion in market prices must not be a modus operandi because it increases burden on government budget and is detrimental to the profits of small and medium level growers. Ultimately, that burden is passed on to taxpayers.
- A major hurdle in controlling food crises is large scale hoarding which disrupts the food supply and market mechanisms. Hoarding often takes place due to administrative failure. It is impossible to break through this vicious cycle until regulatory authority stringently enforces penalties on hoarders and anyone who manipulates the supply chain for exorbitant profits. National and provincial regulatory authorities must work in close coordination to ensure strict monitoring of the entire food supply chain and ensure strict enforcement of penalties against hoarders. Credible private institutions can also be engaged for independent monitoring and evaluation of any mala fide manipulations of the market. Effective and transparent implementation mechanisms are imperative to prevent large-scale hoarding that artificially causes food crises.
- The government must also provide well-directed subsidies to the farmers and suppliers in order to deliver essential food crops to end user at minimum benchmark prices. The main idea of agricultural subsidy is to encourage farmers to use inputs which otherwise help in raising productivity, reduce cost, mitigate environmental problems and incentivize innovative practices. Apart from this, to maintain and develop parity of agriculture with other sectors, subsidies are justified. Government should avoid blanket subsidies and must target either small-scale farmers for protection against economic shocks or to export-oriented/innovative crop production to incentivize farmers to move to export-oriented products or adopt innovative practices to improve productivity.
- Rural population is adversely affected by any shocks in the agriculture sector with a major segment of population directly or indirectly employed in the agriculture sector. High incidence of rural poverty is a major concern for Pakistan which is deeply connected with problems plaguing the agriculture sector. Food-stressed rural regions within Pakistan can benefit greatly from establishment of rural growth centers to reduce the food crisis. RGCs can serve as hubs of integrated service delivery and markets which will provide not only employment opportunity with stimulation of economic activities, but will also raise living standards to minimize the stress on food crises within that region. Sindh has incorporated the concept of RGCs in its 'Poverty Reduction Strategy' which is being piloted in various parts of rural Sindh. RGCs are conceptualized as centers of integrated service delivery with upward and downward market linkages to spur rural economic growth vis-à-vis activities pertaining to comparative advantage in resource endowments.

- It must be noted that infant and young child feeding (IYCF) practices in Pakistan is critically sub-optimal and only 14.2% receive diet from 4 or more high nutritious food groups in Pakistan; and only 12.6% in Sindh. More than 80% of the young population is deprived of acceptable levels of dietary diversity. The demand-side constraints for nutritious diversified food may be due to the lack of awareness amongst the feeding and young mothers, coupled with low income. Common risk factors for poor child feeding are poverty and poor access to health and nutrition services in the community which can be termed as supply-side constraints. This underlines the need to improve the capacity of programs, health professionals, and community workers to support good complementary feeding. Especially for rural areas of Sindh, it is recommended for urgent nutrition support such as complete Community-based Management of Acute Malnutrition Model (CMAM) programme/packages including Targeted Supplementary Feeding Programme (TSFP) component for Moderately Acute Malnourished Children (MAM) as well as other nutrition sensitive interventions.
- Income (or lack thereof) is also one of the prominent hurdles that contribute to the food shortage severity. Real Income, which is essentially one's purchasing power, is affected by inflation. Ideally, the nominal income level must be commensurate with the level of inflation. However, in Pakistan, a stagflation like situation has translated into increasing levels of inflation with stagnant levels of nominal income which essentially means a reduction in real income/purchasing power. Reduced real income further decreases food accessibility, especially for lower-income groups. Therefore, it is recommended that if income standards cannot be increased substantially, then government at federal level must control inflation on essential food items, ensuring its accessibility amongst the masses.
- The basic proposition in reducing food crises revolves around availability of food in general. The supply chain management system of wheat under the federal and provincial government is significantly weak that allows middle-men to artificially inflate the prices and create shortages, hence, affecting the marginalized and vulnerable segments. Pakistan must work to strengthen its regulatory mechanism, like Australia, to prevent all sorts of cartel and inefficiency from its wheat market.
- Increasing the productivity of essential food grains must be a policy imperative. This means that production of staple foods like wheat, rice and sugar, tomatoes, potatoes and onion etc. must receive special attention. Because Pakistan has one fourth of its population below poverty line, pro-active measures must be taken to improve the quality and quantity of production of these essential crops which is treated as their primary source of energy. With increasing population growth, the country needs to incentivize productivity enhancement and technology upgradation to improve the productivity of staple foods.

Conclusion

Pakistan is a low-income developing country and agriculture is its most important sector due to its primary commitment of providing healthy food to the country's fast-growing population. In the past 73 years, the total cultivable land of Pakistan has just increased by 40 percent, while there was more than 40 times increase in population during the same period. Rapid population growth along with massive urban expansion is causing increasing pressure on the cultivated land. Tremendous efforts are needed to narrow the gap between food demand, due to population growth, and domestic food production. Managing food security in Pakistan requires an understanding on how agricultural policies affect food supply and incomes, and the poor vulnerable population in rural and urban areas. Since, Pakistan is a severely food-stressed country, with almost 37% of population widely affected by the food scarcity, the recent outbreak of COVID-19 coupled with locust attack has critically damaged the dynamics of food and crop production inside Pakistan. Because population control is a sensitive concept in the country, added pressures can be presumed to continue in terms of food demands in future. Therefore, it is recommended that Pakistan must learn from global practices that entails use of high yielding methods using modern practices like, drip irrigation and hybrid farming to maximize yields. Increased mechanization and improved productivity are heavily reliant on effective institutional arrangements at national as well as provincial level. Lack of coordination between the provinces and the center has greatly affected the present situation of food security in Pakistan. Central institutions, like Ministry of Food Security and Research and PASSCO, can play a pivotal role in addressing the food crises at national level. Programs, like Zero-Hunger, must be undertaken to leverage cash transfers that encourage spending on necessary food items for improved dietary diversity levels. Targeted subsidies must also be provided and blanket subsidies must be avoided to incentivize the resource-constrained farmers in adopting innovative practices for improved yields. Eliminating food crises is a mammoth challenge within a country like Pakistan where administrative inefficiencies exist. However, since Pakistan's principal natural resources are arable land and water, it is possible to beat food crises inside Pakistan. The main component needed is collective willingness and efficient administrative control. Ministry of Food Security and Research can spearhead meaningful initiatives to foster inter-provincial collaboration that addresses the availability, accessibility and consumption dimensions of food security in Pakistan.

Annexure-I

Table 1

Sindh's Production in Major food crops in last 10 years			
Crops	2008-09	2016-17	% Change
Banana	128.89	111.67	-15.42
Chilli	172.20	126.20	-36.45
Citrus	30.53	26.31	-16.04
Dates	261.95	202.30	-29.49
Garlic	14.31	6.80	-110.44
Onion	660.17	747.50	11.68
Bajra	45.00	23.30	-93.13
Barley	3.60	4.70	23.40
Gram	31.60	18.50	-70.81
Jowar	33.00	12.40	-166.13
Maize	1.70	3.60	52.78
Mash	0.30	0.10	-200.00
Masoor	3.60	0.90	-300.00
Moong	5.80	1.30	-346.15
Potato	3.00	5.60	46.43
Rice	2537.10	2661.60	4.68
Sesamum	3.50	4.80	27.08
Sugarcane	13304.30	20208.90	34.17
Tomato	100.90	195.80	48.47
Wheat	3540.20	3910.40	9.47

Table 2

(Production '000' Tones.)

Pakistan's Production in Major food crops in last 10 years			
Crops	2008-09	2016-17	% Change
Banana	157.32	134.90	-16.6
Chilli	187.70	142.90	-31.4
Dates	566.49	438.99	-29.0
Onion	1704.14	1833.30	7.0
Bajra	296.40	304.90	2.8
Barley	81.50	58.00	-40.5
Gram	740.50	329.70	-124.6
Jowar	164.50	148.70	-10.6
Maize	3593.00	6134.30	41.4
Mash	13.60	7.20	-88.9
Masoor	14.40	7.60	-89.5
Moong	157.40	130.20	-20.9
Potato	2941.30	3831.70	23.2
Rice	6952.00	6849.30	-1.5
Sesamum	41.00	34.10	-20.2
Sugarcane	50045.40	75482.20	33.7
Tomato	561.90	569.00	1.2
Wheat	24032.90	26673.60	9.9

Table 3

Table 1.a General Inflation (%) (Base 2015-16)																		
PERIOD	CPI														SPI**		WPI	
	General						Food				Non-Food							
	National		Urban		Rural		Urban		Rural		Urban		Rural		YoY	MoM	YoY	MoM
	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM				
Jan-19	5.6	0.3	6.2	0.4	4.6	0.0	2.6	0.3	1.8	0.0	8.2	0.5	7.0	0.0	3.4	0.4	12.6	-0.8
Feb-19	6.8	0.9	7.2	0.9	6.0	0.9	5.9	2.3	5.2	1.7	8.0	0.1	6.7	0.2	7.2	2.4	13.9	1.6
Mar-19	8.6	2.0	8.9	1.9	8.2	2.2	8.8	2.5	9.3	3.3	9.0	1.5	7.3	1.3	10.5	2.1	16.6	2.2
Apr-19	8.3	0.7	8.4	0.8	8.1	0.6	8.3	1.3	9.3	0.6	8.4	0.6	7.2	0.6	10.0	0.5	17.1	1.8
May-19	8.4	0.6	8.5	0.7	8.3	0.5	9.0	1.3	9.7	0.6	8.3	0.3	7.1	0.4	9.9	0.6	16.5	1.5
Jun-19	8.0	0.5	8.1	0.3	7.9	0.7	7.5	-0.3	9.1	0.7	8.4	0.7	7.0	0.7	9.3	0.9	14.0	0.2
Jul-19	8.4	1.8	8.7	2.0	7.9	1.6	7.9	1.0	9.3	1.7	9.2	2.5	6.7	1.5	8.9	1.0	13.3	3.1
Aug-19	10.5	1.6	10.6	1.5	10.3	1.9	11.9	3.1	12.6	2.9	9.9	0.5	8.4	1.1	12.1	2.7	14.1	1.2
Sep-19	11.4	0.8	11.6	0.7	11.1	0.8	15.0	2.0	15.0	1.8	9.7	0.0	8.0	0.0	14.7	1.9	15.9	0.1
Oct-19	11.0	1.8	10.9	1.6	11.3	2.2	13.7	1.4	14.6	2.6	9.3	1.7	8.7	1.8	15.1	2.7	13.3	2.0
Nov-19	12.7	1.3	12.1	1.0	13.6	1.9	16.6	2.4	19.3	3.4	9.6	0.2	9.0	0.6	20.2	3.7	11.2	-0.8
Dec-19	12.6	-0.3	12.0	-0.4	13.6	-0.3	16.7	-1.7	19.7	-1.1	9.5	0.4	8.8	0.4	18.1	-2.0	12.4	-0.3
Jan-20	14.6	2.0	13.4	1.7	16.3	2.4	19.5	2.7	23.8	3.4	10.2	1.1	10.5	1.5	18.3	0.5	15.4	1.8

** SPI for quintile 1. Digits 0.0* are due to rounding off.

Table 4

SPI (53 items) 2007-08=100					
Income Group (Quintile)	SPI for week ended on			% change over	
	29-08-19	22-08-19	30-08-18	22-08-19	30-08-18
Q1 (Upto Rs. 8000)	250.24	250.54	215.29	-0.12	16.23
Q2 (Rs. 8001-12000)	262.89	263.28	223.58	-0.15	17.58
Q3 (Rs. 12001-18000)	265.14	265.60	225.23	-0.17	17.72
Q4 (Rs. 18001-35000)	275.69	276.22	230.19	-0.19	19.77
Q5 (Above Rs. 35000)	280.44	281.01	229.29	-0.20	22.31
Combined	271.33	271.83	227.17	-0.18	19.44

Table 5

Yearly Sensitive Price Indicator (SPI) with base 2007-08=100

Period July to June	SPI (Q1)	Percentage Change over Previous Year
2008-09	121.14	21.14
2009-10	136.80	12.93
2010-11	159.47	16.57
2011-12	170.77	7.08
2012-13	184.04	7.77
2013-14	201.15	9.30
2014-15	204.66	1.74
2015-16	207.35	1.31
2016-17	210.59	1.56
2017-18	212.44	0.88

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TRAINING NEEDS ASSESSMENT REPORT



Executive Summary

Under the guidance of Chairperson (P&D Board, Govt. of Sindh), Director General Research & Training Wing (R&TW) and his team conducted research to identify the training needs and skills gap analysis of all sections and projects of P&DD.

The objective was to devise strategies for training and human resource development. To achieve the objective, R&TW undertook a survey to identify training needs and infer the skills gap of P&DD employees in both technical and non-technical areas.

Survey methodology was adopted for TNA of P&D sections and projects, whereby a structured questionnaire for assessing the training needs was circulated to all sections and projects for conducting TNA. Prior to circulating the TNA questionnaire, R&T Wing requested all sections and projects of P&D to share their updated employee list to gauge the overall head-count of P&D, and its sections, attached offices and projects. Data of 545 employees from 24 sections and projects was submitted to R&T Wing. Subsequently, R&T Wing circulated the TNA questionnaire to assess the training needs of employees (i.e. BS-5 and above). In light of the circulated TNA questionnaire, 332 employees from 13 sections/attached offices/projects of P&D responded and submitted their responses through their respective sections/attached offices/projects. The data has revealed key findings regarding the training needs and identified gaps that need to be addressed by devising result-based trainings for P&D employees. Data analysis reveals various thematic areas that need to be focused upon for capacity building of P&D employees.

One of the key-finding of the training needs assessment is that most employees in BS 12-16 have barely received any training. The capacity of these employees needs to be substantially augmented vis-à-vis more training opportunities to improve their efficiency in completing routine-based tasks and other functions.

Moreover, TNA results reveal that employees in BS 17 & above pay-scales are more interested in management and leadership trainings. Top priority areas identified through analysis include both functional and behavioral thematic areas. These include MS Office, Project Monitoring Tools & Techniques (Result Based M&E), GIS Mapping & Remote sensing, Survey Data Analysis, Public Administration, Procurement Management, Project Impact & Evaluation, PC I- V- Preparation, Appraisal & Scrutiny, Human Resource Management and Performance Management.

Introduction

Research & Training Wing

The Research and Training Wing was formerly known as Sindh Regional Planning Organization and was formed under SRPO Act of 1976. SRPO was responsible for developing district level plans for P&DD and inform the overall planning for the province. The structure of organization was different from what it is now, and the overall functions of SRPO were not specific and thus not focused. The SRPO was repealed in 2005 and Research and Training Wing was formed in 2006. The Wing was envisioned as the knowledge hub for P&DD for capacity development of the Department and to evolve as an evidence-based planning and policy formulation unit.

Despite its formation and organization in 2006, the Wing still lacked focus on the training and research aspect, and thus the department was virtually dormant. Therefore, in 2017, the Planning and Development Department of the Government of Sindh initiated the process of revitalization with technical support from European Union Public Financial Management Support Program for Pakistan (EU PFM-SPP). The primary aim was to enhance public sector delivery, to enhance the capacity of human resource and to meet the modern-day development challenges by adopting modern techniques and tools of planning and development and bring the province of Sindh to the path of sustained economic growth and prosperity.

The Wing now acts as in-house research and capacity development body for P & DD to improve the Departmental functionality, and effectiveness and quality of Public Investment Management. Eventually the Wing aims to evolve as a policy hub within the government of Sindh for informed policy making. Research and Training Wing will also endeavor to cater to the capacity development aspects of not only the Planning and Development Department but of other line departments of the Government of Sindh too. The Wing also aims to develop meaningful partnerships with leading universities, think- tanks, civil society organizations and business associations in the shape of Memorandums of Understanding (MoU) in to order to foster collaborations along the lines of relevant research and capacity development initiatives.

Under the leadership of its Director-General, the Wing has been able to impart trainings, conduct research and develop partnerships with academia. The Wing has quickly been able to develop a work-plan with P&D Board's approval and has already delved into operationalizing the objectives defined in its work-plan. During FY 2018-19, R&TW has been able to impart both in- house and institutional trainings on topics including Orientation for the new Planning Officers, Data Analysis, Communication Skills, Results-Based Monitoring and others. Partner academic institutions like NED University, SZABIST and IBA-Karachi tailored their trainings to the needs of P&DD officials.

Similarly, research study workshops on provision of clean drinking water in urban Sindh and case study for public-private partnership model in education were also conducted. R&TW also conducted a seminar on Entrepreneurship in Sindh with EU's PFM-SPP and NIC Karachi, and an international conference on sustainable development with NED University.

Research and Training was focal point from P&DD on the impact assessment of Union Council Poverty Reduction Program (now People's Poverty Reduction Program) in 4 pilot districts. Similarly, R&TW was also the focal point on the World Bank's 'Health Private Sector Assessment in Sindh' which translated into a prospective research study to be undertaken by AKUH to analyze the public-private partnership contract arrangements in the province's health sector.

R&TW has also developed a series of in-house research reports that focus on the thematic areas of Social Protection Strategy, Poverty Reduction Strategy and Information & Communications Technology in Health Sector.

The ultimate aim of the Wing is to be a source of practical knowledge transmission by imparting research and training through long-term partnerships with academia, development partners and other stakeholders. The Wing will keep evolving and developing with support from the Government leadership that initiated its revitalization.

Training Needs Assessment

An assessment process serves as a diagnostic tool for determining what training needs to take place at what level of hierarchy. The overarching aim of a Needs Assessment is to determine what competencies and skills need to be developed to help individuals and the organization in accomplishing their respective goals and objectives. The goal of TNA is to reduce the gaps between existing employee skills and the skills required by the job and department. The training needs assessment survey can serve as the basis (benchmark) for determining effectiveness of the trainings administered in terms of acquiring knowledge and skills to improve functionality.

Background

Initially in 1st quarter of 2018, R&T Wing carried out its first TNA exercise by circulating a questionnaire to all P&D sections, projects and wings through Secretary Planning's office. Responses were received from 56 officers (BPS 17-20) and the questionnaire mainly relied on self-identified responses with other information such as demographics and job description. Based on the TNA data, an analysis was done and key training areas/topics were identified for training design and delivery. After this first iteration, R&T Wing envisaged to pursue a more rigorous needs assessment and gather responses from more P&DD employees to improve representativeness of the findings.

New Approach

The Research and Training Wing, P&DD, GoS, conducted a comprehensive themes-based training needs assessment of the Planning and Development Department. The overarching idea was to assess the skills gap in functional competencies and specific training needs of the employees to design, facilitate and conduct customized in-house and institutional trainings. Training Needs Assessment was conducted by administering self-explanatory questionnaires to the targeted staff members of BPS-5 and above. R&T Wing's aim was to reach as many employees as possible with a detailed and comprehensive questionnaire circulated to all sections/projects/wings of P&D.

After the data received through completed TNA questionnaires; the analysis was done to understand training preferences and prioritized areas identified by the employees. Based on the findings of TNA, a comprehensive training plan would be devised comprising of both in-house and institutional trainings. It is hoped that the trainings will not only help the trainees in augmenting their capacity, but also catalyze their respective career progression by gaining the requisite technical knowledge and skills.

TNA Questionnaire

Training Need Assessment (TNA) forms the basis of the training plan and capacity building activities. TNA, conducted by R&T Wing, was based on a detailed and comprehensive questionnaire which was developed keeping in view the dynamics and diversity of P&D and its employees. The questionnaire was divided into 04 distinct and key sections:

- Employee Information / Demographics
- Job responsibilities
- Technical skills required for the job function(s)
- Thematic Training Needs

Target Thematic & Training Areas

The thematic areas were mainly taken from past TNA and various discussions that took place from time to time with senior management and other key personnel of P&D including Members, Project Directors, Director Generals, Sr. Chief, Chief and Assistant Chiefs. TNA Questionnaire was developed, keeping in view major learning, functional and technical areas applicable to various sections and projects of P&D. These areas were mentioned in the questionnaire and participants were requested to mention their needs as per their job descriptions. Participants were also given the opportunity to mention their learning needs other than the options of thematic areas provided in the questionnaire. This was done to be able to get an exhaustive list of the training needs of the employees.

Following thematic areas were targeted in TNA questionnaire:

PC I – V – Preparation, Appraisal & Scrutiny	Project Appraisal & Scrutiny	Project Monitoring Tools & Technique (result-based M&E Management)	Project Impact & Evaluation
Survey Data Analysis	Cost Benefit Analysis	Evidence Based Planning	Procurement Management
Budget Preparation and Costing	Financial and Economic Analysis	Audit and pre audit	Project Financial Management & Budget Tracking
Public Administration	Human Resource Management	Performance Management	Human Resources Development
GIS Mapping & Remote Sensing	MS Office	STATA	SPSS
E-Views	MIS	Office Automation	Effective Writing Skills
Water Governance	E-Governance	Team Management	Innovative Leadership in Digital Age
Policy Skills and Leadership	Problem Solving	Management Skills	Report Writing
Strategic Planning	Strategic Management	Business Communication Skills	

The aforementioned thematic areas covered both technical and non-technical aspects of staff members working in P&D. Their job profiles, nature of work and tasks were kept in mind when these thematic areas were identified.

TNA Process Flow

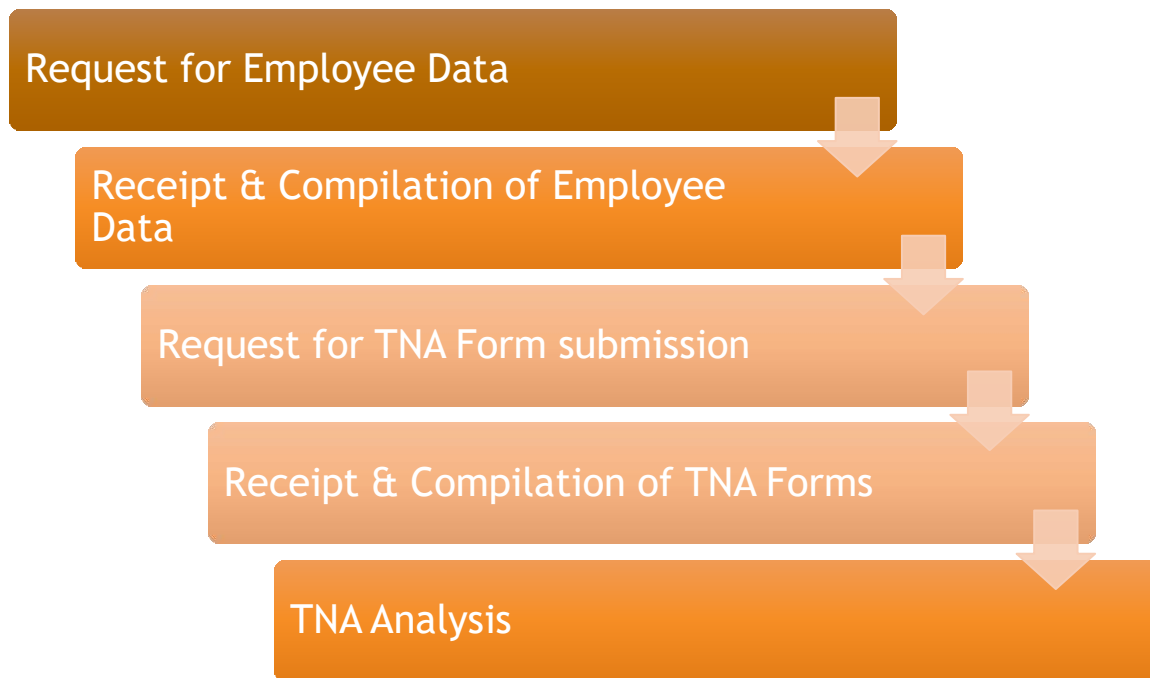


Figure 1: TNA Process Flow

Figure 1 shows that R&T Wing followed a set protocol and process to conduct and execute the TNA exercise. R&T Wing aimed to reach maximum staff members working in P&D to gauge their training needs. It was therefore important to know employee details i.e., name, grade, position, section etc. of employees working in each section, project and attached office of P&D. The first step was to request all P&D section and projects for their employee details. A letter was circulated with an information template to all P&D sections and projects and in reply, R&T Wing received employee data of 545 employees from 24 sections.

Once employee data was received, the same was compiled and populated for further action with regards to training need assessment. Questionnaire was developed and vetted by Director General R&T Wing. This needs assessment questionnaire was then circulated to all sections and projects of P&D with a request to disseminate the same to all BPS-5 & above employees and share their filled forms with R&T Wing.

13 sections/attached offices/projects of P&D (list given below) submitted their staff members' TNA questionnaires totaling 332 employees of BPS-5 & above. Once the questionnaires were received, their responses were recorded and compiled for data analysis.

S. No	Departments
1.	Bureau of Statistics
2.	Education / Development
3.	Sports, Culture & Tourism
4.	Science & Technology
5.	Environment & Climate Change
6.	Livestock & Fisheries
7.	Economic Policy & Research (EPR)
8.	Karachi Neighborhood Improvement Project (KNIP)
9.	Directorate of Urban Policy & Strategic Planning (UPSP)
10.	Monitoring & Evaluation Cell (MEC)
11.	Water Sector Improvement Project (WSIP)
12.	Office of Additional Secretary (Admin)
13.	Research & Training Wing

TNA Timelines

Activity	Target Month	Remarks
Request for Employee Data	May 2019	R&T Wing sent letters to all Members, Sr. Chiefs & Project Directors to share employee data of their respective offices
Receipt & Compilation of Employee Data	June 2019	After receipt of submitted data by various sections/projects/wings, employee data was entered and compiled in an excel sheet.
Request for TNA Form submission	July 2019	Once Employee Data was compiled, R&T Wing sent letters to all Members, Sr. Chiefs & Project Directors to submit duly filled and signed TNA forms
Receipt & Compilation of TNA Forms	September 2019	After receipt of TNA forms by various sections/projects/wings, disaggregated TNA data was entered and compiled in an excel sheet.
TNA Analysis	October 2019	TNA Data Analysis was done post compilation for responses received in the form of completed questionnaires

Table 1: TNA Timelines

Table 1. shows the TNA timelines and the order in which tasks were performed. Employee data request was sent to all P&D sections and projects in the month of May 2019. Compilation of employee data was done during the month of June 2019. Afterwards, sections and projects were sent TNA forms during July 2019 and over a period of two months, forms were received from various sections which were compiled and analyzed during the month of September / October 2019.

TNA Respondents

Employees in BS-5 & above pay-scales were targeted to share their input regarding training needs through the questionnaire circulated by R&T Wing. Below is the list of respondents (by designations) of each grade who participated in the survey:

BPS	Positions
BS 05	Enumerator, St. Computer and Surveyor
BS 07	Proof Reader
BS 08	Key Punch Operator
BS 11	Accounts Assistant, Care Taker, IT Assistant, Junior Clerk and Sub Engineer
BS 12	Computer Operator, Data Processing Assistant, Offset Mach. Man, Personal Assistant, Steno Typist, Supervisor and Technical Assistant
BS 14	Data Processing Officer (DPO), Data Processing Supervisor, IT Assistant, Junior Stenographer, Librarian, Office Assistant, Receptionist, Scale stenographer, Senior Clerk, Statistical Assistant, Statistical Officer, Stenographer, Sub Engineer and T.O Assistant
BS 15	Computer Officer, Data Processing Officer (DPO), Data Processing Supervisor and Personal Assistant
BS 16	Accounts Assistant, Admin Accounts Officer, Admin Assistant, Assistant, Program Assistant, Program Assistant Engineer, Statistical Assistant, Stenographer and System Support Engineer
BS 17	Programmer, Programmer (GIS), Accounts Officer, Assistant Director, Junior Hydrogeologist, M&E Officer, Network Administrator, Planning Officer, Private Secretary, Procurement Officer, Research Associate, SO (Admin), Sr. Programmer, Statistical Officer, System Support Engineer and Technical Specialist/Program Officer
BS 18	Assistant Chief, Deputy Director, Director, M&E Officer, Regional M&E Officer, SMEO and System Analyst
BS 19	Chief and Director
BS 20	Deputy Project Director, Member (N.R) /Sr. Chief
MP III	Chief Training Officer, Economic Growth Advisor, Public Sector Governance Advisor and Social Sector Advisor

Training Needs Analysis

In terms of broad categorization, there are two main parts of the needs assessment. The first part is the assessment itself whereby employees are given the opportunity to share their input regarding their technical and non-technical training needs which would have a positive impact on their capacity development resulting in organizational progress.

The second part is the analysis of assessment results. The responses received through questionnaires

are entered and compiled in a data sheet in conduct relevant analysis. Disaggregated data analysis is crucial as it helps identify training gaps and needs at individual and organizational level to help formulate customized training plans to cater to both individual and organizational needs.

In the following section, we will present the key findings from data analysis to reflect prioritized training needs stratified by sections and pay-scales along with prioritized training topics.

Employee Data (received from P&D)

As mentioned earlier, in order to target the total population of P&DD, R&T Wing requested all sections and projects to share their employee data prior to initiating the TNA activity. Following is the list of sections/projects who shared their employee data with R&T Wing:

<i>S. No.</i>	<i>Name</i>	<i>Total Emps</i>
1	Bureau of Statistics	308
2	Monitoring & Evaluation Cell	91
3	Directorate of Urban Policy & Strategic Planning	14
4	R&T Wing	28
5	Water Sector Improvement Project (WSIP)	12
6	Karachi Neighborhood Improvement Project	6
7	Sports, Culture & Tourism	4
8	Science & Technology	3
9	Environment & Climate Change	3
10	Livestock & Fisheries	5
11	Economic Policy & Research (EPR)	4
12	Development	1
13	Agriculture	5
14	Health	7
15	Social Sector	5
16	Transport & Communication	9
17	Water & Drainage	6
18	Energy/Industries	8
19	Transport	3
20	Physical Planning & Housing (PP&H)	5
21	Education	7
22	Foreign Aid	4
23	Accelerated Action Plan Task Force Section (Nutrition)	6
24	PPRP / SGRRP	1
TOTAL	545	

Table 2: Employee Data Received from P&DD

Table 2 depicts that a total of 24 sections, attached offices and projects of P&DD shared their employee data. The total count received was 545 employees of sections and projects mentioned in above table.

The data covers employees working in Government Basic Pay scale system ranging from grade 1 to 22. However, data of employees working in different projects as contractual staff is also included. In general, P&DD has a diversified employment pool:

1. BPS system employees: Employees who work as permanent workers with all retirement and pension benefits.
2. Contractual appointments: Workers employed for short term from six months to three years contract without retirement benefits.
3. MP-scale employees are appointed on two-year contract as technical experts.

TNA Responses

The total employee pool of P&D as per Accountant-General Sindh’s payroll record is 718. R&T Wing firstly requested all P&D sections and attached offices to provide their active employee list. In response, employee data of 545 employees from 24 sections and projects of P&D was received. Furthermore, R&T Wing requested all P&D sections and attached offices to submit completed TNA questionnaires of their respective staff members. In response, 332 TNA questionnaires were received from 13 sections and attached offices of P&D.

AG Sindh Employee Pool of P&D	Employee Data Received from P&D	%age (Column 2 / Column 3)	BPS 5 & Above Employees as per Data Rcvd from P&D	TNA Response of BPS 5& above	%age (Column 5 / Column 4)	%age (Column 5 / Column2)
718	545	76%	416	332	80%	61%

Table 3: TNA Responses Summary

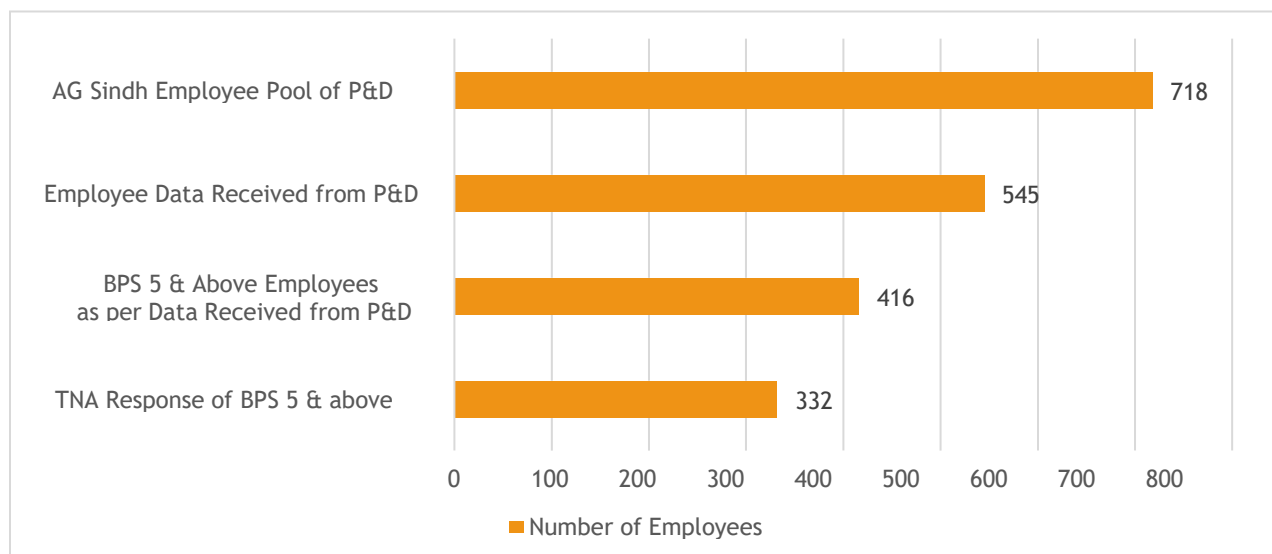


Figure 2: TNA Responses Summary

Table 3 / Figure 2 shows that against employee data of 718 (AG Sindh record), data of 545 employees was received from 24 sections and projects of P&D, out of which 416 employees were from BPS-5 and above. Moreover, out of 416 BPS-5 and above employees, 332 responded to the TNA questionnaire from 13 sections and projects of P&D. Total Response Rate was 80%.

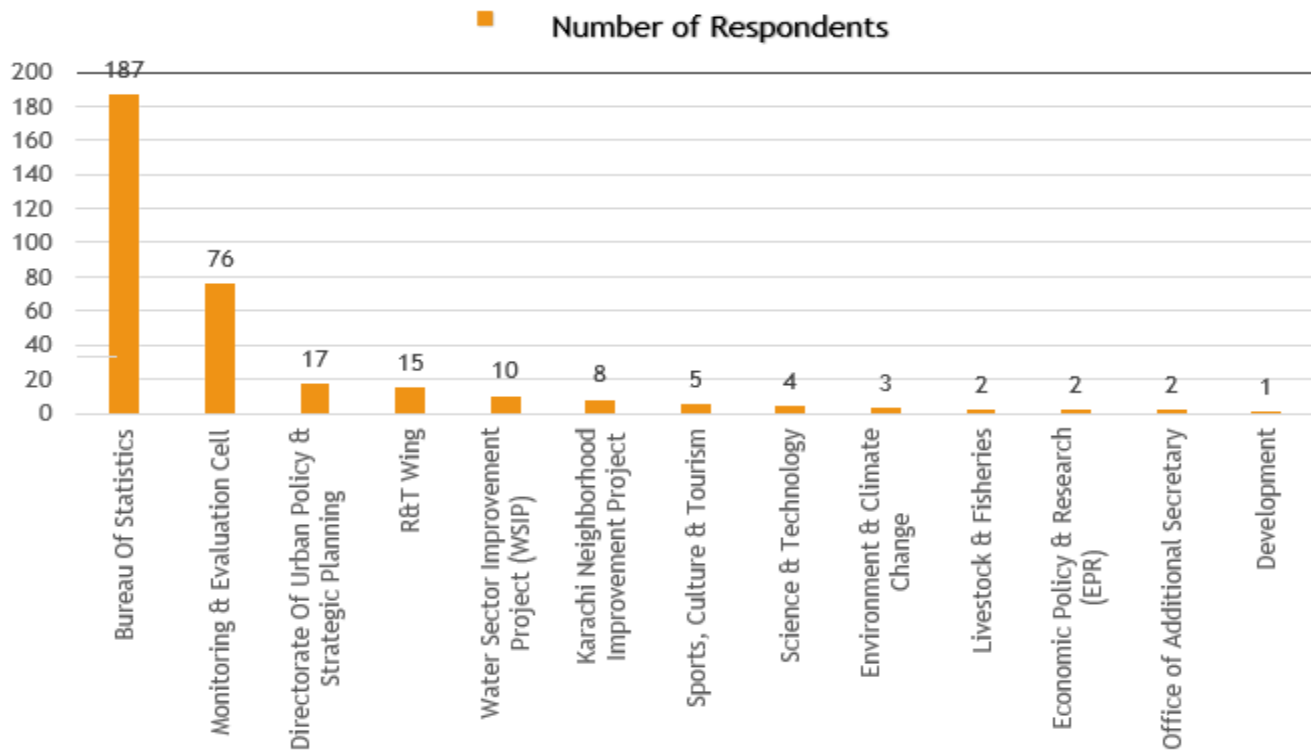


Figure 3: TNA Responses - Section Wise

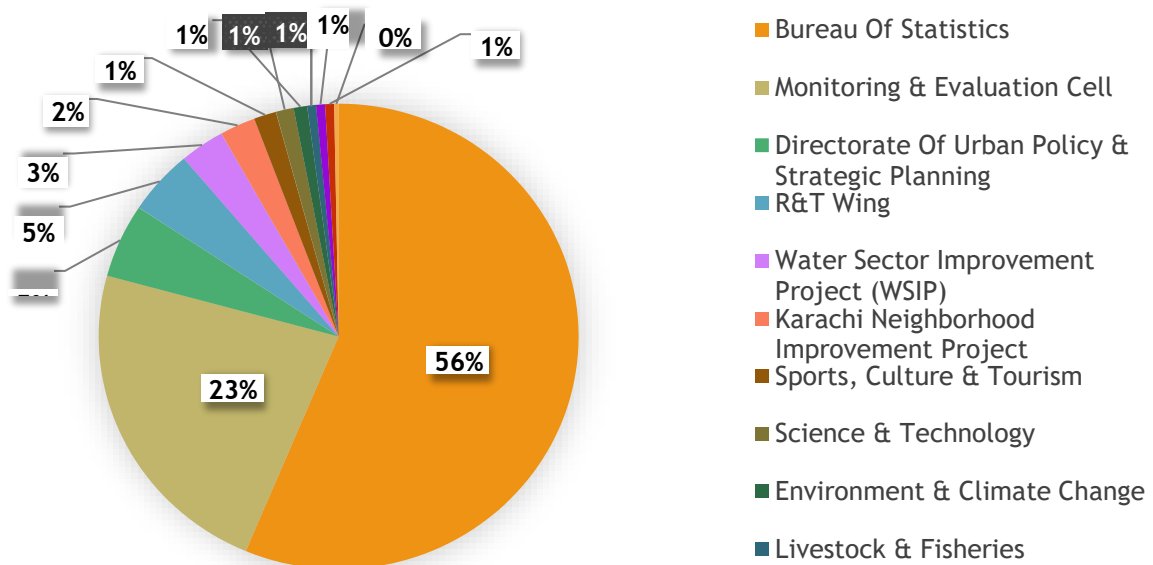


Figure 4: TNA Responses - Section Wise %ages

Figure 3 & 4 shows that against employee data of 718 (AG Sindh record) and P&D data of 545 employees, 332, BS 05 & above employees from 13 sections and projects of P&D, responded to the TNA questionnaire and shared their training needs. This depicts that data is largely skewed towards BoS & MEC since they contribute 56% & 23% (79%) to the total responses.

Number of Respondents – Grade Wise

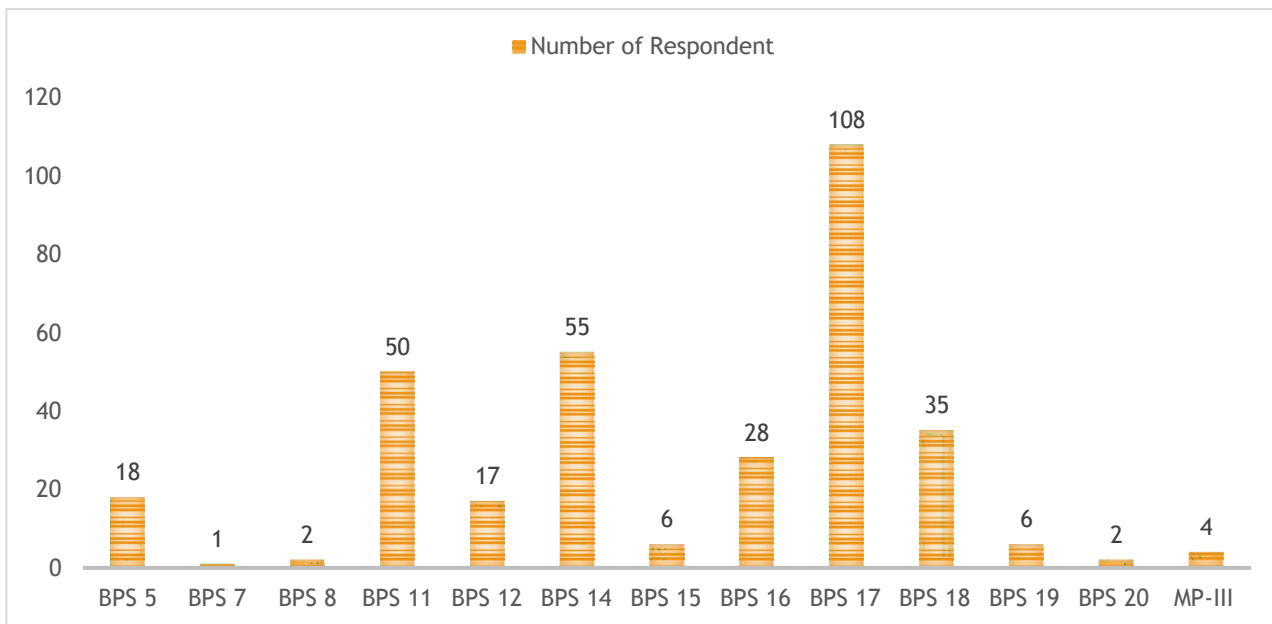


Figure 5: Number of Respondents - Grade Wise

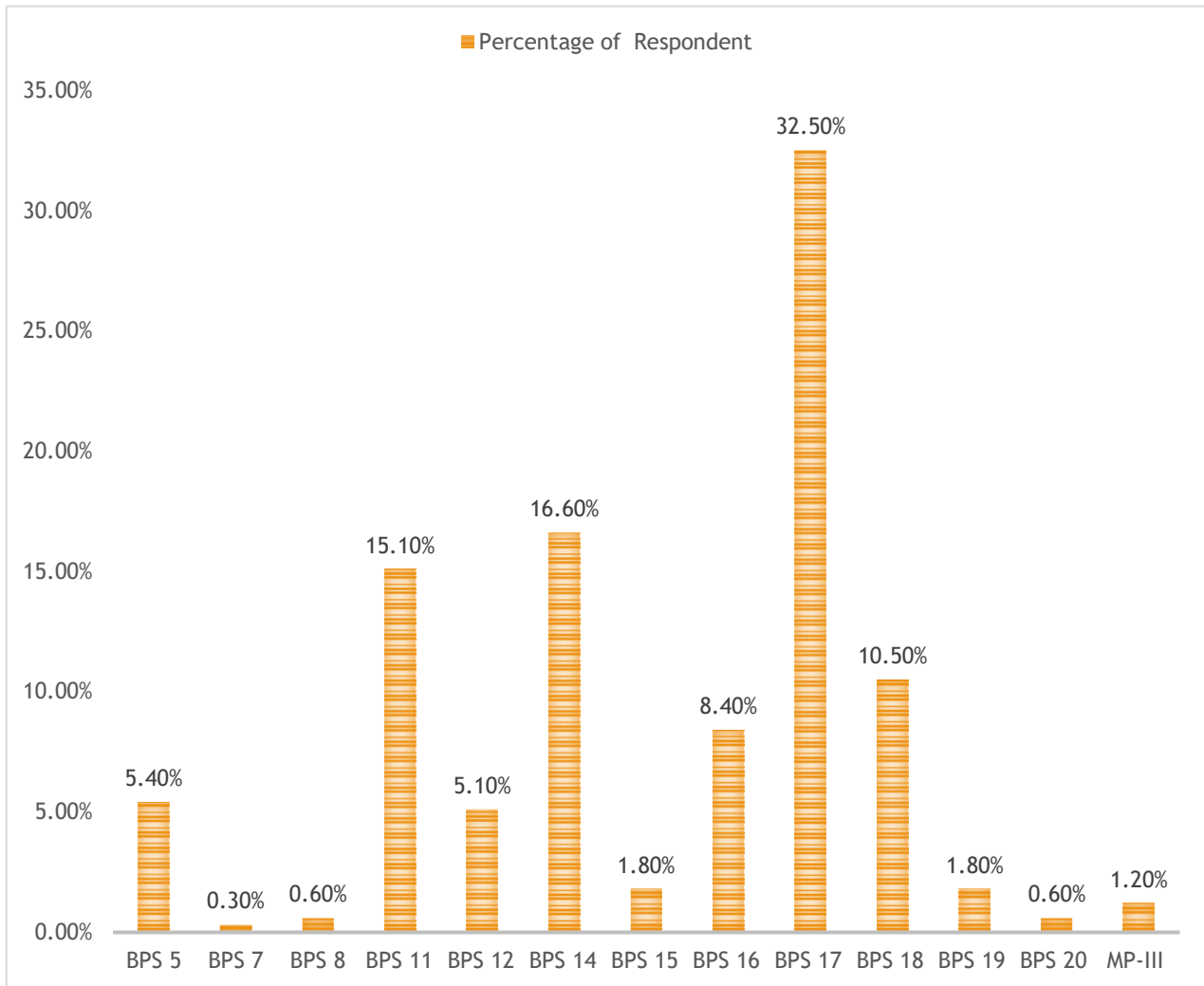


Figure 6: %age of Respondents by Basic Pay Scale

Figure 5 & 6 illustrates total number of respondents in each grade. Starting from BPS-5, each grade had a different respondent count. BPS 11, 14 and 17 had the most respondents i.e., 50, 55 and 108 respectively; making them 64% of the total 332 respondents.

Training Areas / Topics

Most of the selected training topics were part of the TNA questionnaire. R&T Wing designed the questionnaire in such a way that key functional and behavioral aspects of each job function were covered and given in the form of training thematic areas to choose from. These thematic areas were identified by reviewing Job Descriptions and taking input from the section heads.

Through the TNA questionnaire, respondents had the opportunity to share their preferred learning areas by selecting the thematic areas covered in the questionnaire. They were also given the opportunity to mention any prioritized learning topic that wasn't part of the thematic training list.

Thematic areas included both functional and behavioral learning topics. If we look at the list below of training topics preferences, we would find an array of technical topics such as Project Monitoring Tools & Techniques, CCNA (Cisco Certified Associate), Survey Data Analysis, GIS Mapping and many more. Similarly, respondents showed their willingness to learn about behavioral competencies of Management, Leadership, Admin, Public Relations and Strategy.

The list below reflects the order of training preferences of employees which show a blend of both functional and behavioral learning areas. In total, 68 training areas were mentioned by respondents in their TNA questionnaires. The list is in descending order based on the number of responses corresponding to each training area.

It is imperative to mention that out of 332 responses, 79% were from Bureau of Statistics and Monitoring & Evaluation Cell; which means that data is largely skewed towards these two attached Wings of P&D. However, disaggregated data has been captured on individual level which means that at the time of conceptualizing training plan & design, individual responses will be taken into consideration to develop training interventions and forming respective cohorts for corresponding trainings.

Order of Preference - 1 – 10	
S. No.	Training
1	MS Office
2	Project Monitoring Tools & Techniques (Result Based M&E)
3	GIS Mapping & Remote sensing
4	Survey Data Analysis
5	Public Administration
6	Procurement Management
7	Project Impact & Evaluation
8	PC I-V- Preparation, Appraisal & Scrutiny
9	Human Resource Management
10	Management skills

Table 4: Training Preference 1-10

Table 4 shows that aforementioned training topics were most preferred by respondents in their TNA questionnaires. These training topics include both technical as well as management-based trainings. MS Office is rated at top because data management, interpretation, reporting and presentation has become an integral part of any job function. The modern working environment demands that public sector employees are equipped with both technical and management skills so as to bring a positive change in their working and its execution.

Order of Preference - 11 -20	
S. No.	Training
11	Budget Preparation & Costing
12	Performance Management
13	Human Resources Development
14	Problem Solving
15	Strategic Planning
16	Evidence Based Planning
17	Audit and Pre-Audit
18	SPSS
19	MIS
20	Financial Statements, Chart of accounts/ Description of the accounts/ Main entries

Table 5: Training Preference 11-20

Table 5 shows the second tier of most preferred training topics out of 68 topics captured in TNA. These training topics include topics related to finance, management, HR and statistics. Respondents showed their intent to get trained in areas pertaining to Budget Preparation & Costing, Performance Management, Human Resources Development, and Problem Solving etc.

Order of Preference - 21 -30	
S. No.	Training
21	Policy Skills and Leadership
22	Project Appraisal & Scrutiny
23	Office Automation
24	Financial and Economic Analysis
25	STATA
26	Business Communication
27	Team Management
28	E-Views
29	Innovative Leadership in Digital Age
30	E-Governance

Table 6: Training Preference 21-30

Table 6 shows the third tier of most preferred training topics captured in TNA. These training topics include topics related to Projects, Leadership, finance, management, HR and statistics. Respondents showed their intent to get trained in areas pertaining to Policy Skills and Leadership, STATA, E-Views, E-Governance and, and Business Communication etc. It is evident that respondents are keen to learn new management and leadership skills in order to compete in the ever-evolving global and competitive market. Modern working environment is about smart working and areas like strategic management, financial management and project management are need of the hour. By learning new concepts and modern techniques, respondents would be able to break the stereotypes and their monotonous working

culture in order to set new benchmarks and achieve new milestones.

Order of Preference - 31-40	
S. No.	Training
31	Project Financial Management & Budget Tracking
32	Cost Benefit Analysis
33	Water Governance
34	Strategic Management
35	Cost & Financial Analysis
36	Writing Boot Camp
37	Report Writing
38	Project Management Certification
39	Financial Management
40	Office Management

Table 7: Training Preference 31-40

Table 7 shows that a group of respondents prefer to get trained in areas pertaining to topics mentioned above which include unique topics such as Water Governance, Strategic Management, Office Management, and Cost Benefit Analysis etc.

Order of Preference - 41-50	
S. No.	Training
41	Planning Process
42	Use of Films
43	CCNA (Cisco Certified Associate) MCSA (Microsoft Certified Solution Associate) Network Security
44	Character Building
45	Computer Networking
46	Engineering Practice to Deal with Health facilities Including Hospitals etc.
47	Engineering practice to monitor civil Works
48	Engineering Practices to monitor road Projects
49	Engineering technical to handle Engineering works especially
50	Food security through agriculture

Table 8: Training Preference 41-50

Table 8 shows that a group of respondents would like to get trained in areas pertaining to more technical and job-specific topics mentioned above which include unique topics such as Food security through agriculture, CCNA (Cisco Certified Associate), and Engineering Practices to monitor road Projects etc.

Order of Preference - 51-68	
S. No.	Training
51	Mobile Development i.e. iOS & Android Training
52	Modern practices in Agriculture
53	Planning Program of Federal Government
54	Primavera
55	Prince 2
56	Procurement of Modern equipment in Agriculture
57	PYTHON Software
58	Report Analysis
59	SAP
60	Technical Skills
61	Time Management
62	Training about Medical equipment and standard to deal with health services
63	Training in engineering practices to monitor construction works in perspective of its quality and Standard
64	Quantitative & Qualitative Evaluation, Monitoring & Data Analysis
65	Advance Excel
66	Office Ethics
67	Oracle Database Management
68	Procurement Certification

Table 9: Training Preference 51-68

Table 9 shows last set of training topics opted by respondents in their TNA forms. These training topics are technical and job-specific in nature and include topics such as Quantitative & Qualitative Evaluation, Monitoring & Data Analysis, Advance Excel, PYTHON Software and Prince 2 etc.

In light of the exhaustive list give above from Table 1 to 9, we now look at priority training areas/topics identified by majority of respondents across all 13 sections / projects. This list is in descending order of preference:

S. No.	Training	Total	Response %age
1	MS Office	211	64%
2	Project Monitoring Tools & Techniques (Result Based M&E)	179	54%
3	GIS Mapping & Remote sensing	148	45%
4	Survey Data Analysis	139	42%
5	Public Administration	138	42%
6	Procurement Management	135	41%
7	Project Impact & Evaluation	133	40%
8	PC I-V- Preparation, Appraisal & Scrutiny	133	40%
9	Human Resource Management	127	38%
10	Management skills	126	38%

Table 10: Priority Topics (all 13 sections)

Table 10 shows that aforementioned training topics were selected by the respondents in their TNA questionnaires. These training topics include both technical as well as management-based areas. As mentioned earlier, the data is based on responses received from 13 sections of P&D and out of these, Bureau of Statistics and Monitoring & Evaluation Cell contribute 79% of the total responses. That’s why the data is skewed towards these sections.

For example, MS Office was mentioned by 211 respondents out of which 28% are Statistical Assistants & Officers of BoS and 23% are respondents working as Junior Clerks and Enumerators etc.

Other example is of Procurement Management whereby 26% of 135 respondents are Statistical Officers of BoS.

It is therefore important to also analyze priority training areas by excluding BoS and MEC from the list. The figure below reflects prioritized training areas of P&DD employees after excluding BoS and MEC from the analysis.

Total Responses	BoS	MEC	Rest of Section	BoS %age	MEC %age	Rest of Sections %age
332	187	76	69	56%	23%	21%

Figure 7 and table above shows that out of 332 TNA responses, BoS and MEC combined have 263 responses i.e., 79% of the total responses. Moreover, rest of the 11 sections/attached offices/projects comprise 21% of the total responses.

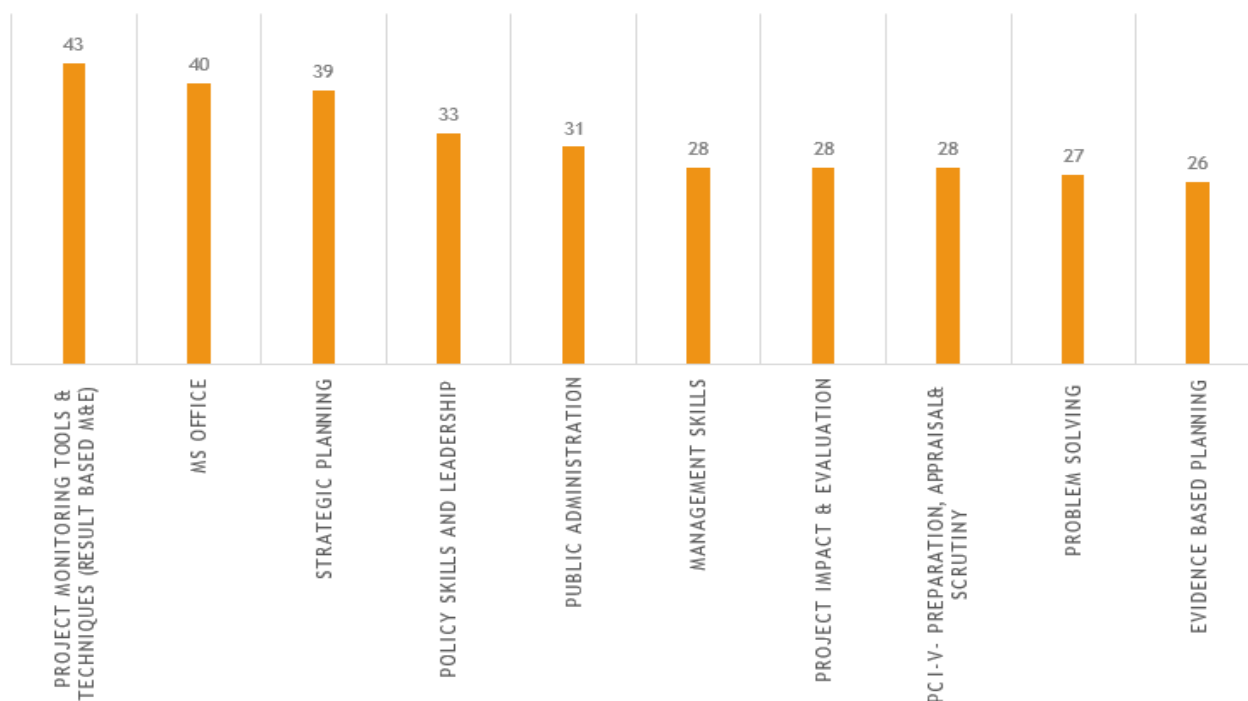


Figure 7: Priority Training Topics excluding BoS & MEC

Interestingly, by taking out BoS and MEC from the priority list, we see some changes. MS Office comes below Project Monitoring Tools & Techniques (Result Based M&E) at number two. Also, MS Office, Project Monitoring Tools & Techniques (Result Based M&E), Public Administration, Project Impact & Evaluation, PC I-V- Preparation, Appraisal & Scrutiny and Management skills are common preferred areas in both lists i.e., Table 10 and Figure 7 (without BoS & MEC and with BoS and MEC). However, Strategic Planning, Policy Skills and Leadership, Problem Solving and Evidence Based Planning are unique in Figure 7.

BPS 17 & above Priority Training Areas			
S. No.	Training Name	# of TNA Responses	%age
1	Project Monitoring Tools & Techniques (Result Based M&E)	115	74%
2	Project Impact & Evaluation	90	58%
3	PC I-V- Preparation, Appraisal & Scrutiny	84	54%
4	MS Office	81	52%
5	GIS Mapping & Remote sensing	78	50%
6	Procurement Management	77	50%
7	Evidence Based Planning	73	47%
8	Strategic Planning	73	47%
9	Project Appraisal & Scrutiny	68	44%
10	Survey Data Analysis	67	43%
11	Management skills	64	41%
12	Human Resources Development	63	41%
13	Budget Preparation & Costing	62	40%
14	Performance Management	61	39%
15	Financial and Economic Analysis	60	39%
16	Problem Solving	58	37%
17	Public Administration	58	37%
18	SPSS	57	37%
19	Human Resource Management	56	36%
20	Policy Skills and Leadership	56	36%

Total Respondents of BPS 17 & above = 155

Table 11: BPS 17 & above Priority Training Areas

Table 11 shows 20 priority training areas mentioned by BPS 17 & above officers, who are involved in strategic planning, decision-making and other technical functions that are crucial for the Department. Hence, a sub-group analysis for BPS 17 & above is imperative to plan for capacity development initiatives that are embedded in augmenting the core skills and expertise of these officers.

Summing it up and as elucidated earlier, the TNA data captured through questionnaires is disaggregated at individual level. This essentially means that at the time of training design and delivery, individual responses will be taken into consideration for training execution.

Conclusions

The main conclusions derived from the training needs assessment are the following:

- Preferred training areas of the employees include both technical and behavioral thematic areas
- Disaggregated data analysis reveals individualized training preferences that can be used to formulate cohorts of similar preferences for a specific training from several projects/sections/attached offices
- Stratified analysis can be done to reflect preferences of organizational level trainings (e.g., most preferred trainings for BoS/MEC)
- Focused training plans for specific designations and pay-scales (e.g., Planning Officers, Statistical Officers, Monitoring Officers, Assistant Chiefs, etc.) can also be designed to help equip the officers with requisite skills for seamless transition to decision-oriented decisions
- Levels of analysis can help determine what specific trainings can be undertaken in collaboration with already established training institutes
- For trainings that are not offered by existing institutions, customized in-house trainings can be designed to tailor to specific needs of the Officers
- Needs assessment data-base is a live document that can be used as a frame of reference for training design and execution. Similarly, periodic data upgradation can also be undertaken to reflect changes in training preferences over time

Way Forward

TNA results will form the basis of designing technical and behavioral training programs for P&D employees and R&T Wing aims to use this data for capacity building initiatives for next three years. All interventions i.e. In-house training, institutional training, diplomas, short courses and certifications will be executed by R&T Wing in light of TNA results.

In-house programs will focus on capacity building of P&DD employees by engaging subject experts working in P&DD and its attached offices. R&T Wing will be identifying internal trainers for In-house programs based on their education, skill set and subject knowledge. Furthermore, R&T Wing will engage these trainers to design and deliver specific training programs identified by respondents in TNA.

R&T Wing will also focus on organizing institutional training programs of both technical and behavioral nature. Institutes and training providers are equipped with expert resources and infrastructure to cater learning needs of their clients. That's why R&T Wing has already partnered with academic and technical institutes such as IBA Karachi, Institute of Business Management (IoBM), SZABIST, Pakistan Institute of Management, Center of Economic Research in Pakistan (CERP), Mehran University Jamshoro, NED University and Pakistan Institute of Development Economics (PIDE) to design and deliver specific technical and behavioral training programs.

Different Types of Trainings

Based on this TNA, R&T Wing aims to focus on in-house, institutional and external trainings through ADP scheme 1811 "Research and Training for Planning & Development and Human Resource Development". Furthermore, the same data would also form the basis of initiating and facilitating P&D staff members in short courses, diploma / certification / degree programs.

Training Execution, Monitoring & Evaluation

R&T Wing has the responsibility to not only facilitate in learning and capacity building initiatives, but also to monitor and evaluate the impact of each intervention.

R&T Wing is committed to proactively support and facilitate P&D in all its learning and capacity building initiatives. Each training or learning intervention would be closely administered by R&T Wing's Chief Training Officer and the same would be monitored for quality and compliance by Monitoring, Evaluation & Learning Officer (MEAL Officer). A complete training mechanism would be in place with the objective of providing the best training and learning solution to P&D staff members.

Appendix – I

Section Wise – Priority Training Topics / Areas

An overview of section/project wise priority training topics / areas identified by respondents in their TNA questionnaires:

Development	
Audit and Pre-Audit	Description of the accounts/ Main entries
Budget Preparation & Costing	Human Resource Management
Cost Benefit Analysis	Human Resources Development
Evidence Based Planning	Innovative Leadership in Digital Age
Financial and Economic Analysis	Performance Management
Financial Statements, Chart of accounts/	
Environment & Climate Change	
Project Impact & Evaluation	GIS Mapping & Remote sensing
Procurement Management	Financial and Economic Analysis
Project Monitoring Tools & Techniques(Result Based M&E)	Evidence Based Planning
Performance Management	Budget Preparation & Costing
MS Office	Water Governance
EPR	
Human Resource Management	E-Governance
Human Resources Development	Evidence Based Planning
Problem Solving	GIS Mapping & Remote sensing
Strategic Planning	Innovative Leadership in Digital Age
Office Automation	Management skills
Karachi Neighborhood Improvement Project	
Policy Skills and Leadership	Human Resource Management
Project Monitoring Tools & Techniques(Result Based M&E)	Innovative Leadership in Digital Age
Performance Management	Problem Solving
Team Management	Procurement Management
Evidence Based Planning	Public Administration
Livestock & Fisheries	
Financial and Economic Analysis	Cost Benefit Analysis
GIS Mapping & Remote sensing	Human Resource Management
Policy Skills and Leadership	Human Resources Development
Strategic Planning	Performance Management
Project Monitoring Tools & Techniques(Result Based M&E)	Procurement Management

Project Monitoring Tools & Techniques(Result Based M&E)	Strategic Planning
MS Office	PC I-V- Preparation, Appraisal & Scrutiny
Procurement Management	GIS Mapping & Remote sensing
Project Impact & Evaluation	Management skills
Cost Benefit Analysis	Performance Management
Science & Technology	
MS Office	Project Impact & Evaluation
PC I-V- Preparation, Appraisal & Scrutiny	Strategic Planning
E-Governance	Budget Preparation & Costing
Evidence Based Planning	Business Communication
Financial and Economic Analysis	GIS Mapping & Remote sensing
Sports Culture & Tourism	
Financial and Economic Analysis	SPSS
Strategic Planning	GIS Mapping & Remote sensing
Budget Preparation & Costing	Policy Skills and Leadership
PC I-V- Preparation, Appraisal & Scrutiny	Problem Solving
Project Monitoring Tools & Techniques(Result Based M&E)	Procurement Management
Urban Policy & Strategic Planning	
MS Office	Human Resource Management
Project Monitoring Tools & Techniques(Result Based M&E)	Strategic Planning
Public Administration	GIS Mapping & Remote sensing
Business Communication	Human Resources Development
Management skills	Office Automation
Water Sector Improvement Project	
Project Monitoring Tools & Techniques(Result Based M&E)	Team Management
Strategic Planning	Business Communication
Management skills	Cost Benefit Analysis
Problem Solving	GIS Mapping & Remote sensing
Procurement Management	Human Resource Management
Research & Training Wing	
MS Office	PC I-V- Preparation, Appraisal & Scrutiny
Project Impact & Evaluation	Cost Benefit Analysis
Evidence Based Planning	Financial and Economic Analysis
Strategic Planning	Management skills
Survey Data Analysis	Policy Skills and Leadership
Bureau of Statistics	
MS Office	STATA
Survey Data Analysis	Financial Statements, Chart of accounts/ Description of the accounts/ Main entries
GIS Mapping & Remote sensing	Human Resource Management

Budget Preparation & Costing	Human Resources Development
Public Administration	Procurement Management
Office of Additional Secretary	
Public Administration	MS Office
Budget Preparation & Costing	PC I-V- Preparation, Appraisal & Scrutiny
Management skills	

Grade Wise – Priority Training Topics / Areas

This section gives us an overview of Grade wise priority training topics / areas identified by respondents in their TNA questionnaires:

BS-05	
MS Office	MIS
Survey Data Analysis	Human Resource Management
Problem Solving	STATA
Office Automation	Public Administration
Business Communication	GIS Mapping & Remote sensing
BS-07	
Audit and Pre Audit	Management skills
E-Governance	MS Office
Human Resource Management	Survey Data Analysis
Human Resources Development	Team Management
Innovative Leadership in Digital Age	Office Automation
BS-08	
Business Communication	MS Office
Human Resource Management	Problem Solving
Management skills	Survey Data Analysis
BS-11	
MS Office	Survey Data Analysis
Financial Statements, Chart of accounts/ Description of the accounts/ Main entries	Project Monitoring Tools & Techniques (Result Based M&E)
Budget Preparation & Costing	Office Automation
Human Resource Management	Performance Management
Audit and Pre Audit	Public Administration
BS-12	
MS Office	Performance Management
Management skills	Problem Solving
Office Automation	Survey Data Analysis
Public Administration	MIS
Human Resource Management	Audit and Pre Audit
BS-14	
MS Office	STATA

GIS Mapping & Remote sensing	Performance Management
Public Administration	Survey Data Analysis
Procurement Management	Human Resource Management
Budget Preparation & Costing	Financial Statements, Chart of accounts/ Description of the accounts/ Main entries
BS-15	
Project Monitoring Tools & Techniques(Result Based M&E)	Office Automation
MIS	Audit and Pre Audit
MS Office	Business Communication
GIS Mapping & Remote sensing	Innovative Leadership in Digital Age
PC I-V- Preparation, Appraisal & Scrutiny	Management skills
BS-16	
MS Office	Policy Skills and Leadership
Project Monitoring Tools & Techniques(Result Based M&E)	Office Automation
Public Administration	Audit and Pre Audit
Management skills	Human Resource Management
Business Communication	Team Management
BS-17	
Project Monitoring Tools & Techniques(Result Based M&E)	Project Impact & Evaluation
PC I-V- Preparation, Appraisal & Scrutiny	Procurement Management
MS Office	Evidence Based Planning
GIS Mapping & Remote sensing	Strategic Planning
SPSS	Survey Data Analysis
BS-18	
Project Monitoring Tools & Techniques(Result Based M&E)	PC I-V- Preparation, Appraisal & Scrutiny
Project Impact & Evaluation	Cost Benefit Analysis
Procurement Management	Financial and Economic Analysis
Evidence Based Planning	MS Office
Project Appraisal & Scrutiny	Strategic Planning
BS-19	
Financial and Economic Analysis	Policy Skills and Leadership
Strategic Planning	Project Impact & Evaluation
E-Governance	Project Monitoring Tools & Techniques (Result Based M&E)
Evidence Based Planning	Business Communication
Innovative Leadership in Digital Age	GIS Mapping & Remote sensing
BS-20	
Strategic Planning	Project Monitoring Tools & Techniques (Result Based M&E)
Performance Management	Cost Benefit Analysis

Policy Skills and Leadership	Evidence Based Planning
Team Management	Financial and Economic Analysis
Management skills	GIS Mapping & Remote sensing
MP-III	
Project Impact & Evaluation	MS Office
Survey Data Analysis	PC I-V- Preparation, Appraisal & Scrutiny
E-Governance	Cost Benefit Analysis
Evidence Based Planning	Audit and Pre-Audit
Human Resources Development	Financial and Economic Analysis

Appendix – II

Training Needs Assessment Questionnaire

Training Needs Assessment of Officers (BPS-5 – 20)

This questionnaire is to be filled by BPS 05 & above or equivalent regular and contractual employees of P&D and its sections/projects.

Full Name:	Designation:
BPS Grade:	Section/Project:
Date of Joining:	Job Placement City:
Cell #:	Email ID:
CNIC #:	Date of Birth:
Office Address:	
Office Phone #:	

1. Academic Qualification (Please mention year and institute of the Highest Degree Obtained). *

PhD	
MPhil	
MS	
Masters	
Bachelors/Graduation	
Intermediate	
Matriculation	
Middle Pass (8 th Class)	
Technical Diploma	
Any other Qualification	

2. How long have you been in the current position? (Please mention starting date, month & year)

3. Trainings/Courses Attended in last 03 years:

Sr. No	Trainings/Courses attended	Institution	Year	Duration	Major Areas/ Subject

4. Please list down your job responsibilities and related tasks in bullet form:

5. Please list down 05 major technical skills required to perform your job:

6. Training Needs Identification

Kindly tick the most relevant and appropriate training needs for your capacity development:

a. Project Preparation, Appraisal, Monitoring & Evaluation

PC I – V – Preparation, Appraisal &Scrutiny	
Project Appraisal & Scrutiny	
Project Monitoring Tools & Technique (Result based M&E Management)	
Project Impact & Evaluation	
Survey Data Analysis	
Cost Benefit Analysis	
Evidence Based Planning	

b. Tendering / Procurement

Procurement Management	
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c. Administration & Human Resources Management

Public Administration	
Human Resource Management	
Performance Management	
Human Resources Development	

d. Financial Management

Budget Preparation and Costing	
Financial and Economic Analysis	
Audit and pre audit	
Project Financial Management & Budget Tracking	
Financial statements, Chart of accounts / Description of the accounts / Main entries	

e. Technical Trainings

GIS Mapping & Remote Sensing	
MS Office (Word, Excel & PowerPoint)	
STATA (statistical software)	
SPSS (statistical software)	
E-Views (statistical software)	
MIS (statistical software)	
Office Automation (statistical software)	

f. Others

Writing Boot camp	
Water Governance	
E-Governance	
Team Management	
Innovative Leadership in Digital Age	
Policy Skills and Leadership	
Problem Solving	

Management Skills	
Strategic Planning	
Strategic Management	
Business Communication Skills	

7. Any other training, please mention below:

Respondent's Signature & Date

8. To Be Filled by Head of the Section / Project

I. Please share 03 key and major technical areas of improvement for this position as per the JD shared above?

HOD Name, Designation, Signature & Date

RESEARCH HIGHLIGHTS 2019-20

RESEARCH & TRAINING WING,
PLANNING & DEVELOPMENT DEPARTMENT,
GOVERNMENT OF SINDH.

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Research & Training Wing,
Mezzanine Floor, Faiyaz Centre,
S.M.C.H.S, Shahrah-E-Faisal, Karachi.

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