Report on Data Fest Workshops, 2024

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1. INTRODUCTION

1.1 Background

Data Fest, 2024, held on 21-22, October, 2024 is first ever prime event hosted by Pakistan Bureau of Statistics at Pak China Friendship Center, Islamabad in collaboration with UNFPA, UNICEF and other partners to provide a platform to data users and producers to celebrates data science and its ever-evolving impact on the Economy of Pakistan. This Festival has multiple activities, including stalls, keynote presentations, panel discussion, and most importantly workshops where experts from academia, government organizations, NGOs and INGOs participated in hybrid format and centered around understanding data for life and equity with five thematic areas discussed in below and elsewhere[1]. In the backdrop, higher management of Pakistan Bureau of Statistics assigned task of Workshops Management to ensure the smooth execution of the Data Festival. Consequently, a dedicated group named Workshop Management was formed to oversee all aspects related to the workshops i.e. coordination with speakers, selection of papers, time slot allocation and IT support services. Therefore, **Dr. Bahrawar Jan**, Deputy Director General (Price/Trade/Industry), **Mr. Rizwan Bashir**, Director (Social Statistics), and **Mrs. Kanwal Murtaza**, Chief Statistical Officer (Field Services) were designated as focal persons for workshop management.

1.2 Objectives of the PBS Data Festival

1.2.1 Promote Data Literacy:
- Enhance understanding of data among the general public and stakeholders.
- Foster a culture of data-driven decision-making in various sectors.

1.2.2 Increase Awareness of Data Importance:
- Highlight the critical role of data in shaping policies and driving development.
- Create public awareness campaigns to emphasize the significance of data in everyday life.

1.2.3 Encourage Engagement in Academia and Education:
- Promote the importance of data among students and educational institutions.
- Inspire academic research and curricula that focus on data science and analysis.

1.2.4 Facilitate Inter-Organizational Collaboration:
- Bring together diverse organizations and departments to share insights and data.
- Encourage partnerships that promote data exchange and collaborative research.

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[1] https://datafest.data.gov.pk/Home

1.2.5 Identify Data Needs:
- Pinpoint the specific data requirements of academia, organizations, and the general public.
- Use feedback to guide future data initiatives and services offered by PBS.

1.2.6 Launch a Public Campaign:
- Initiate a campaign to advocate for data importance and its applications in society.
- Utilize various media platforms to reach a broad audience.
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1.2.7 Showcase PBS Data and Advancements:
- Highlight the extensive data sources available through PBS.
- Demonstrate advancements made by PBS since the completion of the First Digital Population and Housing census.
- Present case studies that illustrate the practical applications of PBS data.

By aligning these objectives, PBS aims to enhance its role as a leading data producing organization and also foster a society that values and effectively utilizes data for informed decision-making.

2.   WORKSHOP ARRANGEMENTS

2.1   In House Meetings of Workshop Management:

A series of in-house meetings were held to effectively distribute tasks and assign roles to all team members, ensuring a well-coordinated effort. The list of members is annexed as Annexure-II

Further an online meeting with the focal persons from HDS, the event organizer, was also held to understand their role and the extent of their preparations for the Data Festival. This meeting helped to ensure that all aspects of the event were aligned and well-coordinated, and both PBS and HDS were fully prepared for a seamless execution of the workshops.

2.2   Staff of Workshop Management:

Each focal person engaged the strengths of their respective sections, voluntarily, and the Data Fest Secretariat provided support staff for the initiative. To be specific, staff of Social Statistics Section, Price Section, Industry Section, Business Register Section, and Field Services Section were engaged for this activity along with newly appointed SOs. CSO Social Statistics also helped in entire process. For technical support, staff from DP Centre was also engaged at each workstation. **(Annexure-I)**

2.3.   Composition of Workshops at the PBS Data Festival:

The Data Festival workshops were organized across six workstations, with three located on the ground floor and three on the first floor. The schedule for the two-day event was structured as follows:

Day 1:

- There were **3 sessions** each of one-hour duration, for all six workstations.

- This provided a total of **18 presentation slots** for the first day.

Day 2:

- There were **4 sessions**, each of one-hour duration, for all six workstations.
- This offered a total of **24 presentation slots** for the second day.

In total, the festival featured **42 presentation slots** during two days' event, ensuring a rich exchange of ideas, research, and insights from diversified sectors. Owing to a large number of interested presenters, PBS higher authorities decided to provide opportunities to as many participants as possible to showcase their work at this important forum. To accommodate more presenters time slots were adjusted where necessary, with some being divided into **30-minute sessions**. This flexible approach ensured broader participation while maintaining the quality and focus of each presentation. However, there papers were scrutinized and irrelevant or out of scope papers were screened out. This rigorous process took much time of the team working on it.

2.4. Scrutiny of Presentations for the PBS Data Festival Workshops:

The initial data of interested participants provided by the Data Fest Secretariat was carefully scrutinized by the Workshop Management comprised of Dr. Bahrawar Jan, Mr. Rizwan Bashir and Ms. Kanwal Murtaza based on themes and areas of interest. Participants were contacted via email to obtain their credentials and PowerPoint presentations.

Once presentations were received, each underwent a thorough review by the focal persons to ensure matching with the festival's themes. Workshop Management then provided detailed guidelines to the presenters through email, instructing them on necessary modifications, including content and slide count, to fit their assigned time slots.

- **For One (1)-hour presentations**, presenters were advised to prepare **12 to 15 slides**, which included a **15-minute Q&A session**.

- **For 30-minutes presentations**, presenters were asked to limit their slide count to **10 slides**, with a **10-minute Q&A session**.

These guidelines ensured that each presentation was well-structured, focused, and allowed ample time for audience interaction and feedback.

Dr. Bahrawar Jan floated the idea that each workshop should be moderated by a Chair, this was endorsed by Workshop Management team. It was decided that the chair could either be an officer of PBS or a presenter from another workstation. PBS took great pride in extending the honor of chairing presentations to presenters from different organizations **(Annexure-II)**, enhancing the collaborative spirit of the event. Workshop Management reached out to potential chairs, sharing the schedules and requesting their availability. Based on their ease and preferences, time slots were adjusted to ensure smooth coordination.

2.5   Job of Workshop Management Team for the PBS Data Festival

2.5.1 Ensure Smooth Execution of Workshops:

- Organize and oversee all aspects of workshop management for a seamless event experience.

- Coordinate with presenters, chairs, and support staff to ensure timely execution of sessions.

2.5.2 Facilitate Effective Knowledge Sharing:

- Provide a platform to diverse presenters to share their research, insights, and data.

- Promote data-driven discussions and decision-making through well-structured presentations.

2.5.3 Promote Engagement Across Sectors:

- Involve participants from academia, government, and the private sector in collaborative workshops.

- Encourage cross-sector and cross cutting dialogue on data-related issues and challenges.

2.5.4 Align Presentations with Key Themes:

- Ensure that all presentations are aligned with the festival's thematic areas.

- Provide presenters with guidelines on content structure, time slots, and slide counts to maintain consistency.

2.5.5 Optimize Participation Opportunities:

- Adjust time slots (30 or 60 minutes) to accommodate more presenters, maximizing the number of participants who can present.

- Ensure that each session includes opportunities for audience interaction through Q&A sessions.

2.5.6 Engage High-Profile Experts as Chairs:

- Assign chairs from PBS or other organizations to lead each workshop, fostering collaboration.

- Ensure that chairs manage the session, introduce speakers, and moderate Q&A discussions effectively.

2.5.7 Ensure Professionalism and Recognition:
- Maintain a professional atmosphere in each workshop with structured session flow.

- Recognize presenters by awarding certificates at the end of each session to honor their contributions.

2.5.8 Leverage Presenter Feedback for Future Events:
- Collect and analyze feedback from participants to refine future workshops.
- Identify gaps or new themes based on feedback for better alignment with future data needs.

By adhering to these objectives, the Workshop Management team aimed to create an efficient, collaborative, and impactful environment for all participants, ensuring the success of the PBS Data Festival workshop

2.6 Role of the Chair:
The role of the Chair was crucial in ensuring the smooth flow of each workshop session. Their responsibilities included:

2.6.1 Opening the Session:
- The Chair began by introducing themselves and setting the stage for the presentation.

2.6.2 Introducing the Presenter:
- They provided a brief introduction to the presenter, sharing their profile and a summary of the presentation topic.

2.6.3 Moderating the Q&A Session:
- After the presentation, the Chair facilitated the Q&A session, ensuring active audience participation and maintaining time limits.

2.6.4 Awarding Certificates:
- At the end of the session, the Chair presented the certificate of appreciation to the presenter, acknowledging their contribution to the event.

This role was pivotal in maintaining the professionalism and flow of the workshops, ensuring an engaging experience for both presenters and the audience.

3. WORKSHOP OPERATIONS:
The workshop, initially scheduled to span two days, was successfully concluded within the same timeframe. Notably, the number of presentations exceeded the planned **52 presentations** by four. Thus, a total of **56** Presentations were delivered across 42 time slots at 6 workstations. On the first day, presentations were conducted in three slots: Time Slot 1 (12:00-1:00 PM), Slot 2 (2:15-3:15 PM), and Slot 3 (3:15-4:15 PM). On day two presentations were organized into four slots: 10:00-11:00 AM, 11:30

AM-12:30 PM, 2:00-3:00 PM, and 3:30-4:30 PM. This condensed schedule allowed for an efficient and productive workshop, accommodating a greater number of presentations than initially anticipated. However, this was possible with proper time management and coordination of entire team and support of presenters who were equally flexible. The details of the workshops are given as under:

Day - 1

Table No.1 Summary of Day 1

Workshop Station	No. of Presentations	No. of Presenters	No. of Organizations
1	3	3	2
2	3	3	2
3	4	4	3
4	4	6	3
5	4	4	2
6	4	4	3
Grand Total	22	24	15

Note: Details of workshop schedule are attached as Annexure-III

The inaugural day of Data Fest commenced with great fervor, as esteemed workshop sessions started from 12:00 P.M. and concluded at 04:15 P.M. Distinguished presenters from reputable organizations took center stage, delivering expert insights across three concurrent slots. The comprehensive program encompassed diverse themes some of them are given asunder:

- *Data Visualization: Leveraging Power BI for strategic Business insights and decision making*
- *The Significance of Data for Investment: Informing strategic decision-making*
- *Child and Mother Health: Advancing public health initiatives*

On first day twenty-four (24) renowned experts from different walk of life presented their latest data related work, captivating audience of their workstations. The respected chairpersons provided expert facilitation, ensuring seamless discussions and fostering an environment conducive to knowledge sharing. However, the day was not without its challenges. Technical difficulties arose, causing brief disruptions in several presentations. Internet Connectivity issues hindered some presenters' ability to showcase their visual aids. Despite these hurdles, the presenters demonstrated remarkable adaptability, swiftly adjusting their delivery to minimize disruptions. Notably, the audience demonstrated exceptional enthusiasm, posing pertinent questions to presenters and diligently recording key takeaways. The interactive Q&A sessions promoted meaningful dialogue between experts and attendees, fostering a dynamic exchange of ideas The day's proceedings underscored the significance of Data Fest as a premier platform for intellectual exchange, collaboration, and innovation.

Day 1 WORKSTATION 1

Presentation 1 **Presenter:** Mr. Attiq ur Rehman **Organization:** Pakistan Bureau of Statistics (PBS) **Topic:** Data for Investment **Key Highlights:** • Transformation of data from information to an asset • Analysis of gross, fixed & capital investment trends in Pakistan • Data on GFCF as a basis for future investment planning **Chair:** Dr. Abdul Zahid Khan, Chairman DTM **(IIUI)**	
Presentation 2 **Presenter:** Prof. Dr. Saleha Naghmi Organization: Kinnaird College for Women, Lahore **Topic:** Tidy verse (Working the Power of Data) **Key Highlights:** • Introduction to tidy data • Data transformation using dplyr • Graphical representation using ggplot2 • Analysis of MICS survey 2018 **Chair:** Dr. Ayesha Nazuk **(NUST)**	
Presentation 3 **Presenter:** Dr. Sayad Waseem Abbas **Organization:** Pakistan Bureau of Statistics (PBS) **Topic**: Rural Statistics **Key Highlights:** • Improving living standards in rural areas • Development of rural infrastructure • Identifying rural area concentrations for health, education, and housing needs • Importance of rural development in decentralized planning **Chair:** Dr. Saleha Naghmi	

DAY 1 WORKSTATION 2

Presentation 1 **Presenter**: Joao Pedro Azevedo **Organization**: UNICEF **Topic:** Child and Mother Health **Chair**: Shazia Begum **(PBS)**	
Presentation 2 **Presenter**: Dr. Baharawar Jan **Organization**: Pakistan Bureau of Statistics (PBS) **Topic:** Quantile-Wise Cost-of-Living Impact **Key Highlights**: • Determined quantile-wise growth rates of expenditure for each commodity group using the Consumer Price Index (CPI). • Estimated cost of living based on growth rates, commodity group weights, and indices. • Showed disparity in cost of living between rich and poor. • Analyzed the disparity in per-capita income and cost of living growth. **Chairs**: Mr. Tariq Bashir **(PBS)** **Co-chair:** Dr. Ehtesham Gull **(PBS)**	
Presentation 3 **Presenter**: Muhammad Zaman Bhatti **Organization**: Finance Division **Topic**: Pakistan Economy: Easy Access to Data **Key Highlights**: • One-stop digital platform for socio-economic data. • Data visualization. • Comparative analysis. **Chair**: Mr. Naseer Ahmad **(PBS)**	

DAY 1 WORKSTATION 3

Presentation 1 **Presenter**: Muhammad Asif **Organization**: State Bank of Pakistan (SBP) **Topic:** SBP EasyData - Making Data Access Easier **Key Highlights**: • EasyData is an online repository of economic data by SBP. • Provides access to historical and current data from public and private sources. • User-friendly interface to facilitate easier data access. **Chair**: Dr. Liaqat **(PBS)**	
Presentation 2 **Presenter**: Fahad Mirza **Organization**: World Bank **Topic**: Leveraging the Power of Data through Storytelling **Key Highlights**: • Evolution of data storytelling (e.g., John Snow's cholera map, Napoleon's march). • Importance of visualization in revealing insights and altering data interpretation. • Use of Scrollyboard for interactive storytelling to enhance audience engagement. **Chair**: Mr. Attiq ur Rehman **(PBS)**	
Presentation 3 **Presenter**: Rizwan Bashir **Organization**: Pakistan Bureau of Statistics (PBS) **Topic**: Crime Statistics: Enhancement of Data Coverage **Key Highlights**: • Overview of crime statistics from 1980-2023. • Challenges in crime data collection: provincial data only, no district-level data, irregular updates. • Solutions: National-level data fusion, GIS integration for trend analysis, real-time data sharing, crime visualization. **Chair:** Dr. Sundas **(NUST)**	

Presentation 4
Presenter: Dr. Abid Rauf
Organization: UET Taxila

Topic: Statistical and Machine Learning Approaches in Recommender Systems

Key Highlights:
- Applications of recommender systems in e-governance.
- Use in personalized public service delivery and citizen engagement.
- Focus on data privacy and bias challenges.
- Enhanced transparency, efficiency, & citizen participation.

Chair: Dr. Sundas **(NUST)**

Day 1 WORKSTATION 4

Presentation 1
Presenter: Dr. Sundas & Dr. Yasir
Organization: NUST

Topic: Integrated Approaches to Data Analytics and Visualization: Leveraging Power BI for Strategic Business Insights and Decision Making

Key Highlights:

- Data Analytics for Analytic Decision Making
- Basic Concepts of BI Architecture
- Extract, Transform and Load (ETL), Exploratory Data Analysis (EDA)
- Descriptive, Diagnostic, Predictive, and Prescriptive Analytics
- Use of Analytical Tools like Power BI

Chair: Mr. Rizwan Bashir **(PBS)**
Co-chair: Mr. Syed Sibt e Hassam **(SCP)**

Presentation 2 **Presenter:** Dr. Zahid Asghar **Organization:** Quaid e Azam University **Topic:** Data as the New Currency **Key Highlights:** • Data as the cornerstone of modern-era governance, AI, and innovation • Quality Data • Data Trust • Data Privacy • Citizens of Data Science • Data Monetization **Chair:** Dr. Khalid Farooq, **Chief SO**	
Presentation 3 **Presenter:** Miss Sobia Munawar **Organization:** Pakistan Bureau of Statistics (PBS) **Topic:** DSSI (Digital Price Statistics Survey) **Key Highlights:** • Digital Price Statistics Survey • DSSI Features • Gap Analysis (DC Rates and SPI) • Gap Analysis (Wholesale and Retail) • Data Integration and Need-based Assessment **Chair:** Dr. Khalid Farooq, **Chief SO**	

Presentation 4
Presenter: Mr. Zeeshan Ullah and Mr. Akbar Ali Sherazi
Organization: NEECA (National Energy Efficiency and Conservation Authority)

Topic: Pakistan's Fan Replacement Program

Key Highlights:

- Data-driven policymaking
- NEECA Introduction & Action Plan 2023-30
- ECBC (Energy Conservation Building Code)
- Fan Replacement Program – Justification
- Strategic Impact of the Program

Chair: Mr. Rafique Hussain Talpur **(PBS)**

DAY 1 WORKSTATION 5

Presentation 1 **Presenter:** Dr. Abiha Zahra **Organization:** Department of Governance & Global Studies, Info Technology University, Lahore **Topic**: Longitudinal Data from Public Sector Organizations and Bureaucracy: Trends, Insights, and Challenges **Key Highlights:** - Appointment patterns of senior bureaucratic leaders/heads in the Public Sector - Competence of bureaucratic leadership (Education and Experience) - Gender distribution at leadership positions across various policy fields - Patterns and Insights into the term in office at senior bureaucratic positions during various political periods **Chair:** Dr. Kalsoom Akhtar Chaudhry **(HOD, Statistics, Kinnaird College)**	
Presentation 2 **Presenter:** Mr. Noman **Organization:** Food & Agriculture Organization (FAO) **Topic:** Digitalization of FAO Farmer Field School (FFS) **Key Highlights:** - FFS Database and Dashboard - FFS Indicators - Drill Down for Gender Disaggregation - Monitoring and Data Visualization in Action **Chair:** Dr. Amjad Javed Sandhu (PBS)Co- **Chair:** Dr. Rizwan Bashir Sandhu (PBS)	

Presentation 3 **Presenter:** Dr. Ayesha Nazuk **Organization:** National University of Science & Technology (NUST) **Topic:** Exploring the Potential Challenges of E-Governance in Pakistan **Key Highlights:** • Introduction to E-Governance • E-Governance Models • The NGO Disclosure Index • Top Performers **Chair:** Dr. Zahid Asghar **(QAU)**	
Presentation 4 **Presenter:** Dr. Tanweer ul Islam **Organization:** National University of Science & Technology (NUST) **Topic:** Data Visualization with R **Key Highlights:** • Histogram • Wage Distribution • Scatter Plot • Regression Line **Chair:** Dr. Zahid Asghar **(QAU)**	

DAY 1 WORKSTATION 6

Presentation 1
Presenter: Mr. Ashfaq Ahmed
Organization: Wafaqi Muhtasib

Topic: Data Management and Operation at Wafaqi Muhtasib for Dispensation of Justice and Eradication of Maladministration

Key Highlights:

- WMS data helps analyze governance quality and identify systemic issues in Federal Government Agencies.
- It supports policy changes, gap identification, improved service delivery, and eradication of maladministration.
- Structured public feedback channels refine services and adapt to changing needs.
- The data enhances standards for justice and fairness in administration.

Chair: Mr. Shaukat Khan, DDG **(PBS)**

Presentation 2
Presenter: Dr. Abdul Qayyum
Organization: Crop Reporting Survey, Punjab (CRS)

Topic: Introduction, Crop Reporting Services Punjab. Methodology of Crop Area Estimation, Statistical Method: Remote Sensing, Methodology of Crop Yield Estimation, Important Surveys

Key Highlights:
- Timely and accurate estimation of acreage and production for all crops ensures better planning and food security.
- Automated systems and scientific models reduce human intervention in data collection and dissemination for reliable crop estimates.

Chair: Dr. Naveed, JACC **(PBS)**

Presentation 3 **Presenter:** Miss Mehrun-Nisa **Organization:** National University of Modern Languages, ICT (NUML) **Topic:** Social Impact of Machine Learning & Applications **Key Highlights:** • Policies, guidelines, and standards. • Data quality framework. • Privacy, compliance, and security. • Information architecture and integrations. • Reporting and analytics. **Chair:** Shazia Begum **(PBS)**	

Presentation 4
Presenter: Miss Amna Sajid
Organization: National University of Modern Languages, ICT (NUML)
 	
Topic: Healthcare and Generative AI: Transforming the Future
 	
Key Highlights:
    • Policies, guidelines, and standards.
    • Data quality framework.
    • Privacy, compliance, and security.
    • Information architecture and integrations.
Reporting and analytics.
 	
Chair: Shazia Begum **(PBS)**	

DAY-2

Table No. 2. Summary of Day 2

Workshop Station	No. of Presentations	No. of Presenters	No. of Organizations
1	5	7	5
2	6	6	3
3	6	7	3
4	5	7	4
5	6	4	4
6	6	7	4
Grand Total	**34**	**38**	**23**

Note: Details of workshop schedule are attached as Annexure-III

Day 2 of DataFest witnessed an escalation in intellectual dedication. On this day workshop sessions resumed from 10:00 A.M. to 04:30 P.M. Building on the momentum of Day 1, **Thirty-eight** (38) presenters from **Twenty-Three (23)** esteemed organizations shared their research across six concurrent slots. The expanded program delved into:

- National Accounts and Economic Statistics in public Policy Domain
- Social development index
- Data Acquisition visualization and Forecasting process
- Localized Mobile Health Application: Fully Automated AI Diagnostic for Sustainable.

DAY 2 WORKSTATION 1

Presentation 1
Presenter: Muhammad Mubashir
Organization: Economic Data & Statistics Department, NEOM Saudi Arabia

Topic: National Accounts and Economic Statistics in Public Policy Domain

Key Highlights:

- Importance of National Accounts and Economic Statistics in public policy
- Visualization of NEOM and Waikato Region using Tableau
- Insights on productivity and household income shaping fiscal strategies

Chair: Dr. Mehrosh Khalid **(IIUI)**

Presentation 2 **Presenter:** Dr. Madiha Iqbal **Organization:** Directorate General IT, Balochistan **Topic**: Data-Driven Interventions for Mental Health **Key Highlights:** • Focus on generational trauma and untreated mental health issues • Whispering Hope: a mental health intervention tool for anxiety and depression severity prediction • Use of data for developing predictive models **Chair:** Dr. Mehrosh Khalid **(IIUI)**	
Presentation 3 **Presenter**: Dr. Mehrosh Khalid **Organization:** International Islamic University, Islamabad (Department of Bioinformatics) **Topic:** Empowering Decision-Making Through Data Visualization and Analysis **Key Highlights**: • The transformative role of data in modern governance • Data-driven strategies in public policy • Enhancing public services through data analysis **Chair:** Mr.Munwar Ali Ghanghro **(PBS)**	

Presentation 4 **Presenter**: Kashif Mushtaq Kanju **Organization:** Police Department, KP **Topic**: Technological Initiatives in KP **Key Highlights**: • Welfare initiatives in health and education sectors • Police Sahulat SOP and digital app for online services **Chair**: Muhammad Ibrahim **(RDS)**	
Presentation 5 **Presenters:** 1. Muhammad Ibrahim 2. Syed Saddam Haider 3. Aisha Irum **Organization:** Research and Development Solutions, Islamabad **Topic**: Utilizing Proxy-Based Methodologies to Enhance HDI Estimates at the District Level **Key Highlights:** • Use of visualization tools to unlock insights from large datasets • Understanding of shapefiles and triangulation of datasets • Survey data analysis for policy-making **Chair**: Mr. Azizullah Bhatti **(PBS)**	

DAY 2 WORKSTATION 2

Presentation 1 **Presenter**: Mr. Ihsan ul Haq **Organization**: Pakistan Bureau of Statistics (PBS **Topic**: "Unveiling Health Financing in Pakistan: Insights" **Key Highlights**: • Critical landscape of healthcare financing through National Health Accounts (NHA). • Importance of robust health financing data for shaping policies and improving health outcomes. **Chair**: Prof. Donald Roy McNeil	
Presentation 2 **Presenter**: Shazia Begum **Organization**: Pakistan Bureau of Statistics (PBS) **Topic:** Growth & Development **Key Highlights**: • Trade's contribution to economic growth and development. • Analysis of trade statistics using time-series data. • Improving the efficiency of economic resources. **Chair**: Dr. Muhammad Afzaal **(Development Project Planning and Commission)**	

Presentation 3 & 4 **Presenters**: Miss Saira Abid, Mr. Muhammad Farooq **Organization**: Bureau of Statistics, P&D Board, Punjab (BOS) **Topic 1**: Equity Profile Reliving Patterns of Inequality **Key Highlights**: Revealing patterns of inequality. **Topic 2**: Punjab Info User Interface Workshop **Key Highlights**: • Understanding Punjab Info. • Key features of Punjab Info. • Database summary and retrieval. **Chair**: Mr. Ihsan ul Haq **(PBS)**	
Presentation 5 **Presenter**: Dr. Verda Salman **Organization**: National University of Sciences and Technology (NUST) **Topic**: Estimating Food Security Indicators with Household Integrated Economic Survey **Key Highlights**: • Method for estimating food security indicators. • Household Integrated Economic Survey (HIES). • The Food Insecurity Experience Scale (FIES). **Chair**: Ms. Rizwana Siddique **(PBS)**	

Presentation 6
Presenter: Dr. Amber Sarwar
Organization: Rawalpindi Women University

Topic: Habitats of Chilli Pepper in China under Climate Change

Key Highlights:

- Study used a model to predict where chili peppers can be grown in China with climate changes.
- Temperature and rainfall are important factors.

Chair: Mr. Suhaib **(PBS)**

DAY 2 WORKSTATION 3

Presentation 1
Presenter: Kishwar Khan
Organization: Competition Commission of Pakistan

Topic: Essential Data for Research on Competition Issues

Key Highlights:

- Data collection, compilation, and analysis for enforcing the Competition Act.
- Role of market data in addressing competition law violations.
- Data-driven research enhances regulatory enforcement and governance.
- Importance of accessible and relevant market data for analyzing market dynamics.

Chair: Syed Abul Qadir **(PBS)**

Presentation 2 **Presenter**: Saqib Sultan **Organization**: Pakistan Bureau of Statistics (PBS) **Topic**: Social Development Index **Key Highlights**: • Overview of data collection modules in the digital census. • Analysis of education, living standards, and ICT. • District-wise analysis of out-of-school children in the 2023 Census. **Chair**: Miss Kishwar Khan **(CCP)**	
Presentation 3 **Presenter**: Izzat Ali Chachar **Organization**: Bureau of Statistics (BOS), Sindh **Topic**: Empowering Decisions through Data **Key Highlights**: • Use of data analytics to inform decision-making and reduce errors. • Data visualization to present complex information for accurate decisions. • Predictive analytics to forecast trends and identify risks. • Creating a data-driven culture for collaboration and continuous improvement. **Chair**: Miss Kishwar Khan **(CCP)**	

Presentation 4 **Presenters**: Yasir Rahim & Rukhsana Kausar **Organization**: Population Welfare Department, Punjab **Topic**: Data Storytelling for Evidence-Based Decision-Making **Key Highlights**: • Development of an ADP scheme to collect, organize, and analyze data for population planning. • Data collected from national and provincial stakeholders and used for policy-making. • Generated 20 data books for better decision-making and policy formulation. **Chair**: Prof. Dr. Jahangir Khan **(Sarhad University)**	
Presentation 5 **Presenters**: Ms. Saman Rai **Organization**: Population Welfare Department, Punjab **Topic**: Role of SBCC in population Management. **Key Highlights**: • Role of SBCC. • Important of data in SBCC. • Prime Role of SBCC. • Evaluation procedure in SBCC. **Chair:** Prof. Dr. Jahangir Khan **(Sarhad University)**	

Presentation 6
Presenter: Prof. Dr. Jahangir Khan
Organization: Sarhad University of Science and IT

Topic: Remote Sensing Spatial Observations Using MODIS Data Products

Key Highlights:

- Use of MODIS data for monitoring droughts and floods, including soil moisture information.
- Vegetation Temperature Condition Index (VTCI) approach for drought monitoring using NDVI and LST.
- Analysis of a 12-year time series for drought and flood events and their impacts on crop seasons.

Chair: Dr. Arshad Mahmood Malik **(Arid University)**

Day 2 WORKSTATION 4

Presentation 1
Presenter: Ch. Sajid Rasool
Organization: Bureau of Statistics, P&D Board, Punjab (BOS)

Topic: Data-Driven Decision Making through Integration and Visualization

Key Highlights:

- About DDM (Data-Driven Decision Making)
- Types and Sources of Evidence
- Use of Statistics in Decision Making
- Official Sources of Evidence
- Role of MICS in DDDM

Chair: Malik Rizwan Asghar **(Metrological Department)**

Presentation 2
Presenter: Issac Shahza
Organization: Bureau of Statistics, P&D Board, Punjab (BOS)

Topic: Complex Sample Designs in Survey Estimation

Key Highlights:

- Complex Samples
- Design Features on Variance Estimation
- Effects of Design Features
- Complex Sample Variance Estimation Methods

Chair: Malik Rizwan Asghar **(Metrological Department)**

Presentation 3
Presenter: Malik Rizwan Asghar
Organization: Metrological Department

Topic: Data Acquisition, Visualization, and Forecasting Process

Key Highlights:

- Data Acquisition and Transformation
- Weather Data Sensors
- Data Analysis
- Weather Forecast Process
- Data Integration Approach

Chair: Ch. Sajid Rasool **(BOS)**

Presentation 4
Presenter: Dr. Ali Turab & Zille Huma
Organization: Precision Health Consultant Global (PHC)

Topic: Addressing Gaps in National Health Data

Key Highlights:

- Analysis of National-Level Health Survey Data
- Exploring Common Gaps and Issues in Data Collection, Quality, and Representation
- Challenges and Solutions: Implementation of AI Solutions in Healthcare

Chair: Dr. Muhammad Habib **(Arid University)**

Presentation 5

Presenter: Dr. Muhammad Habib & Mr. Abdul Hameed
Organization: PMAS Arid Agriculture University, Rawalpindi

Topic: Exploring the Performance of Various Machine Learning Algorithms on Diverse Datasets for Predictive Analysis

Key Highlights:

- Data Processing and Cleaning
- Exploratory Data Analysis
- Data Visualization Techniques
- Advanced Feature Engineering
- Hyperparameter Optimization: GridSearchCV
- Model Development: Logistic Regression, Decision Tree
- Ensemble Techniques: XGBoost Classifier, Random Forest Classifier
- Model Evaluation and Performance Metrics

Chair: Mr. Ehtisham **(DP Centre, PBS)**

Day 2 WORKSTATION 5

Presentation 1 **Presenter:** Mr. Aftab Ahmad Afridi **Organization:** National Commission on the Status of Women (NCSW) **Topic**: National Gender Data Portal **Key Highlights:** • NCSW Background and Introduction • NGDP Background and Introduction • NGDP Data Portal • Data Collection Mechanism **Chair:** Ms. Kainat **Co-Chair:** Mr. Usman	
Presentation 2 **Presenter:** Ms. Kainat **Organization:** CECOS University of IT and Emerging Sciences **Topic**: Using Predictive Technologies: The Role of Monsoon Forecasting in Disaster Risk Management **Key Highlights:** • Monsoon Forecasting: The use of predictive technology in forecasting monsoons. • Disaster Risk Management: How forecasting can help mitigate disaster risks. **Chair:** Mr. Yasir **(DP, PBS)** **Note:** Ms. Maryam Mashal Khan did not attend the session. However, she sent her representative Ms. Kainat	

Presentation 3 **Presenter:** Mr. Usman **Organization:** CECOS University of IT and Emerging Sciences **Topic**: Localized Mobile Health Application: Fully Automated AI Diagnostic for Sustainable Pakistan **Key Highlights:** • **Mobile Health Application:** Introduction of an AI-powered health diagnostic tool. • **Sustainable Development:** How the app contributes to healthcare sustainability in Pakistan **Chair:** Mr. Yasir (DP, PBS) **Note:** Ms. Maryam Mashal Khan did not attend the session. However, she sent her representative Mr. Usman.	
Presentation 4 **Presenter:** Mr. Rohail Amjad Mughal **Organization:** PITB (Punjab Information Technology Board), OSSP & BOS **Topic**: Leveraging Technology for Efficient Household Survey Data Collection **Key Highlights:** • Household Surveys: **Use of technology in conducting efficient surveys.** • Data Collection Tools: **Introduction of tools for real-time data collection.** **Chair:** Dr. Maryam Mahsal **Co-chair**: Mr. Sajid Rasool **Note:** Ms. Maryam Mashal Khan did not attend the session.	

Presentation 5
Presenter: Mr. Rohail Amjad Mughal
Organization: BOS, Punjab

Topic: Online Statistical System in Punjab -
Integration of Official Statistics on Real-Time Basis

Key Highlights:

- **Statistical Integration:** Merging official statistics into one system for real-time access.
- **Efficiency:** How this system enhances the efficiency of data reporting.

Chair: Dr. Maryam Mahsal
Co-chair: Mr. Sajid Rasool

Note: Ms. Maryam Mashal Khan did not attend the session.

Presentation 6
Presenter: Mr. Zeeshan Ullah
Organization: NEECA (National Energy Efficiency and Conservation Authority)

Topic: Pakistan's Fan Replacement Program

Key Highlights:
- Data-driven policymaking
- NEECA Introduction & Action Plan 2023-30
- ECBC (Energy Conservation Building Code)
- Fan Replacement Program – Justification
- Strategic Impact of the Program

Chair: Mr. Akbar Ali Shirazi **(NEECA)**

Day 2 WORKSTATION 6

Presentation 1 **Presenter:** Miss Rehana **Organization:** FAO **Topic**: FSNIS, FAO Pakistan **KEY HIGHLIGHTS:** • Food Security and Nutrition Information System (FSNIS) • Pakistan Animal Identification & Traceability System (PAITS) **Chair:** Dr. Sohail Khan (Sino-Pak Centre)	
Presentation 2 **Presenter:** Mr. Saddam **Organization:** FAO **Topic:** Aqua Portal **KEY HIGHLIGHTS:** • Enable climate-resilient decision-making in agriculture and rural areas. • Improve accessibility to crucial water, climate, and agriculture data. • Empower stakeholders with robust decision-making capacities **Chair:** Dr. Sohail Khan (Sino-Pak Centre)	

Presentation 3 **Presenters:** Ms. Sobia Munawar & Mr. Arslan Basheer **Organization:** Pakistan Bureau of Statistics (PBS) **Topic**: Data Visualization of PBS **Key Highlights:** • Benefits of API. • Uses of Census data as a base. • Dashboard preparation. • Covid-19 impact analysis. **Chair:** Dr. Sohail Khan (Sino-Pak Centre)	
Presentation 4 **Presenters:** Dr. Arshad Mahmood Malik (Chairman, HOD) **Organization:** PMAS Arid Agriculture University (PBS) **Topic**: Hydroponics Technological Interventions in Agriculture Framing, Challenges and Opportunities **Key Highlights:** • Technical Manifestation. • Case study of Successful Model in Pakistan. • Financial Feasibility Benefits of API. • Uses of Census data as a base. • Dashboard preparation. **Chair:** Mr. Rizwan Basheer, (PBS)	

Presentation 5
Presenters: Mr. Jahangir Khan
O**rganization:**   Securities and Exchange
Commission of Pakistan

Topic: Digital journey at SECP

Key Highlights:
- Introduction & Key Statistics
- Data Flow in Corporate Registry
- Secured Transaction Registry
- Regulatory Sandbox
- Major Reporting Systems
- Digitalization Journey & LEAP Project
- Way Forward

Chair: Mr. Arshad Mehmood (ARID agriculture)

4.   WORKSHOP OUTCOME

4.1   Outlook of the Workshop Management.

In the two days' activity, approximately **one thousand and eighty-six (1086)** participants **(Annexure-IV)** attended various session of workshops, with engaging discussions and fostering meaningful connections. The distinguished chairpersons skillfully moderated the sessions, providing seamless transitions and valuable insights. However, last-minute changes in the presentation schedules posed logistical challenges, requiring swift rearrangements by the organizing committee. Despite minor setbacks, including temporary network connectivity issues and audio-visual delays, and non-availability of stationery, the presenters demonstrated remarkable flexibility. Quick-thinking organizers swiftly addressed these challenges, minimizing disruptions.

It was also noted that some presenter in 30-minutes slot exceeded their time limit and as result second presenter had to cover their presentation in only 15 minutes that also effected their overall grading

Two days of nonstop workshops reinforced Data Fest's stature as a top-tier platform for convening experts, sharing insights, and catalyzing cutting-edge ideas.

4.2   Challenges and Issues

i.   Workshops proceedings hindered by technical issues, including sound system malfunctions, connectivity problems, and software glitches. These disruptions derailed presentations, hindered collaboration, and frustrated participants.

ii.   One notable challenge encountered during the workshop was noise distraction, primarily due to the open-space setting. Conducting the workshop in an open area made it vulnerable to ambient noise from surrounding activities, foot traffic, and conversations. This constant background noise periodically disrupted presentations and group discussions, affecting participant focus and engagement.

iii.   Last-minute cancellations and schedule alterations by presenters created logistical hurdles for workshop.

iv.   The unavailability of essential amenities, including stationary supplies and water bottles created an inconvenient environment and hindered participant productivity during the workshop.

v.   Due to the non-availability of a venue map at the reception desk, workshop attendees faced challenges locating the event space, resulting in lost time and inconvenience.

vi.   It was also noticed that refreshment/food availability for presenters and organizers turned out to be quite problematic despite the fact plenty of food was available. Further, water was available for the chair and presenters on day one but on day two it disappeared.

4.3   Suggestions

i.   Thorough technical check required to be conducted before the workshop. Test audio-visual equipment, internet connectivity, and software one day before the event. Identify backup options for unexpected issues.

ii.   Choose a quiet, enclosed venue to minimize noise distractions. Consider noise-reducing materials or dividers if necessary. Ensure the venue provides essential amenities.

iii.   Confirm presenter availability well in advance and establish a clear cancellation policy. Identify backup presenters or alternative content. Communicate schedule changes promptly to attendees.

iv.   Conduct a venue needs assessment to ensure essential amenities. Provide clear instructions for accessing amenities. Consider offering additional amenities like snacks and refreshments.

v.   Provide clear venue directions and maps. Display signage indicating the workshop location and designate a welcome desk or information point. Ensure reception staff are informed about the workshop.

4.4   Impact of the PBS Data Festival

The Pakistan Bureau of Statistics (PBS) successfully conducted its first-ever Data Festival on October 21 and 22, which included a series of workshops where presenters from academia, the government, and the private sector participated. This event had a profound impact both internally within PBS and externally in terms of its reputation and future potential.

4.4.1. Internal Impact:

The Data Festival marked an unprecedented experience for PBS employees, as it brought together staff from various sections who had not previously collaborated on such a large scale. This collective effort fostered a strong sense of unity and teamwork within the organization. The level of enthusiasm and involvement shown by PBS employees during the event was unparalleled in PBS's history. This newfound in-house collaboration has strengthened PBS's internal cohesion, improved cross-departmental coordination and creating a culture of collective achievement

4.4.2   External Impact:

Externally, the success of the Data Festival has elevated PBS's standing as an extraordinary government organization. It showcased PBS's capability to organize large-scale, impactful events, highlighting its role as a key player in fostering data-driven dialogue and knowledge sharing. The festival also resulted in PBS building a valuable network of high-profile individuals from various sectors, whose contact details are now part of PBS's database. This network can be leveraged for future seminars, workshops, and presentations, making PBS better equipped to engage with experts for upcoming initiatives.

Overall, the Data Festival has not only strengthened PBS internally but has also enhanced its reputation as a leading, innovative organization in the government sector

5. ANNEXURES

List of team Members

Sr. No.	Team Member	Designation
1	Dr. Bahrawar Jan	DDG
2	Mr. Rizwan Bashir	Director
3	Ms. Aisha Khaliq	CSO
4	Ms. Kanwal Murtaza	CSO
5	Ms. Ayesha Ashfaque	S.O.
6	Mr. Adnan Shams	S.O.
7	Mr. Anand Kumar	S.O.
8	Ms. Aqsa Ali	S.O.
9	Ms. Faiza Razzaque	S.O.
10	Ms. Sadaf Waseem	S.O.
11	Ms. Rimsha Haider	S.O.
12	Ms. Arfa Badar	S.O.
13	Ms. Farhat Humma	S.O.
14	Ms. Zahida Parveen	S.O.
15	Ms. Sadia Mursaleen	S.O.
16	Ms. Shahla Nousheen	S.O.
17	Mr. Hammad Waseh	S.A.
18	Mr. Tanveer Aslam Abbasi	S.A
19	Mr. Muhammad Shakeel	S.A.
20	Mr. Rana Irfan Shafique	S.A.
21	Mr. Nasir Ali	S.A.
22	Mr. Noor Muhammad Farooq	S.A.
23	Ms. Saima Nazli	S.A.
24	Ms. Tehreem Khan	S.A.
25	Mr. Zeeshan Arshad	S.A.
26	Ms. Farah Naz	S.A.
27	Ms. Munnaza Jabeen	S.A.
28	Ms. Kishwar Sultana	S.A.
29	Mr. Ikram Ullah	S.A.
30	Mr. Amjad Mahmood	DEO
31	Mr. Asad Hussain	DEO
32	Mr. Abid Akhter Khan	DEO
33	Mr. Ahmad Faraz	DEO
34	Mr. Sajjad Naseer	DEO
35	Mr. Ikram Ullah	DEO

List of Organizations (Day-1)

Sr. No.	Organization
1	Pakistan Bureau of Statistics (PBS)
2	Kinnaird College For Women, Lahore
3	UNICEF
4	Finance Division
5	State Bank of Pakistan (SBP)
6	World Bank
7	UET Taxila
8	National University of Science & Technology (NUST)
9	Quaid-e-Azam University (QAU)
10	National Energy Efficiency & Conservation Authority (NEECA)
11	Dept. of Governance & Global Studies, Info Technology University. LHR
12	Food & Agriculture Organization (FAO)
13	Wafaqi Muhtasib
14	Crop Reporting Survey, Punjab (CRS)
15	National University of Modern Languages, ICT (NUML)

List of Organizations (Day-2)

Sr. No.	Organization
1	Economic Data & Statistics Department, NEOM Saudi Arabia
2	Directorate General IT, Balochistan
3	International Islamic University, Islamabad (IIUI)
4	Police Department, KP
5	Research and Development Solution, ISB (RDS)
6	Pakistan Bureau of Statistics (PBS)
7	Bureau of Statistics, P&D Board, Punjab (BOS)
8	National University of Science & Technology (NUST)
9	Rawalpindi Women University
10	Competition Commission of Pakistan
11	BOS, Sindh
12	Population Welfare Department, Punjab
13	Sarhad University of Science and IT
14	Metrological department
15	Precision Health Consultant Global (PHC)
16	PMAS Arid Agriculture University, Rawalpindi.
17	National Commission on the Status of Women (NCSW)
18	CECOS University of IT and Emerging Sciences
19	Punjab Information Technology Board (PITB)
20	National Energy Efficiency & Conservation Authority (NEECA)
21	Food & Agriculture Organization (FAO)
22	Sino-Pak center for AI
23	Security and Exchange Commission of Pakistan (SECP)

WORKSHOP SCHEDULE:

Day-I (21 October, 2024) Workshop Details (18 Workshops x 1 Hour Each)					
Time	W-1	W-2	W-3	W-4	W-5	W-6
S-1	(D1S1W1)	(D1S1W2)	(D1S1W3)	(D1S1W4)	(D1S1W5)	(D1S1W6)

Day-I (21 October, 2024) Workshop Details (18 Workshops x 1 Hour Each)

Time	W-1	W-2	W-3	W-4	W-5	W-6
S-1	(D1S1W1)	(D1S1W2)	(D1S1W3)	(D1S1W4)	(D1S1W5)	(D1S1W6)
12:00 to 13:00	**Organization: Pakistan Bureau of statistics (PBS)** **Presenter:** Mr. Attiq ur Rehman (PBS) **Topic:** "Data for Investment" **Chair**: Dr Abdul Zahid Khan, Chairman DTM, (IIUI) **Attendence: 11**	**Organization: UNICEF** **Presenter:** Joad Pedro **Topic:** "Child and Mother Health" **Chair:** Shazia Begum (PBS) **Attendance:13**	**Organization: State Bank of Pakistan (SBP)** **Presenter:** Mr. Muhammad Asif (SDSD, SBP) **Topic:** "SBP EasyData - making data access easier" **Chair:** Dr. Liaqat, (PBS) **Attendance:18**	**Organization: NUST** **Presenter:** Dr. Sundas & Dr. Yasir **Topic**: Integrated Approaches to Data Analytics and Visualization: Leveraging Power BI for Strategic Business Insights and& decision making. **Chair:** Mr. Rizwan Bashir, PBS **Attendance:19**	**Organization:** Dept. of Governance & Global Studies, Info Technology University. LHR **Presenter:** Dr. Abiha Zahra **Topic:** "Longitudinal Data from Public Sector Organizations and Bureaucracy: Trends, Insights and Challenges". **Chair:** Dr. Kalsoom Akhtar Chaudhry (HOD, Statistics, Kinnaird College) **Attendance:17**	**Organization: Wafaqi Muhtisb** **Presenter: Mr.** Ashfaq Ahmed **Topic:** " Data Management and Operation at Wafaqi Muhtisb for Dispensation of Justice and eradication of maladministration " **Chair:** Mr. Shaukat Khan, DDG, (PBS) **Attendance:38**
	BREAK (1:00 to 2:00)					
S-2	(D1S2W1)	(D1S2W2)	(D1S2W3)	(D1S2W4)	(D1S2W5)	(D1S2W6)

14:15 to 15:15	**Organization: Kinnaird College For Women, Lahore** **Presenter:** Prof. Dr. Saleha Naghmi **Topic:** "Tidy verse (Working the Power of Data) " **Chair:** Dr. Ayesha Nazuk (NUST) **Attendence: 32**	**Organization: Pakistan Bureau of Statistics (PBS)** **Presenter:** Dr. Baharawar Jan **Topic:** "Quantile-Wise Cost-of-Living Impact" **Chair:** i- Mr. Tariq Bashir (PBS) ii- Dr. Ehtesham Gull (PBS) **Attendence:20**	**Organization: World Bank** **Presenter. Fahad Mirza** **Topic:** "DASHBOARD/ leveraging the power of the data through story telling" **Chair:** Mr. Attiq ur Rehman (PBS) **Attendence:16**	**Organization:** i-Quaid-e-Azam University ii-PBS, DP Center **Presenter:** i- Dr. Zahid Asghar ii-Miss Sobia Munawar **Topic:** i "Data as the new Currency" ii- DSSI **Chair:** Dr. Khalid Farooq (PBS) **Attendence:16** **Attendence:12**	**Organization: Food & Agriculture Organization (FAO)** **Presenter:** Mr. Noman **Topic:** "Digitalization of FAO Former Field School (FFS)" **Chair:** Dr. Amjad Javed Sandhu (PBS) **Attendence:17**	**Organization: Crop Reporting Survey, Punjab (CRS)** **Presenter:** Dr. Abdul Qayyum, DG. (CRS) **Topic:** "Introduction, crop reporting services Punjab. Methodology of crop area estimation, statistical method: remote sensing. Methodology of crop yield estimation. Important surveys" **Chair:** Dr. Naveed, JACC, PBS **Attendence:26**
S-3	**(D1S3W1)**	**(D1S3W2)**	**(D1S3W3)**	**(D1S3W4)**	**(D1S3W5)**	**(D1S3W6)**
15:15 to 16:15	**Organization: Pakistan Bureau of Statistics (PBS)** **Presenter:** Dr. Sayad Waseem Abbas **Topic:**" Rural Statistics"**Chair**: Dr. Saleha Naghmi **Attendence: 10**	**Organization:** Finance Division**Presenter:** Muhammad Zaman Bhatti **Topic:** "Pakistan Economy: Easy Access to Data "**Chair**: Mr. Naseer Ahmad (PBS) **Attendence:19**	**Organization:** **i- PBS** **ii-UET TEXILA** **Presenter: i-** Mr. Rizwan Bashir ii- Dr. Abid Rauf **Topic:** i-"Crime Statistics: Enhancement of Data Coverage and Improving Time Lag " **ii-** "A Comprehensive Overview of Statistical and Machine learning approaches in Recommender Systems"**Chair**: Dr. Sundas (NUST) **Attendence:9Attendence:10**	**Organization:** NEECA **Presenter:** Mr. Akbar Ali Shirazi & Mr. Zeeshan Ullah **Topic:** "Pakistan's Fan replacement programme"**Chair:** Mr. Rafique Hussain Talpur (PBS) **Attendence:17**	**Organization: National University of Science & Technology (NUST)** **Presenter:** i. Dr. Ayesha Nazuk ii. Dr. Tanweer ul Islam **Topic:** i. " Exploring the potential Challenges of E- Governance in Pakistan". ii. Data Visualization with R **Chair:** Dr. Zahid Asghar (QAU)**Attendence:18Attendence:19**	**Organization: National University of Modern Languages, ICT (NUML)Presenter:** i. Miss Mehrun-Nisa ii. Miss Amna Sajid **Topic:** i. "Social Impact of Machine Learning & Applications " **ii-**"Healthcare and Generative AI: Transforming the Future" **Chair:** Shazia Begum, (PBS) **Attendence:13Attendence:17**

<table>
<tr><td colspan="7" align="center" style="background:green;color:white">Day-II (22 October, 2024) Workshop Details (24 Workshops x 1 Hour Each)</td></tr>
</table>

Time	W-1	W-2	W-3	W-4	W-5	W-6
S-1	(D2S1W1)	(D2S1W2)	(D2S1W3)	(D2S1W4)	(D2S1W5)	(D2S1W6)

1000 to 1100						
	Organization: **i- Economic Data & Statistics Department, NEOM Saudi Arabia** **ii- Directorate General IT, Balochistan** **Presenter:** **i-** Muhammad Mubashir Mukhtar **ii-** Madiha Iqbal **Topic: i-** "National Accounts and Economic Statistics in Public Policy Domain" **ii-** "Data Driven Interventions for Mental Health" **Chair:** Dr. Mehrosh Khalid, (IIUI) **Attendence: 23**	**Organization:** **Pakistan Bureau of Statistics (PBS)** **Presenter:** i. Mr. Ihsan ul Haq ii. Shazia Begum **Topic:** i. "Unveiling Health Financing in Pakistan: Insights from National Health Accounts" ii- "Growth & Development" **Chair:** Dr Tanveer ul Islam (NUST) **i- Attendence:23** **ii- Attendence:20**	**Organization:** **Competition Commission of Pakistan** **Presenter:** Ms. Kishwar Khan **Topic:** "Essential Data for Research on Competition Issues: Insights under Pakistan Competition Act 2010 **Chair:** Syed Abul Qadir (PBS) **Attendence:26**	**Organization:** **Bureau of Statistics, P&D Board, Punjab (BOS)** **Presenter:** i. Ch. Sajid Rasool ii. Issac Shahzad **Topic:** i. "Data driven decision making through integration and visualization" ii-"Complex Sample Designs in Survey Estimation" **Chair:** Malik Rizwan Asghar (Metrological Department) **Attendence:25** **Attendence:15**	**Organization: i-** **National Commission on the Status of Women (NCSW)** **ii-EMIS (KP)** **Presenter:** Mr. Aftab Ahmad Afridi **Topic:** " National Gender Data Portal" **Chair:** Dr. Maryam Mahsal Khan (CECOS) **Attendence:15**	**Organization:** **i-FAO** **ii-FAO** **iii-Pakistan Bureau of Statistics (PBS)** **Presenter:** **i-**Miss Rehana **ii-**Mr. Saddam **iii-**Ms. Sobia Munawar & Mr. Arslan Basheer **Topic:** **i-**FSNIS, FAO Pakistan **ii-**Aqua Portal **iii-**Data Visualization of PBS **Chair:** Dr. Sohail Khan (Sino-Pak Centre) Attendence:16 Attendence:20
S-2	**(D2S2W1)**	**(D2S2W2)**	**(D2S2W3)**	**(D2S2W4)**		**(D2S2W6)**

	Organization: (International Islamic University, Islamabad (Department of Bioinformatics)Presenter: Dr. Mehrosh KhalidTopic: Empowering Decision-Making Through Data Visualization and Analysis Chair: Mr. Munwar Ali Ghanghro (PBS)Attendence:26	Organization: Bureau of Statistics, P&D Board, Punjab (BOS)Presenter i-Miss Saira Abid ii-Mr. Muhammad Farooq,Topic: i.1n Equity Profile Reliving Patterns of Inequality ii. Punjab Info User Interface WorkshopChair: Mr. Ihsan ul Haq (PBS)Attendence:17Attendence:19	Organization: Pakistan Bureau of statistics (PBS)Presenter:i-Mr. Saqib Sultan, PBSii-Izzat Ali Chachar, BOS, SindhTopic: i-"Social Development Index"ii-Empowering Decisions through Data Chair: Miss Kishwar Khan (CCP)Attendence:13Attendence:13	Organization: Metrological department Presenter: Malik Rizwan Asghar Topic: "Data Acquisition Visualization and Forecasting Process" Chair: Ch. Sajid Rasool (BOS)Attendence:31	Organization: CECOS University of IT and Emerging Sciences) Presenter: Dr. Maryam Mahsal Khan Topic: i. "Using Predictive Technologies: The Role of Monsoon Forecasting in Disaster Risk Management" ii. Localized Mobile Health Application: Fully Automated AI Diagnostic for Sustainable Pakistan Chair: Mr. Yasir, DP, PBS Attendence:31Attendence:30	Organization: Sino-Pak center for AI Presenter: Dr. Sohail Khan Topic: "High Performance Computing for Data Science Application"Chair: Ms. Sobia MunawarAttendence:25
1130 to 1230						
S-3	(D2S3W1)	(D2S3W2)	(D2S3W3)	(D2S3W4)	(D2S3W5)	(D2S3W6)
1400 to 1500	Organization: Police Department, KP Presenter: Kashif Mushtaq Kanju Topic: Technological Initiatives in KP Chair: Muhammad Ibrahim (RDS) Attendance: -------------	Organization: National University of Sciences and Technology (NUST) Presenter: Dr. Verda Salman Topic: "Estimating Food Security Indicators with Household Integrated Economic Survey" Chair: Ms. Rizwana Siddique, (PBS) Attendance:13	Organization: Population Welfare Department, Punjab Presenter: i-Yasir Rahim & Miss Rukhsana Kausar ii- Miss Saman Rai Topic: i-Data Story telling Fostering a Culture of evidence base decision making" ii-Role of SBCC in Population Management Chair: Prof. Dr. Jahangir Khan Attendence:12 Attendence:17	Organization: Precision Health Consultant Global (PHC) Presenter: i-Dr. Ali Turab ii-Zille Huma, Topic:" Addressing Gaps in National Health Data" Chair: Dr. Muhammad Habib (Arid Uni.) Attendance:26	Organization: PITB (Punjab Information Technology Board), OSSP &BOS Presenter: i. Mr. Rohail Amjad Mughal (represented PITB) ii. Mr. Rohail Amjad Mughal (BOS) Topic: i."Online Statistical system in Punjab-Integration of Official Statistics on Rural Time Basis" ii"-Leveraging Technology for efficient Household Survey Data Collection" Chair: Dr. Maryam Mahsal Attendance:33 Attendance:23	Organization: PMAS Arid Agriculture University, Rawalpindi Presenter: Dr Arshad Mahmood Malik Topic: Hydroponics Technological Interventions in Agriculture Farming, Challenges and Opportunities Chair: Mr. Jhangir (SECP) Attendance:18
S-4	(D2S4W1)	(D2S4W2)	(D2S4W3)	(D2S4W4)	(D2S4W5)	(D2S4W6)

1530 to 1630	Organization: Research and Development Solution, Isb **Presenter:** i. Muhammad Ibrahim ii-Syed Saddam Haider iii-Aisha Irum **Topic:** "Utilizing Proxy-Based Methodologies to Enhance HDI Estimates at the District Level" **Chair:** Mr. Azizullah Bhatti (PBS) **Attendence: 23**	**Organization: Rawalpindi Women University** **Presenter:** Dr. Amber Sarwar **Topic:** "Habitats of Chilli Pepper in China under Climate Change" **Chair:** Mr. Suhaib, (PBS) **Attendence:13**	**Organization: Sarhad University of Science and IT** **Presenter:** Prof. Jahangir Khan **Topic:** "Remote Sensing Spatial Observations using MODIS Data Products for Drought and Land Surface Temperature over the Crop Land of Punjab - Pakistan" **Chair** Dr Arshad Mahmood Malik (Arid Uni.) **Attendence:10**	**Organization: PMAS Arid Agriculture University, Rwp.** **Presenter:** Dr. Muhammad Habib & Mr. Abdul Hameed **Topic:** "Exploring the Performance of various Machine Learning Algorithms on Diverse Datasets for Predictive Analysis" **Chair:** Mr. Ehtisham DP Centre (PBS) **Attendence:16**	**Organization: NEECA** **Presenter:** Mr. Zeeshan Ullah **Topic:** "Pakistan's Fan replacement programme" **Chair:** Yasir Rahim (PWD) Punjab **Attendence:28**	**Organization: Security and Exchange Commission of Pakistan (SECP)** **Presenter:** Mr. Jhangir **Topic**: "Digital Journey at SECP **Chair**: Dr. Arshad Mahmood (PMAS Arid Uni.) **Attendence:15**
	Total Slots:	**42**	**Filled:**	**42**	**Presentations:**	**52**

Total Number of Workshops and Attendance

		ATTENDANCE OF WORKSHOPS	
Work Station	Presenter	Topic	Total
WS1	Mr. Attiq ur Rehman	Data for Investment in 21st Century	11
WS1	Dr. Saleha Naghmi	Tidy Verse (Working the Power of Data)	34
WS1	Dr. Syed Wasim Abbas	Data for Governance and Growth	14
WS1	Mr. Muhammad Mubashir Mukhtar	National Accounts and Economic Statistics in Public Policy Domain	23
WS1	Dr. Madiha Iqbal	Data Driven Interventions for Mental Health	23
WS1	Dr. Mehrosh Khalid	Empowering Decision Making Through Data Analysis and Visualization	26
WS1	Mr. Muhammad Kashif Mushtaq Kanju	Technological Initiatives In KP	21
WS1	Mr. M Ibrahim Syed Saddam & Ms. Ms. Aisha Irum	Data Driven Urban Solutions	23
WS2	Ms. Joao Pedro	Child and Mother Health	13
WS2	Dr. Bahrawar Jan	Quantile-Wise Cost-of-Living Impact	17
WS2	Mr. Muhammad Zaman Bhatti	Pakistan Economy: Easy Access to Data	17
WS2	Ms. Shazia Begum	Growth and Development	20
WS2	Mr. Ihsan-ul Haq	Unveiling Health Financing in Pakistan: Insights from National Health Accounts	15
WS2	Mr. Muhammad Farooq	Equity Profile Reliving Patterns of Inequality	19
WS2	Ms. Saira Abid	Punjab User Interface	17
WS2	Dr. Verda Salman	Estimating Food Security Indicators with Household Integrated Economic Survey	18
WS2	Dr. Amber Sarwar	Habitats of Chilli Pepper in China under Climate Change	14
WS3	Mr. Rizwan Bashir	Crime Statistics; Enhancing of Data Coverage and Improving Time Lag and Frequency for Emerging Data Needs	10
WS3	Dr. Abid Rauf	Crime Statistics; Enhancing of Data Coverage and Improving Time Lag and Frequency for Emerging Data Needs	10
WS3	Mr. Muhammad Asif	SBP EasyData-making data access easier	18
WS3	Mr. Fahad Mirza	DASHBOARD/ Leveraging the Power of Data through story telling	16
WS3	Dr. Abid Rauf	Enhancing E-Governance through recommender System; Personalize services for citizen engagement and policy efficiency	9
WS3	Ms. Kishwar Khan	Essential Data for Research on Competition Issue: Insights Pakistan Competition Act 2010	14
WS3	Mr. Saqib Sultan	Social Development Index	17
WS3	Mr. Izzat Ali Chachar	Empowering Decision making through data	13
WS3	Ms. Saman Rai	Role of SBCC in Population Management	17

WS3	Ms. Rukhsana Kausar	Data Storytelling: Fostering a Culture of Evidence Based Decision Making	12
WS3	Mr. Yasir Raheem	Establishment of Data Center for Population Planning (Poster Presentation)	12
WS3	Prof. Dr. Jahangir Khan	Remote Sensing Spatial Observations using Vegetation Temperature Condition Index for Land Surface Temperature and Drought Monitoring over Punjab of Pakistan	8
WS4	Dr. Sundus & Dr. Yasir NUST University	Integrated Approaches to Data Analysis and Visualization: Learning Power BI for Strategic Business insights and Decision Making	18
WS4	Dr. Zahid Asghar, School of Economics, QAU	Data as the new Currency: Challenges and Opportunities in the 4th Industrial Revolution.	19
WS4	Ms. Sobia Munawwar, Director DP, PBS	Decision Support System on Inflation- DSSI	12
WS4	Mr. Akbar Ali Shirazi & Mr. Zeeshan Ullah, NEECA	Data Driven Government Policy Making & Pakistan's Fan Replacement Program	17
WS4	Ch. Sajid Rasool, Director General, BOS Punjab	Data Driven Decision Making Official Statistics	25
WS4	Mr. Isacc Shahzad, Assistant Director, BOS Punjab	Complex survey Designs and survey Estimation	15
WS4	Malik Rizwan Asghar, Deputy Director (IT), Metrological Deptt.	Data Acquisition, visualization and forecast Process	30
WS4	Dr. Ali Turrab, Zill e Huma, PHC Global	Data for Life and Equity: Addressing gaps in National Health Data and AI Driven Health Care	26
WS4	Dr. Muhammad Habib, Assistant Professor Arid Agriculture & Abdul Hameed, Researcher	Exploring the performance of different machine learning algorithms on different datasets for predictive analysis	6
WS5	Dr. Abhia Zahra	Longitudinal Data from Public Sector Organization and Bureaucracy	15
WS5	Mr. Nouman	Interdisciplinary Data Integration and Visual Analytics	16
WS5	Dr. Ayesha Nazuk	Exploring the Potential and Challenges of E- Governance in Pakistan	12
WS5	Dr. Tanveer ul Islam	Data Visualization with R	18
WS5	Mr. Aftab Afridi	Gender Data Portal	29
WS5	Ms. Maryam Mashal (kainat)	Using Predictive Technologies, the Role of Monsoon Forecasting in Disaster Risk Management	31
WS5	Ms. Maryam Mashal (Usman)	Localized Mobile Health Application	30
WS5	Mr. Rohail Amjad	Leveraging Technology or Efficient Household Survey Data Collection	13
WS5	Mr. Rohail Amjad	Survey Data Processing Using Computer Assisted	18
WS5	Mr. Zeeshan Ullah	Data Driven Government Policy Making and Pakistan's Fan Replacement Program	15
WS6	Dr. Sohail Khan	FSNIS FAO Pakistan & ACWA Portal	16
WS6	Mr. M Ashfaq Ahmed (DG)	Data Management & Operations for Dispensation of Justice Eradication of Mal-Administration	38
WS6	Dr. Abdul Qayyum, DG. (CRS)	"Introduction, crop reporting services Punjab. Methodology of crop area, estimation, statistical method: remote sensing. Methodology of crop yield estimation. Important surveys"	26

WS6	Miss Rehana (Consultant Information manager)	FSNIS	16
WS6	Mr. Saddam (IT Specialist)	ACWA Portal	20
WS6	Ms. Sobia Munawar (PBS)	Data Integration & Visualization	16
WS6	Mr. Arsalan (PBS)	Data Integration & Visualization	20
WS6	Miss Mehrun Nisa	Navigating to Data Governance Landscape & Healthcare and Generative AI: Transforming the Future	13
WS6	Miss Amna Sajid	HealthCare and Generative AI-Transforming the Future	17
WS6	Mr. Arshad Mahmood	Hydroponics Technological Inventions in Agriculture Framing	18
WS6	Mr. Jahangir Khan	Security and Exchange commission of Pakistan	15
WS6	Dr. Sohail Khan	High Performance Computing for Data Science Application	25
Grand Total			**1086**

Total Forms (Evaluation) Processed

Work Station	Workshop Title	Total forms processed
1	Data Driven Urban Solutions	8
	Data for Governance and Growth	14
	Data for Investment in 21st Century	10
	Empowering Decision Making Through Data Analysis and Visualization	18
	National Accounts and Economic Statistics in Public Policy Domain Data Driven Decision Making for Mental Health	19
	Technological Initiatives in KP	16
	Tidy Verse (Working the Power of Data)	20
2	Child & Mother Health	7
	Equity Profile Reliving Patterns of Inequality	4
	Estimating Food Security Indicators with HIES	4
	External Trade Statistics	5
	Habitat of Chili Pepper in China under Climate Change	5
	Pakistan Economy Easy Access to Data	7
	Punjab Info User Interface Workshop	4
	Quantile Wise Cost of Living Impact	7
	Unveiling Healthcare Financing	7
3	Crime Statistics: Enhancement of Data Coverage and Improving Time Lag and Frequency for Emerging Data Needs	9
	Dashboard/Leveraging the Power of Data Through Story Telling	13
	Data Story Telling: Fostering a Culture of Evidence-Based Decision-Making	5
	Empowering Decision through Data	5
	Enhancing E-Governance Through Recommender Systems: Personalized Services for Citizen Engagement and Policy Efficiency	6
	Essential Data for Research on Competition Issue: Insights Pakistan Competition Act 2010	19
	Establishment of Data Center for Population Planning (Poster Presentation)	8
	Remote Sensing Spatial Observation Using MODIS Data Products for Drought and Land Surface Temperature over the Crop Land of Punjab-Pakistan	8
	Role of SBCC in Population Management	13
	State Bank Of Pakistan (SBP) Easy Data Access Easier	11
	Social Welfare Index	21
4	Complex Survey Designs And Survey Estimation	14
	Data Acquisition, Visualization and Forecast Process	17
	Data as The New Currency: Challenges and Opportunities in the 4th Industrial Revolution.	16
	Data Driven Decision Making Official Statistics	20
	Data Driven Government Policy Making & Pakistan's Fan Replacement Program	14
	Data for Life and Equity: Addressing Gaps in National Health Data and AI Driven Health Care	15

		Decision Support System on Inflation- DSSI	10
		Exploring the Performance of Different Machine Learning Algorithms on Different Datasets for Predictive Analysis	7
		Integrated Approaches to Data Analysis and Visualization: Learning Power BI for Strategic Business Insights and Decision Making	15
		National Energy Efficiency and Conservation Authority	14
5		Data Driven Government Policy Making and Pakistan's Fan Replacement Program	17
		Data Visualization with R	9
		Exploring the Potential and Challenges of E- Governance in Pakistan	8
		Gender Data Portal	29
		Interdisciplinary Data Integration and Visual Analytics	13
		Leveraging Technology or Efficient Household Survey Data Collection	11
		Localized Mobile Health Application	19
		Longitudinal Data from Public Sector Organization and Bureaucracy	16
		Survey Data Processing Using Computer Assisted	14
		Using Predictive Technologies, the Role of Monsoon Forecasting in Disaster Risk Management	19
6		"Introduction, Crop Reporting Services Punjab. Methodology of Crop Area, Estimation, Statistical Method: Remote Sensing. Methodology of Crop Yield Estimation. Important Surveys"	19
		ACWA Portal	6
		FSNIS	7
		Data Integration & Visualization	16
		Data Management & Operations for Dispensation of Justice Eradication of Mal-Administration.	12
		Healthcare and Generative AI-Transform in the Future	14
		Hydro Phonics Technological Inventions in Agriculture Framing	16
		Navigating to Data Governance Landscape & Healthcare and Generative AI: Transforming the Future	14
		Security and Exchange Commission of Pakistan	16
Grand Total			**691**