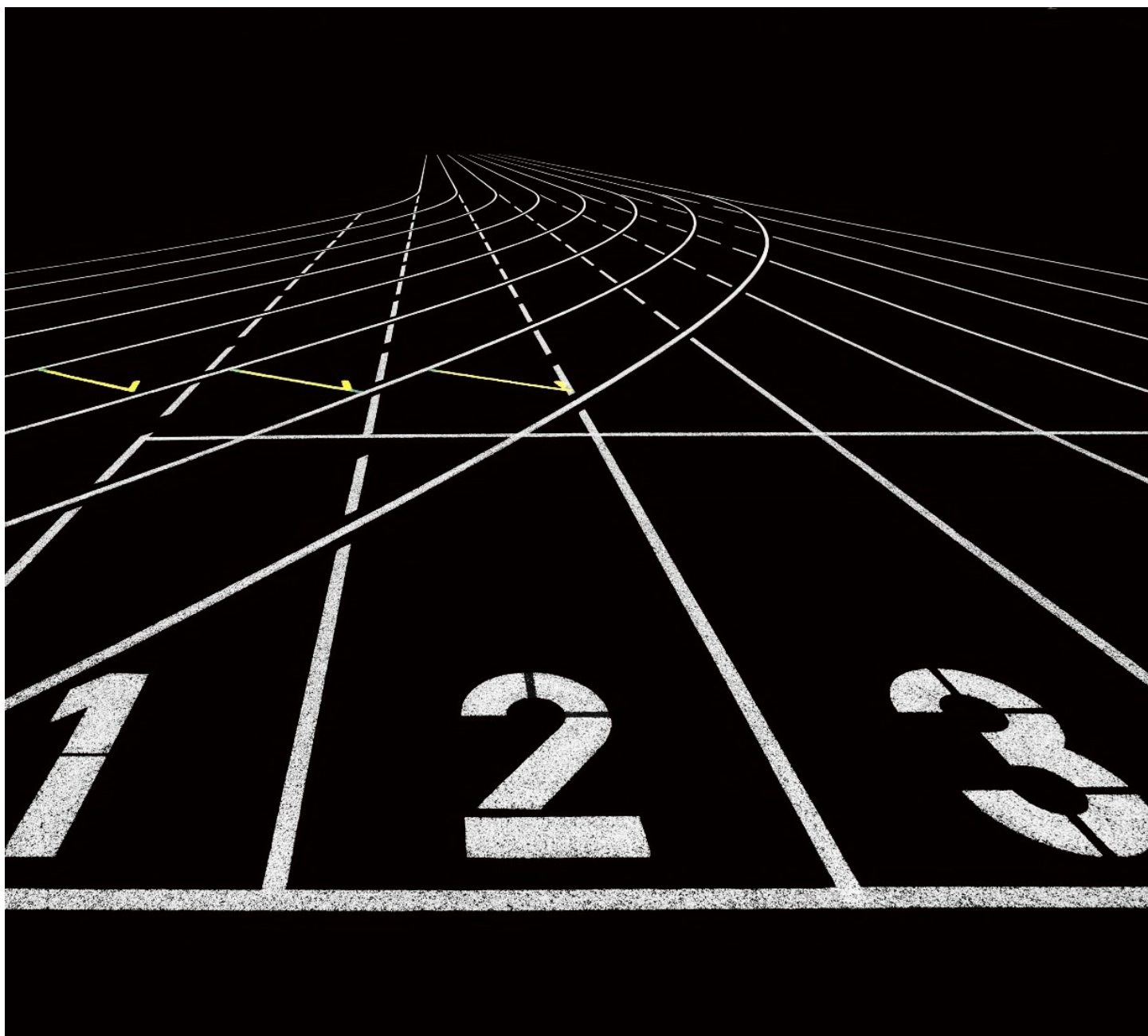# BUSINESS REPORT

EXCEL PORTFOLIO PROJECT

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EXECUTIVE SUMMARY

A comprehensive analysis of the school dataset for districts in Punjab was conducted to guide the strategic disbursement of development funds. To maximize the impact of these funds, the data was reviewed across several key variables, including enrollment numbers, gender distribution, teacher availability, school facilities, and building conditions. Based on this analysis, essential findings and targeted investment proposals are outlined in this report, offering actionable insights to support effective fund allocation and enhance educational outcomes.

Database:

Provided database comprised of Punjab district schools with the following information:

- School ID: Unique identification number for each school.
- School Name: The name of the school.
- Location: The information on district, street, and union councils
- Enrollment: The total number of students enrolled in the school.
- Teachers: The number of teachers in the school
- School Upgradation Years: The years in which the school levels were upgraded (in datasets columns are upgrade_primary_year, upgrade_middle_year, upgrade_high_year, upgrade_higher_sec_year)
- School Gender: The gender for which the school was initially built.
- Gender Studying: The genders currently studying in the school
- School Head Information,
- School status,
- School medium
- Year of establishment
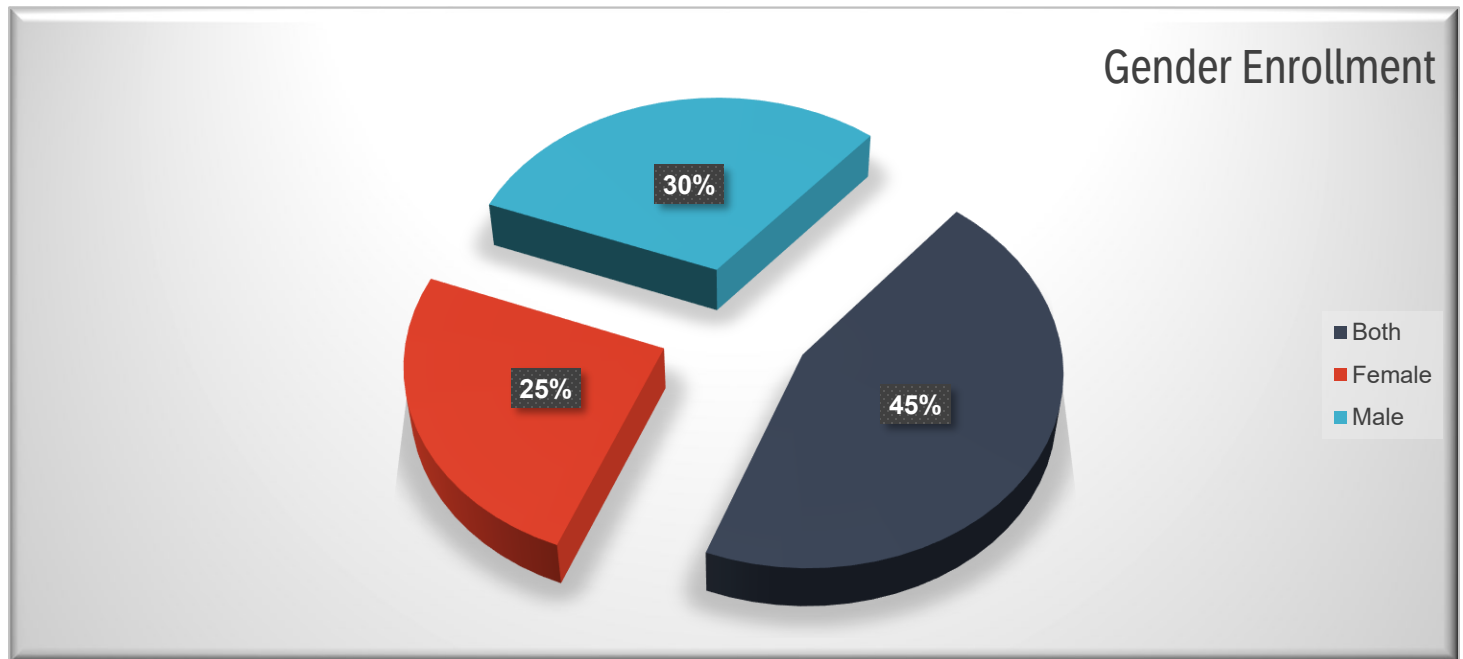- Genders studying
- Infrastructure

Data processing

- Data was arranged with clear column headers.
- Data duplication was checked against school IDs. All the IDs were distinct without empty/null rows.
- Availability of drinking water, electricity etc. were provided in Boolean value.
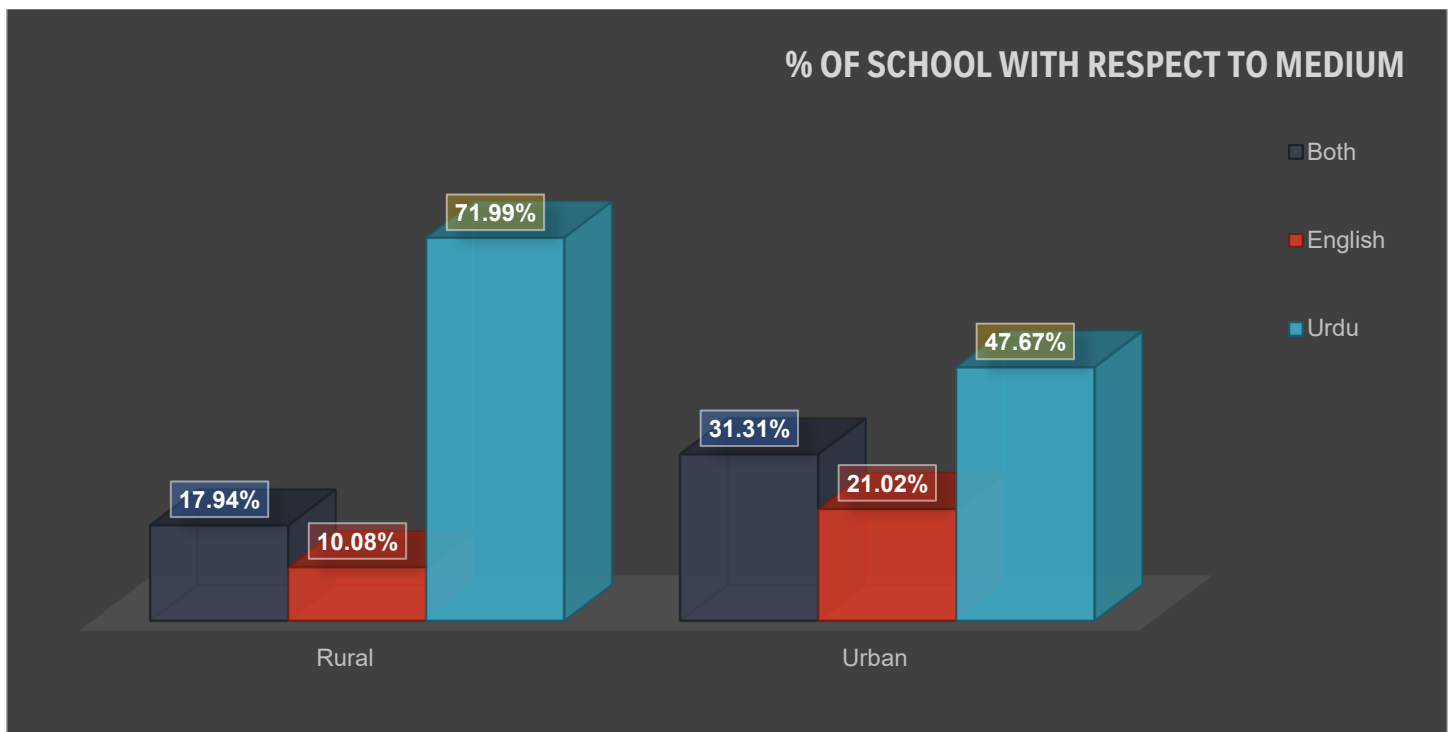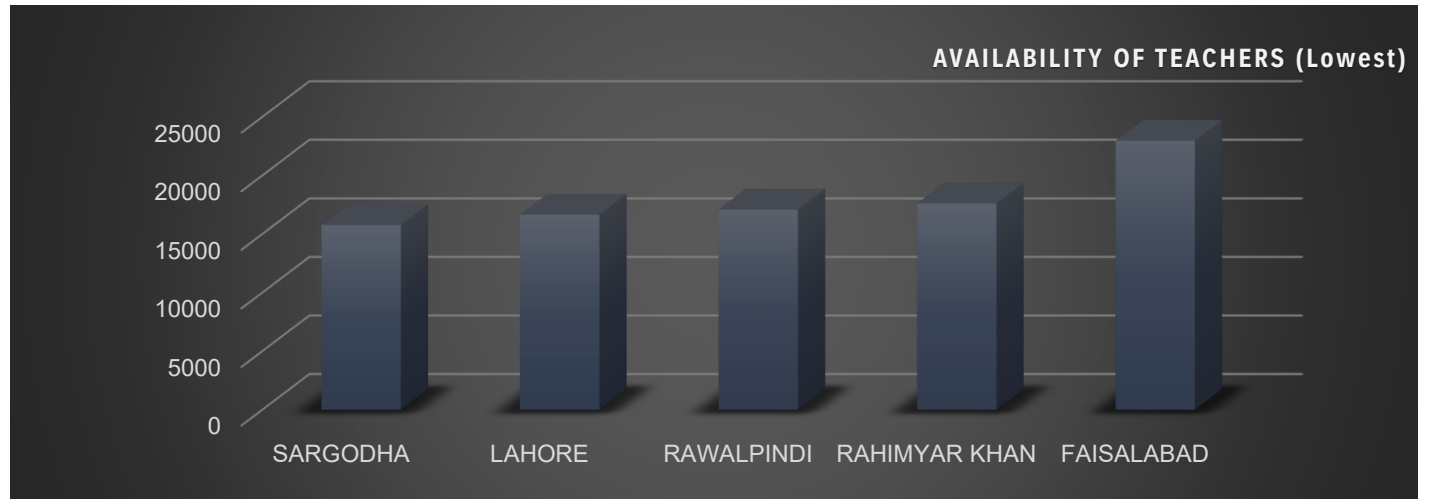
HIGHLIGHTS & INSIGHTS

Based on the objectives set, analysis of the data was carried out using pivot table and charts. Overview of the data set is given in following charts;
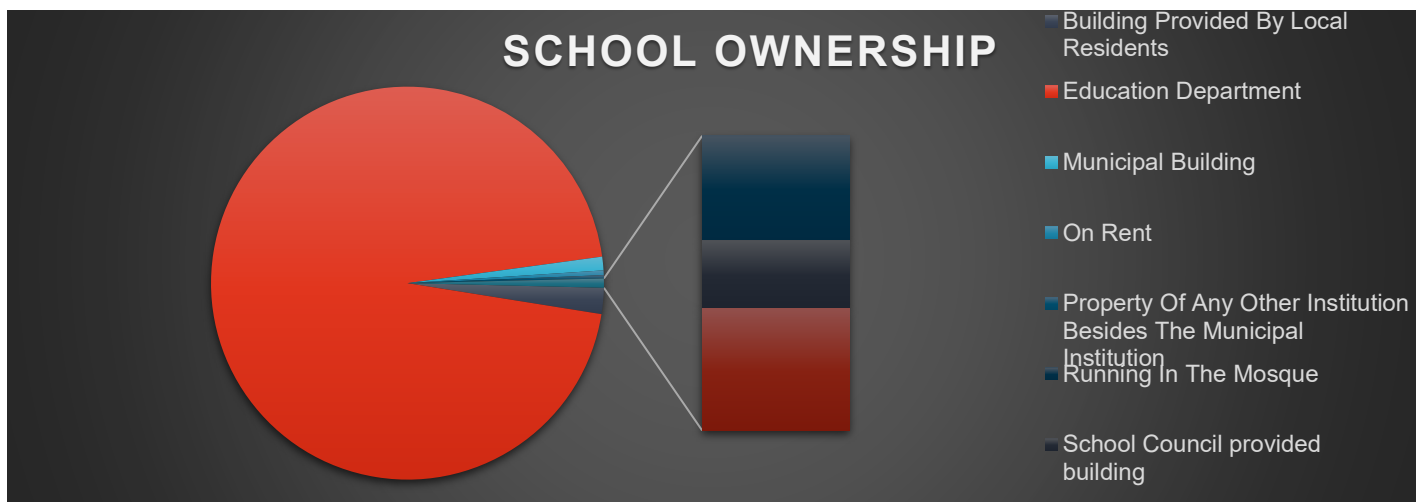

GENDER ENROLLEMENT DISTRIBUTION IN ALL DISTRICTS

PERCENTAGE OF SCHOOLS IN RURAL & URBAN AREAS WITH MEDIUM OF INSTRUCTION

AVAILABILITY OF TEACHERS (Lowest)

LOWEST AVAILABILITY OF TEACHERS DISTRICT WISE

SCHOOL OWNERSHIP

- Building Provided By Local Residents
- Education Department
- Municipal Building
- On Rent
- Property Of Any Other Institution Besides The Municipal Institution
- Running In The Mosque
- School Council provided building

SCHOOL OWNERSHIP

A dashboard with complete details of data set with many useful insights has also been developed. Its link is:

DISTRIBUTION OF FUNDS

1. **SCHOOL LEVEL UPGRADATION:**

Amount to be allocated: 10 million Rs

For school level upgradation, districts with maximum enrollment at different levels and poor or incomplete buildings were identified. As the enrollment in different school levels is high with appropriate number of teachers, the only limiting factor is the necessity of building for additional school level. By spending on infrastructure improvement and level upgradation, more students can be accommodated. In contrast schools with low enrollment in rural areas are also selected for upgradation as their building conditions are unsatisfactory, limiting enrollment.
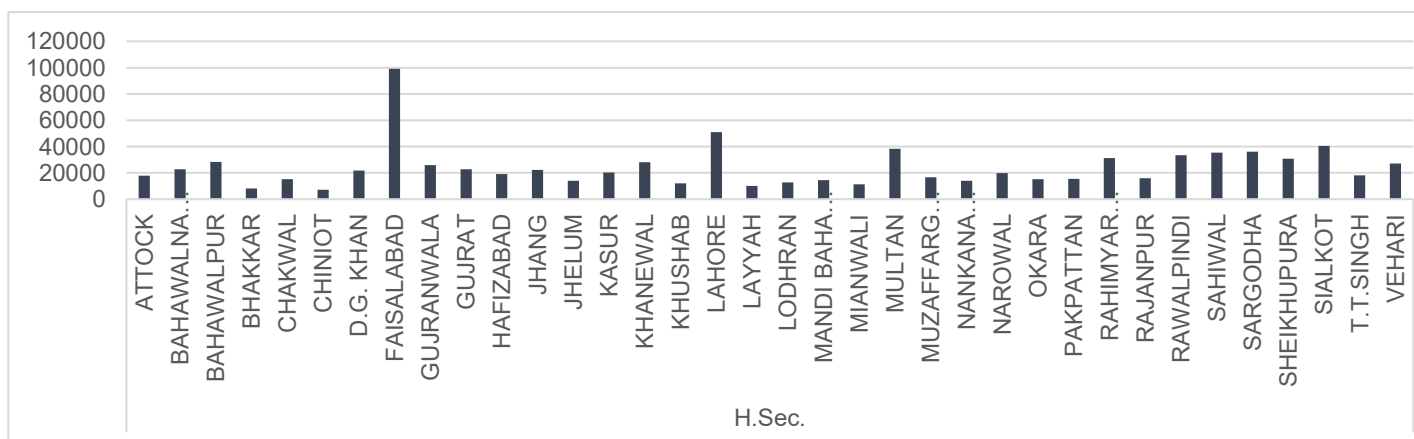
Strategy Adopted: Based on enrollment data, districts with the highest enrollments but outdated infrastructure (e.g., older schools with poor building conditions) were prioritized.

Focus was on areas that serve a large number of students, especially middle and high schools that were last upgraded more than 10 years ago.

Allocation is as follows:

SCHOOL LEVEL	DISTRICT	ALLOCATED AMOUNT (PKR)
Primary	DG Khan	
	Rahim Yar Khan	
Secondary	Lahore	
	Multan	
	Rahim Yar Khan	
Middle	Rahim Yar Khan	6 million
	Gujranwala	
	Lahore	
H Sec	Rahim Yar Khan	
	Nan Kana	
	Bahawalpur	

SCHOOL LEVEL	DISTRICT	ALLOCATED AMOUNT (PKR)
	Chakwal	
Primary	Jehlum	4 million
	Hafizabad	
	Attock	

H.Sec.

2. INFRASTRUCTURE DEVELOPMENT:
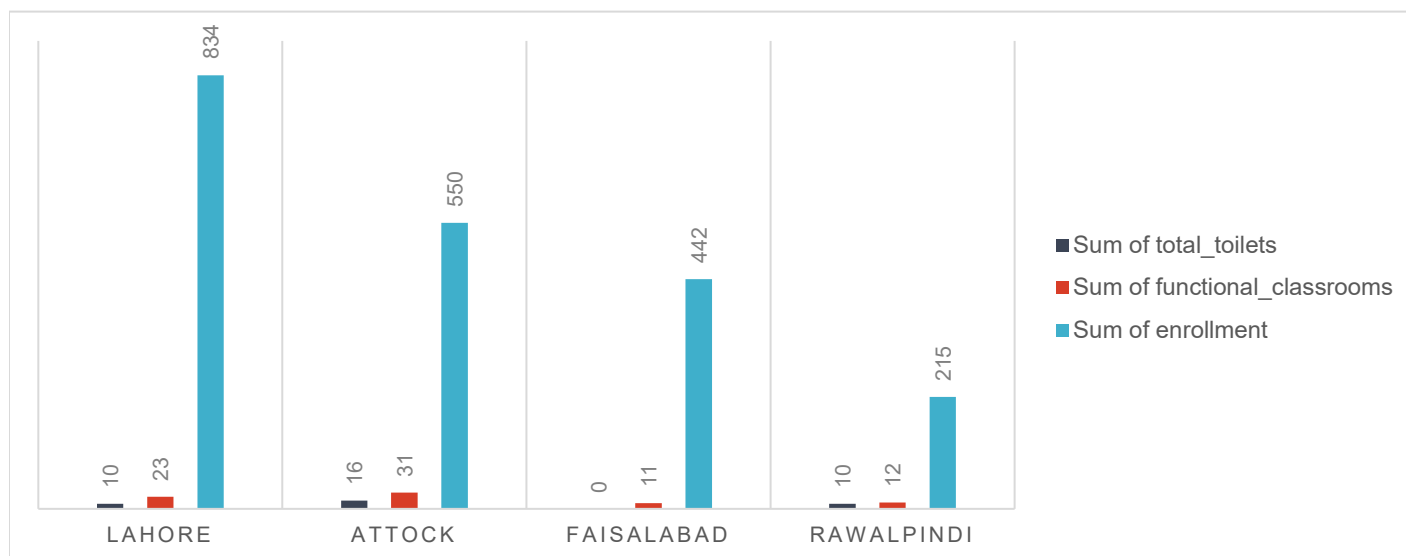
Amount To be Allocated: 5 million Rs

Strategy Adopted: Basic infrastructure needs in schools with insufficient toilets, boundary walls, classrooms, and poor building conditions were addressed, by using data on total_toilets, boundary_wall, functional_classrooms, and bldg_condition to identify the most under-resourced schools. Schools with poor or absent facilities would receive more funds.

Schools without proper boundary walls and toilets, especially in rural areas, and those with fewer than 3 functional classrooms would receive a higher share of the allocation.

Allocation is as follows:

SCHOOL LEVEL	DISTRICT	ALLOCATED AMOUNT (PKR)
Primary	Jhang	
	Bahawalnagar Sahiwal Faisalabad	
Secondary	Rawalpindi	
	Faisalabad	4 million
	Okara TT Singh	
Middle	Sahiwal	
	Rawalpindi	
	Bahawalnagar Khanewal	
H Sec	Attock	
	Faisalabad	
	Rwalapindi	

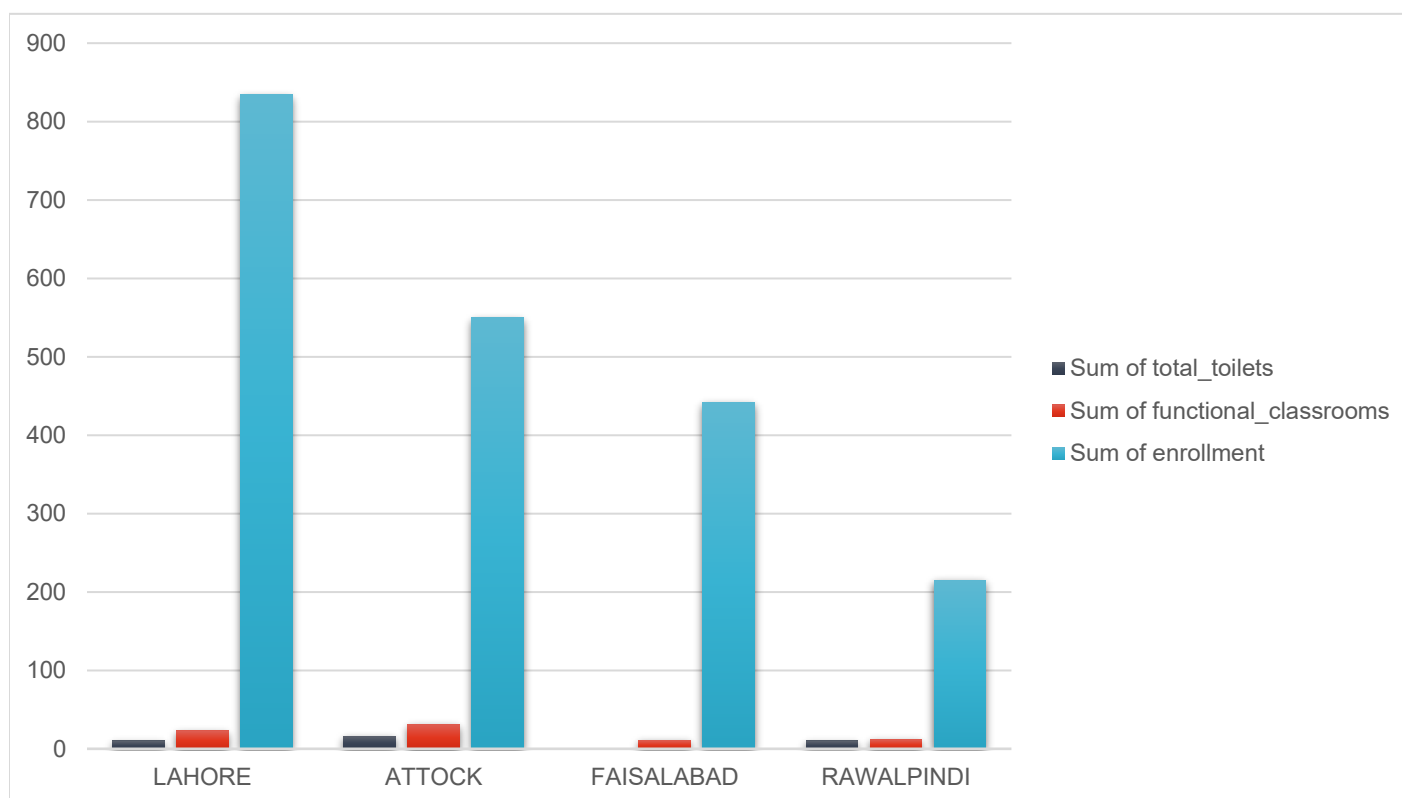| SCHOOL LEVEL	DISTRICT	ALLOCATED AMOUNT (PKR)
Primary, Secondary, Middle, H Sec in Rural Areas	Jhang	
	Bahawalnagar Sahiwal Faisalabad	1 million
	Rawalpindi	

3. FACILITIES DEVELOPMENT:

Amount to be Allocated: 2 million Rs

Strategy Adopted: To provide or improve basic facilities such as drinking water, playgrounds, and science labs. Districts and schools where these facilities are lacking based on the data fields drink_water, playgrounds, and labs, were prioritized. Schools in rural areas with no access to drinking water and those lacking basic science labs were given priority.

SCHOOL LEVEL	DISTRICT	ALLOCATED AMOUNT (PKR)
H Sec	Faisalabad Lahore Sialkot Rawalpindi	0.5 million

Funds allocation for high enrollment H Sec districts for development of labs

SCHOOL LEVEL	DISTRICT	ALLOCATED AMOUNT (PKR)
Primary, Secondary, Middle, H Sec	Attock	1.5 million
	Mianwali Rajanpur Jhang	
	Pak Pattan	

4. DEVELOPMENT OF MIDDLE & HIGH SCHOOLS IN RURAL AREAS:
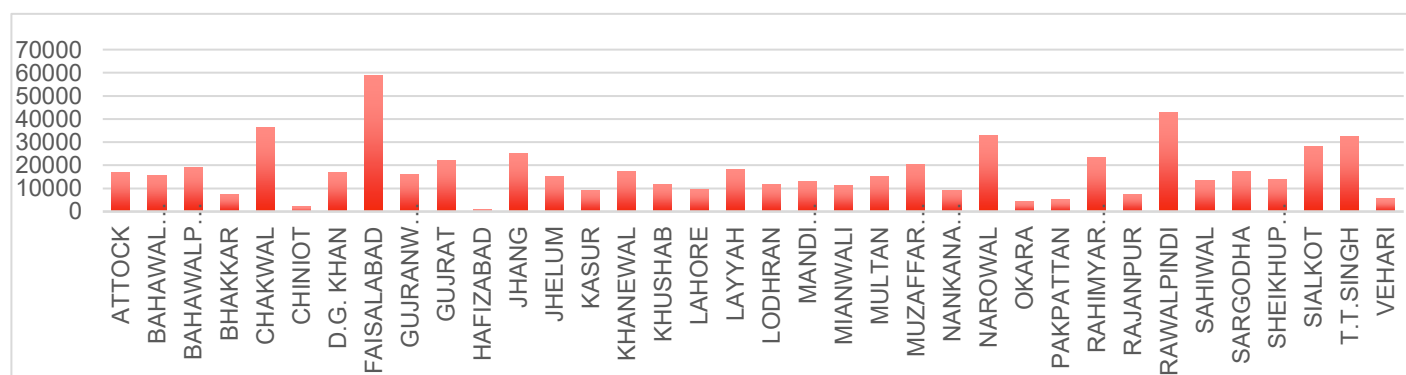
Amount to be Allocated: 20 million Rs

Strategy Adopted: Focus on rural districts where the school_gender column indicates a need for separate gender-based schools was given. Districts with higher population growth and fewer middle/high schools were prioritized. Data on school_gender, school_level, and school_location to identify where middle and high schools are most needed, especially in underserved rural areas was prioritized.

SCHOOL LEVEL	DISTRICT	ALLOCATED AMOUNT (PKR)
Girls Middle	Chakwal Rajanpur Mianwali	12 million
	Jhelum Khushab	
Girls High School	Bhakkar	
	Chiniot	
	Hafizabad Rajanpur	
Boys Middle	Chakwal	
	Jehlum	
	Narowal Lodhran	
Boys High School	Chiniot	
	Hafizabad	
	Khushab Lodhran	

Construction of new high schools for both boys & girls.

SCHOOL LEVEL	DISTRICT	ALLOCATED AMOUNT (PKR)
Middle school	Hafizabad	8 million
	Chiniot	
	Vehari	
	Khushab	
	Bhakkar	
	Hafizabad	
	Okara	
	Pak Pattan	

Development of middle schools in districts where middle education access is lacking

5.NEW PRIARY SCHOOL LEVELS:

Amount to be Allocated: 10 million Rss

Strategy Adopted: Areas where primary education is underrepresented, using data from school_level and enrollment fields to focus on rural and high-growth districts was focused.
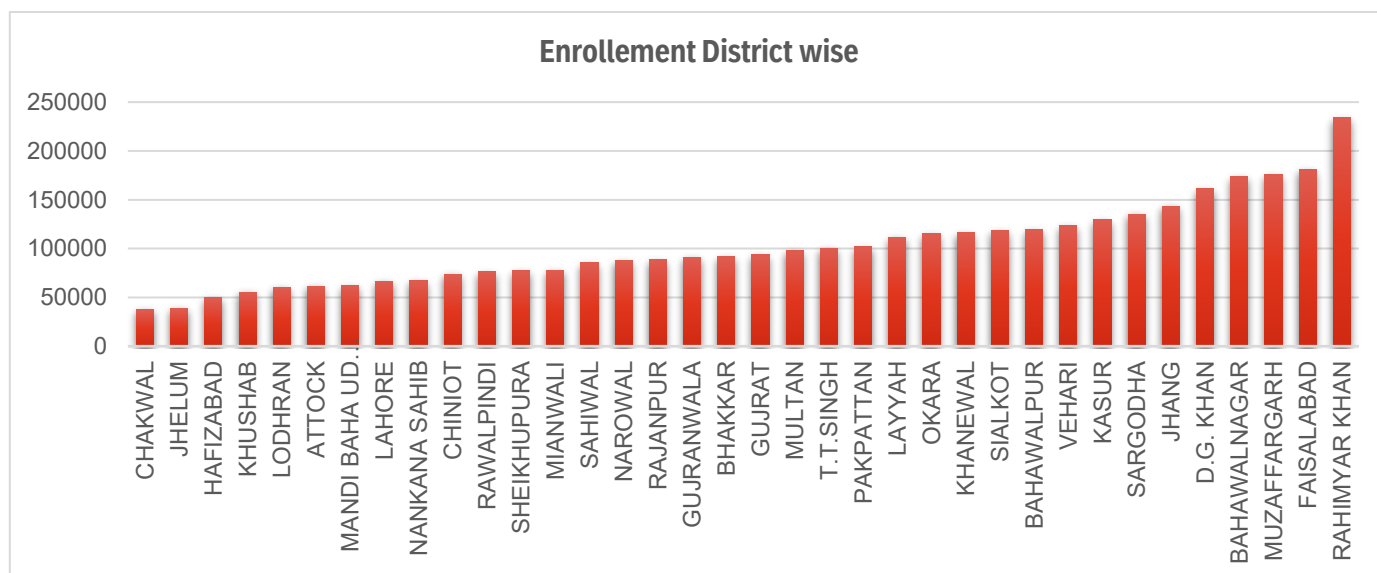
High-enrollment districts with the least number of primary schools, especially those with overcrowded classrooms were prioritized.

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AREA	DISTRICT	ALLOCATED AMOUNT (PKR)
RURAL	Chakwal	
	Jhelum	
	Hafizabad	
	Khushab	6 million
	Lodhran	
	Attock	

Construction of new primary schools in rural districts

AREA	DISTRICT	ALLOCATED AMOUNT (PKR)
URBAN	Lodhran	
	Chakwal	
	Jhelum	
	Nankana Sahab	4 million
	Pak Pattan	
	Narowal	

Development of primary schools in urban districts with high population density.

Enrollement District wise

SUMMARY

The following summarizes the strategic allocation of funds to support school upgradation and infrastructure improvements across districts, based on needs identified through data analysis:

1. School Level Upgradation: Focused on upgrading primary, middle, and high school facilities. Districts with high enrollments and outdated infrastructure are prioritized, with funds directed towards refurbishing buildings and enhancing academic resources.

2. Infrastructure - Toilets, Boundary Walls, Classrooms, Building Condition: Targeting schools with the most critical infrastructure gaps, funds are allocated to address the lack of toilets, secure boundary walls, additional classrooms, and improvements to poorly maintained buildings. Emphasis is placed on rural and under-resourced schools.

3. Essential Facilities - Drinking Water, Playgrounds, Labs: Aimed at ensuring basic facilities, funds are allocated to provide clean drinking water, establish playgrounds, and develop science labs, particularly in schools lacking these amenities.

4. Expansion of Middle and High Schools in Rural Areas: To address education accessibility, funds are earmarked for constructing additional middle and high schools in rural districts, with separate facilities for boys and girls, ensuring balanced gender representation.

5. New Primary Schools: Focused on underserved and densely populated districts, this funding supports the establishment of new primary schools, targeting areas where primary educational facilities are either limited or overcrowded.

This structured fund distribution seeks to balance immediate infrastructure needs with long-term educational development goals, with a primary focus on high-enrollment, rural, and underserved areas to maximize impact.