

## “Evolving Paradigms in Mosque Architecture: Exploring the Traditional Wisdom in the Design of Entrances and Prayer Spaces in in Khyber Pakhtunkhwa, Pakistan”

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### ABSTRACT:

The mosque serves as the architectural symbol of a Muslim community. The mosque's architectural layout must be taken into serious consideration. In Muslim societies, the mosque is a fundamental building that represents the collective and spiritual values of the community. The subtleties of mosque architecture are crucial and should be carefully considered because of their significant social influence. The elements that users interact with first are the entrance and its features. The architects should consider its morphological appearance, size, and scale. The prayer hall is the second most important architectural space that is used primarily for prayers, sermons, and calling people to prayer. It is decorated with various functions. The architects will specifically need to consider the layout of the prayer hall and the wall facing the qibla. To evaluate the fundamental relevance and integration of traditional architectural elements within local mosques, this paper will examine the variety of traditional architectural elements and their characteristics that are common in mosque designs. The study provides a thorough explanation of traditional mosque architecture by utilizing case-study analysis and qualitative research methods. The traditional elements developed by historical masons are functionally optimal over time, according to the paper's conclusion. It promotes the integration of conventional wisdom into the design of modern mosques, guaranteeing that architects meet the ever-evolving demands of worshippers while respecting customized, time-tested solutions. A critical examination of traditional mosque designs, driven by local knowledge and expertise, is required for the advancement of mosque architecture. Neglecting traditional methods without acknowledging their fundamental worth reduces the field's potential for innovation.

**Key Words:** Mosque Architecture, Circulation, Aesthetics, Traditional Wisdom, building Performance.

### Introduction:

The architecture was created because a container was needed to perform specific tasks. Throughout human evolution, humans have constantly given the natural world new meanings. Human culture reflects the desire to improve nature and give it new meanings.

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Furthermore, what was once only meant to be a comfortable space for activities protected from the weather now expresses the architect's taste as well as the desires of the religious congregation. The building's shape can be expressed differently at this point even though the entire structure supports comparable activities or is in the same place. It is thought that the diversity of architectural forms found worldwide stems from this trade-off between needs and wants. This is evident in the way that mosque architecture in Khyber Pakhtunkhwa expresses itself. The mosque that was constructed has a very varied shape, even though it can accommodate comparatively permanent ritual activities. Mosques are typical public buildings with very basic defined functional space requirements. It is a location where the prayer ritual is carried out. It was required that people pray in parallel rows, following the imam or prayer leader who faces Makkah or the Qibla. The rows that are perpendicular to the qibla wall are shorter than the rows that are parallel to it. These are designed to make sure that followers have enough room for a good length of safs.

Mosques had a basic set of functional elements throughout the time of Hazrat Muhammad (SAW), but as Islam expanded to different parts of the world, it included several features from the local vernacular architecture. The Muslim world is currently dealing with modernity, reevaluating tradition, and coming up with new ways to adapt to the shifting needs of people. This leads to the switching of shapes and forms according to the needs of the users, the culture, and the location, at the expense of the historical values that are the foundation of the magnificent mosques of the past.

Studies should be conducted to determine the numerous modifications made to mosque interior layouts as a component of Islamic architecture globally. In addition, there have been numerous debates among academics over the past decade on the design of modern mosques. These academics had varied perspectives, but they all had the same sincere desire to enhance Islamic architecture.

Mosques should be researched concerning social aspects including users' demands and classified under the socially inspired category, just like residential buildings. When designed with users' various cultural demands in mind, the spatial arrangements should provide a sense of comfort and psychological peace. The need for solitude and community is a fundamental concept in housing design that never changes.<sup>1</sup> The various house kinds found in various civilizations are derived from this fundamental idea, which forms the basis of a housing framework that is still applicable today. As the fundamental idea that is intended to be used and remain relevant for years to come, mosques should also be carefully analyzed about the internal orientation and design of spaces.

### **General comprehension:**

In contrast to other building styles, mosque designers and builders typically recognize the need to position the dominant space, or the "mosallah," or worshiping area, to face a specific direction that faces the qibla. The direction of the qibla should be the only focal point of this mosque's main area.

The entrance to the prayer space, which is typically pointed in the direction of the "mihrab" (the center of the qibla, generally designated by a niche), always appears as a

powerful directional axis throughout the prayer hall. The earliest mosque built by the Prophet Muhammad (SAW) and numerous other medieval mosques from the seventh to the fifteenth centuries both exhibit this formal structure.

The Prophet Muhammad (SAW) mosque in Madina is unquestionably the best kind to use as the study's base. This mosque exemplifies minimalism.<sup>2</sup> Islam's modest definition of a mosque is based on the Prophet Muhammad, who is attributed with saying, "Wherever you pray, that place is a mosque".<sup>3</sup> Islam holds that the foundation of architecture should include the Islamic idea of prostration, which can take the shape of a design that is incorporated into the natural surroundings as a representation of a person's dedication to the existence of God.<sup>4</sup>

Modern mosque architecture often conveys a false sense of admiration for architectural beauty, as several designs appear conceited and out of harmony with their surroundings. Such actions disregarded the idea of genuflection. Islam's core principles forbid people from going beyond what is acceptable. As a result, it is essential to incorporate aesthetics into building design in harmony with the surrounding environment since this can enhance the act of prostration and support believers' growing faith.

Since elaborate and massive mosques have begun to appear in Islamic architecture in recent years, certain typical characteristics have also developed, despite being contrary to doctrine.<sup>5</sup> These characteristics include massive scale, the addition of a minaret as a symbol of power and majesty, emphasis on visual aspects through elegant and sophisticated ornamental design, glamorous materials, and infrequent use (just for prayer, which is a clear diversion from the primary goal). Later mosques nevertheless maintain some physical characteristics, such as a well-defined direction.<sup>6</sup>

**Contemporary Mosques and their Components:**

Nowadays, most mosque complexes around the world provide a variety of services to the local community. These days, they serve a variety of purposes, from spiritual to community services.<sup>7</sup> The physical surroundings that include the structure, rooms, parts, equipment, and infrastructure required to maintain the mosques can be referred to as the facilities. Three major roles, namely religious, non-religious, and community amenities, can be broadly classified into the mosques' facilities. The mosque building and its elements are connected to the religious and nonreligious facilities. The mosque's main components include the religious or spiritual component that is the sole purpose to achieve. Alongside its spirituality, it is also used to facilitate the believers with the non-spiritual components. The spiritual components include the congregational obligatory prayer offering spaces, spaces for the recitation of the Holy Quran, and delivering a religious speech or sermon on various contemporary topics or issues. The non-religious component includes the social and cultural components, educational purposes, economics and business spaces, political gatherings, and recreational and sports facilities for youngsters. Modern mosque complexes require physical spaces and building elements to fulfill these functions. In many Muslim countries as well as other nations where Muslims are a minority, these functional components are carried out

within the mosque buildings facilities of contemporary mosque architecture as shown below in *Fig. 01*.

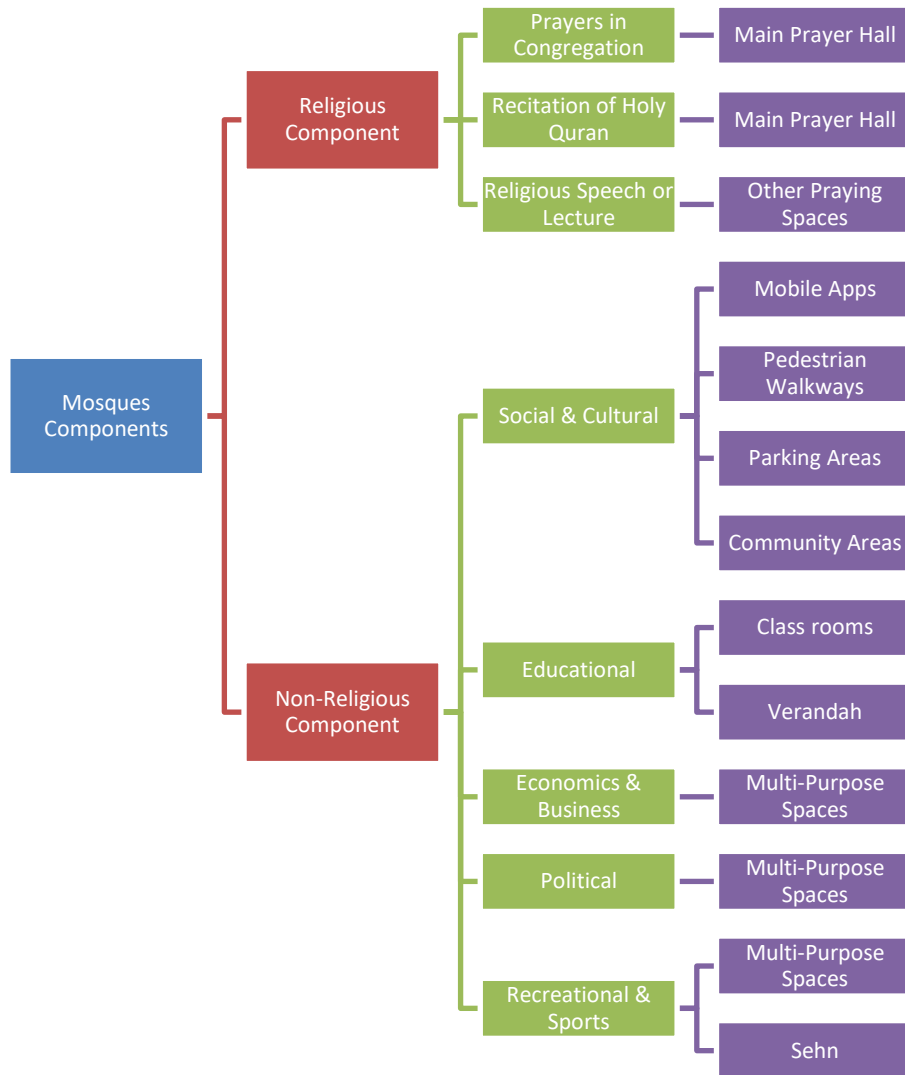


Figure 1: Figure showing the Mosque's functional requirements and the necessary facilities within the mosque complex's physical setting.

**Mosques Building Performances:**

When designing new mosques or rehabilitating existing ones, mosque building performance is a crucial issue to consider. Mosques, like other buildings, are the most useful structures catering to specific communities. It is utilized by many Muslims. According to the capacity and accommodations of the users and their requirements, the building must be professionally evaluated on an array of levels, considering its effective operation on different days and during different hours. Although there are many criteria and levels at which the building can be evaluated, we have restricted our investigation

for this study to the physical and functional performance of the building as described in Fig.02.

**1. Physical Performance of the mosques:**

The architects had to assess the mosque's architectural performance on two different spectrums. Concerning any building either religious or secular, both structural and non-structural performances are significant. Buildings must have strong foundations, columns, beams, slabs, and minarets to withstand a variety of external influences. The structural components must be well-designed and capable of withstanding a range of environmental incidents, including wind pressure, soil erosion, severe precipitation, seismic activity, and material durability.

The building's non-structural performance is just as crucial as its structural performance. This element is made up of the mosque buildings' interior design and aesthetics. This performance is more dependent on the affiliations and stylistic approaches of the local users and architects. To draw people to mosque complexes, cultivate a fondness for these structures, and enable them to spend quality time observing spirituality and establishing a connection with the Almighty Allah, the proper aesthetic evaluation of the mosque needed to be incorporated into exterior ornamentation and interior quality enhancement of the mosques.

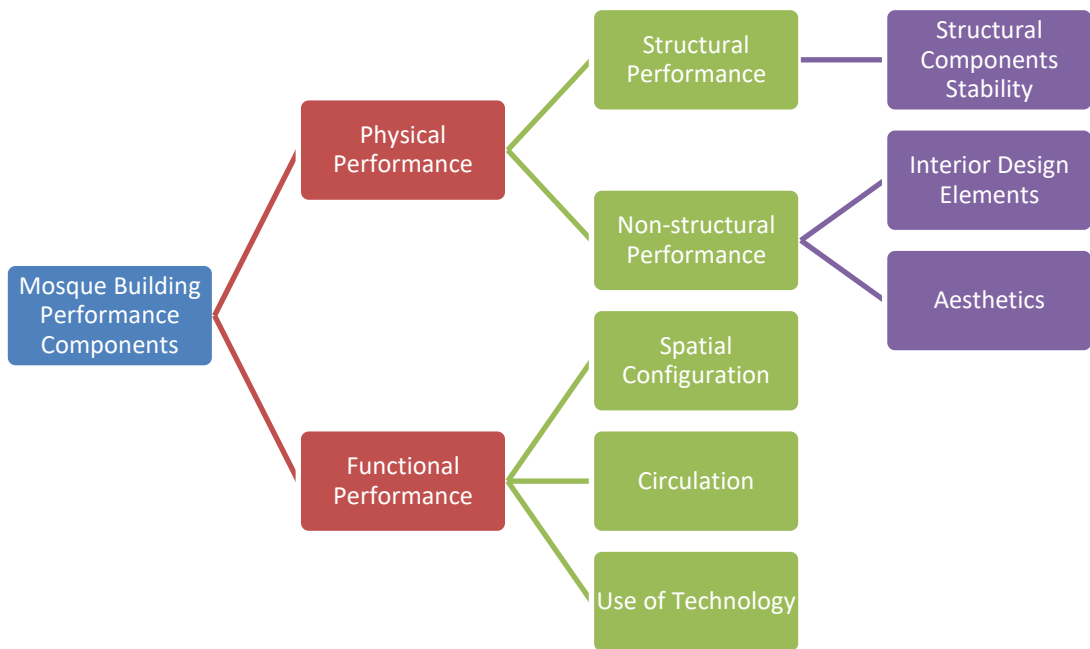


Figure 2: Diagram Illustrating the Performance of Mosque Buildings

**2. Functional Performance of the Mosques:**

The functional performance of mosques and mosque complexes is a crucial criterion to be studied in addition to their physical performance. Its components include technology, circulation, and spatial functions.

It was necessary to examine the mosque's physical configuration and include the space required in the complexes following the requirements of the local users. Studying the relationships between the different areas was necessary, considering the regional climate and traditions. The design had to be sensitive to the community's traditional wisdom and local expectations, and the spaces had to reflect these aspects. The spaces should be welcoming to all genders and ethnicities, without favoring one gender over another or acting as an instrument for the promotion of racial superiority.

The second crucial aspect to consider while building mosques and other religious structures is circulation. These structures, which are community buildings, will accommodate users of all ages, ethnicities, educational levels, and physical abilities. The circulation must be easy to use, consider the users' varied abilities, and show respect for them. Additionally, an array of hardware that improves the efficiency of the functional needs had to be loaded into the circulation. By precisely planning the mosques' circulation systems, the crowding that occurs during different congregations, like the Friday prayer and other peak times, may be readily avoided.


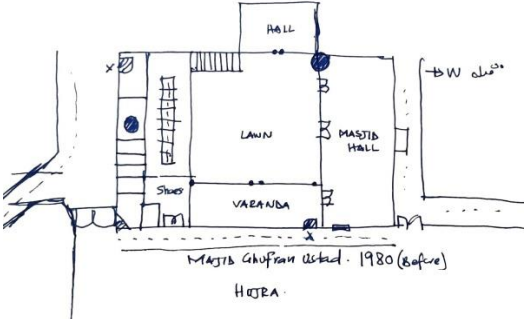

The third most crucial factor to consider when creating a modern mosque is technology. Users will be indirectly encouraged to spend time in mosques using technologies that are integral to contemporary life, such as social networking sites, ICT, the internet, and others. According to research conducted by Barik (2019)<sup>8</sup> and Hirschkind (2012)<sup>9</sup>, the use of ICT and hybrid-mist systems can facilitate the operations of mosques and draw in a diverse range of visitors.

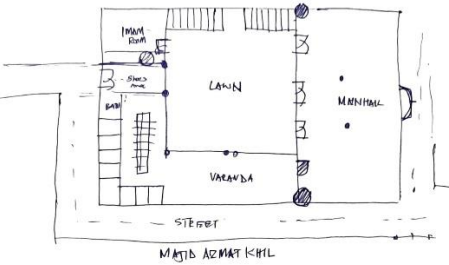
### **Selection of various Cases:**

We have chosen our area inside the Swabi district of Khyber Pakhtunkhwa for this study. With 1624,616 people living there, Swabi is one of the districts in Pakistan's Khyber Pakhtunkhwa Province.<sup>10</sup> Ninety-nine percent of the people living in the Swabi district are Muslims, with a smaller proportion of Hindus and Sikhs. Geographically, the districts of Buner, Mardan, Haripur, Nowshera, and Attock in the Punjab Province border it. It was granted district status in 1988 after being a part of the Peshawar District from 1937 to that year. Administratively, it is divided into four Tehsils: Swabi, Topi, Chota Lahore, and Razzar. Swabi City serves as the district headquarters.

Swabi is situated on the ancient path that links Taxila, Charsadda, Shahbaz Garhi, and Hund with Peshawar. As such, it has significant historical significance. Put differently, Swabi's significance stems primarily from its essential role in Gandharan civilization. As a component of Gandhara culture, it continued to serve as a hub for ideas and cultural values in addition to commerce. It makes sense that Swabi has a rich cultural and archaeological legacy that dates to the fifth century BC given its historical and cultural context.<sup>11</sup>




The Swabi District's Tehsil Razzar was selected as the location. We have chosen the mosques in Parmoli village to represent Tehsil Razzar. After exploring and examining every mosque in the village, we have selected only four to focus on because of their layout and tradition.


S. No	Masjid Name	Floor Plan Diagrams (Free Hand Sketches)
01	<p><b>Sultan Baba Masjid:</b>                      This mosque was constructed in 1983 and was the first at Mohalla Sultan Baba Neembahlol. The Sultan Baba (Late) waqaf this land for the mosque. It is situated on the main Khesha Road, west of the village Parmoli.</p>	
02	<p><b>Ghofran Ustad Masjid:</b>                      This is one of the old mosques in the main Serai Bazar, Mohalla Serai on the East side of the village and with the name of a schoolteacher Ghofran Ustad Masjid. The Masjid is beautiful inside and has a Minar, Mehrab, and a large Sehn in the center. This is a community masjid and is also used as a madrassa. Located at village Parmoli main graveyard road towards Mirali village closed to Govt. Primary school Parmoli.</p>	
03	<p><b>Barho Masjid:</b>                      This is one of the oldest masjids near Union Council Parmoli, called Bahro masjid (Bahro in Pashto means open area) it was renovated a few years ago due to the worst condition of the stone building and is also a community masjid and located on Mirali main road in village Parmoli.</p>	

<p>04</p>	<p><b>Azmat Khail Masjid:</b>                  One of the Oldest masjids in the Village is located at Mohalla Azmat Kheil and one of the largest masjids in the village with beautiful art and design work. The masjid is in the center of the village and it is +50 years old and reconstructed.</p>	
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**Description of Building Performance of Selected Buildings:**

Following the chosen criteria outlined for this research, the following observations were made while inspecting the mosques listed below.

<p><b>Masjid Name</b></p>	<p><b>Physical Performance</b> (Structural / Aesthetics)</p>	<p><b>Functional Performance</b> (Spaces/ Circulation/ Technology)</p>	<p><b>Image</b></p>
<p>Sultan Baba Masjid:</p>	<p>This masjid is over forty years old and in good condition. It features architectural details and aesthetics that are evident throughout Mehrab. Overall, the structure is stable and sound.</p>	<p>Featuring excellent circulation and functionality.                   Over 200 people gather to pray in the Juma, and on average over 100 people study in this mosque.</p>	
<p>Ghofran Ustad Masjid</p>	<p>With time, additional spaces were built to the same structurally sound masjid. It is primarily in its original form with extremely elaborate architectural work.</p>	<p>The entrance is very close to a hujra. The circulation is efficient and helpful in all festivals and peak hours. This masjid can comfortably handle +300 people and is conveniently accessible from many directions.</p>	
<p>Barho Masjid</p>	<p>This masjid has been repaired and rebuilt with intervention. The physical</p>	<p>The capacity is very restricted, as shown in the figure, and it is difficult to handle the people on</p>	

	condition is excellent, and the main hall features a lawn and veranda on the side.	Fridays, especially at UC Parmoli. Circulation is improved, although there is still room for improvement given the old structure and design.	
Azmat Khail Masjid	This is structurally quite weak, yet it is very good in terms of space, flexibly, and visually.	The best layout, circulation, and accessibility for the community, with room for over 400 people and plenty of places for ablution, etc.	

**Discussion:**

Mosque designs have changed around the world due to a reassessment of architectural precedence in terms of styles, uses, and geographic locations. The mosques built in our chosen region are primarily community-led and supported designs. The key stakeholders are the community and the mosque's imam. They serve as the primary decision-makers in determining the various designs and floor plans. If we look closely at the imams' backgrounds, we can see that they are generally from devout households, with fathers and grandfathers who are also mosque imams. So, in most situations, the imams are members of the same family. After any member of the community donates land, the community provides the funding for construction. Rarely, land is bought to build a mosque. Masons are the third and most significant group involved in choosing how the mosques will be laid out. Masons began their practical labor in their early adulthood and have a lineage from Mason households. Their ancestors leave them with the knowledge of masonry, layout design, and other technical aspects.

In traditional cultures, the ultimate decision-making about designs is left to the established nexus of community, Imams, and Master Masons. When making design decisions, they draw on their innate background, requirements, and limits as well as a broader understanding of the environmental, social, functional, and technical factors. In most circumstances, their decisions prove to be effective. The traditional knowledge that these three agents—imams, community elders, and masons—have acquired from their forefathers and are putting into practice in their respective areas can be seen as their common string.

When designing modern mosques, architects must recognize, honor and incorporate traditional wisdom. Professional architects' works may reflect current architectural trends, but traditional stakeholders' time-tested and inherited expertise from past generations is also pertinent. They are not something that can be disregarded instantly.

## Conclusions & Recommendations:

This research paper examines selected mosques to conclude the spaces and circulation practices used in our local mosques. Some observations are concluded. Spaces were constructed according to conventional standards, precise circulation was designed based on the requirements, and it was proven to be very sustainable.

Young architects are advised to get knowledge from traditional mosques by thoroughly documenting the varied examples. Exploring, examining, and analyzing the many functional and aesthetic components of the specified mosques can assist in determining the genotype of traditional mosques. Technical analysis of workmanship, materials, scale, design features, heights, door and window locations, standard sizes for saffs, circulation spaces, ablution spaces, verandas placement and depth sizes, orientation, and many other criteria can be carried out.

Terrorism is another significant problem that is unique to our area. Numerous mosques are the target of various attacks directed towards their patrons and users. Therefore, when designing the mosques in our regions, consideration has to be given to the egress time and the usage of technology to mitigate these kinds of occurrences. In addition to the conventional wisdom, the qualified architects had to learn about the most recent developments in the building sector, the effects of climate change, and other modern issues that could be thoroughly researched and successfully integrated into the mosque's design.

## References:

- <sup>1</sup> Tice, J. (1993). Theme and variations: A typological approach to housing design, teaching, and research. *Journal of Architectural Education*, 46(3), 162-175.
- <sup>2</sup> Ariffin, S. A. I. S. (2005). *Architectural conservation in Islam: case study of the Prophet's Mosque*: Penerbit UTM.
- <sup>3</sup> Hillenbrand, R. (1994). *Islamic architecture: form, function, and meaning*: Columbia University Press.
- <sup>4</sup> Rasdi, M. T. H. M. (2005). *Malaysian architecture: Crisis within*: Utusan Publications.
- <sup>5</sup> Hassan, A. S. (2010). Concept of prostration in traditional Malay Mosque design to the surrounding environment with case study of Tranquerah Mosque in Malacca, Malaysia. *Journal of Techno-Social*, 2(2).
- <sup>6</sup> Imam, N., & Muhammad, S. (2000). Mosque architecture: Formulation of design criteria and standards in the context of Bangladesh.
- <sup>7</sup> Es, M. (2016). Turkish–Dutch mosques and the formation of moral subjects. *Social & Cultural Geography*, 17(7), 825-848.
- <sup>8</sup> Barik, R. K., Misra, C., Lenka, R. K., Dubey, H., & Mankodiya, K. (2019). Hybrid mist-cloud systems for large scale geospatial big data analytics and processing: opportunities and challenges.
- <sup>9</sup> Hirschkind, C. (2012). Experiments in devotion online: the YouTube khuṭba. *International Journal of Middle East Studies*, 44(1), 5-21.
- <sup>10</sup> Pakistan Bureau of Statistics-PBS. (2017a). Provisional Census Results -2017: Khyber Pakhtunkhwa. [http://www.pbs.gov.pk/sites/default/files/PAKISTAN%20TEHSIL%20WISE%20FOR%20WEB%20ENSUS\\_2017.pdf](http://www.pbs.gov.pk/sites/default/files/PAKISTAN%20TEHSIL%20WISE%20FOR%20WEB%20ENSUS_2017.pdf)
- <sup>11</sup> Azeem, R. (2005). Hund in the History. *Ancient Pakistan*, 16, 225-240.