**11 HOUSING AND LAND SUPPLY**

### 11.1 HOUSING AFFORDABILITY AND ACCESSIBILITY

This part of the Section provides a spatial portrait of Punjab’s housing sector analyzing the challenges of the sector followed by a roadmap for the next 30 years and aligning the housing sector with the economic aims for development. The chapter is divided into the following sections:

- Housing shortage challenge: Current and forecasted housing demand in Punjab and an analysis of its contributory components
- Inadequacy and overcrowding as well as inaccessibility to utilities
- Housing unaffordability: Analysis segregated by income groups for 50 cities in Punjab
- Interventions to address the housing crisis: Housing finance and public expenditure
- Scenario-based analysis delineating the future housing strategy

#### 11.1.1 Importance

Housing is an intrinsic component of human well being and economic development. It is both a product and a process essential for achieving the Sustainable Development Goal of ‘Sustainable Cities and Community’. It has remained a critical concern for the Government and was outlined in the Punjab Growth Strategy 2018 as the first most important issue for ‘enabling cities to become engines of growth’.

### 11.2 HOUSING DEMAND, SUPPLY & RESULTING SHORTAGE

Provision of adequate housing is a critical issue that requires specific attention to achieve the desired outcomes on the development strategy for Punjab. A supply and demand analysis conducted using estimates based on the household data from the Population Census 1998 and 2017, with the underlying assumption that one household requires one housing unit (Kular, 2007), shows that at present, there is a total demand of 17.1 million housing units in Punjab. Based on this primary assumption, there is an approximate housing demand of 10.7 million housing units in rural areas and 6.4 million housing units in urban areas. (Figure 11.1)

Based on these estimates, 14% of Punjab’s population is affected. If the current trends of housing stock and demand continue, the housing shortage will increase to 11.3 million housing units in Punjab in 2047. This will mean that approximately 30% of Punjab’s population will be affected (Figure 11.2)

“Estimates based on the intercensal growth rate of housing units, demonstrate a supply of 15.6 million housing units in Punjab. However, this housing stock is inadequate as there is a shortage of 2.3 million units that includes the additional requirement (1.5 million houses) as well as replacement of dilapidated housing (accounted at 5% of existing stock).”

Figure 11.3 and 11.4 show projected increase in housing demand 2017 – 2047 on medium variant and high variant respectively. Projections based on censal growth rates of housing supply and demand show the trends will aggravate the current shortage if well-planned interventions don’t address the shortage.

In order to address this shortage, there is a need to encourage the development of high-density buildings and transit-oriented developments in the peripheral areas of urban centers to cater to increased demand due to urbanization.

#### 11.2.1 Factors Influencing Housing Shortage

\[ Y \text{ (Housing Shortage)} = X \text{ (Urbanization, Net migration, Industrial units...n)} \]

There are various factors that are highly correlated with housing shortage estimations and can assist in identifying the need for strategic housing supply. Table 11.1 shows the correlation of Housing Shortage with three independent variables; Urbanization, Net Migration & Industrial Units.

Urbanization and housing shortage have a 0.75 coefficient of correlation; meaning districts with a higher percentage of urbanized land have a greater housing shortage. Similarly, these districts also have the highest levels of in-migration, which is one of the factors influencing housing demand. Net migration and housing shortage have a 0.55 coefficient of correlation. Similarly, housing shortage and number of industrial units in each district have a 0.61 coefficient of correlation which also significantly on the higher side.
Punjab Spatial Strategy 2047

Figure 11.1: Urban and rural housing demand

![Graph showing urban and rural housing demand]


Figure 11.2: Estimated shortage 2017 and projected shortage 2047

![Graph showing estimated and projected housing shortages]


Table 11.1: Correlation with housing shortage

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Correlation with Housing Shortage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urbanisation</td>
<td>0.75</td>
</tr>
<tr>
<td>Net migration</td>
<td>0.55</td>
</tr>
<tr>
<td>Industrial Unit</td>
<td>0.61</td>
</tr>
</tbody>
</table>
Projected Increase in Housing Demand 2017-2047
(Medium Variant)

Housing unit demand has been calculated keeping the district household size constant between 2017 and 2047. Average household size of urban Punjab is 6.4.

*Due to data limitations, the number of existing housing units is unknown. Therefore, housing supply and shortage cannot be calculated. This map shows projected increase in number of households between 2017-2047. The actual number of housing units required will be 15.5 million + x, with x being the unknown housing shortage today.

Legends
Projected Increase in Household 2017-47

- 30805 - 75000
- 75001 - 150000
- 150001 - 250000
- 250001 - 700000
- 700001 - 4059440

Figure 11.3 Projected Increase in Housing demand (medium variant)
Projected Increase in Housing Demand 2017-2047

(High Variant)

Housing unit demand has been calculated using the projected
decrease in district household size
between 2017 and 2047. Projected
average household size of urban
Punjab in 2047 is 5.8.

*Due to data limitations, the number of
existing housing units is unknown.
Therefore, housing supply and shortage
cannot be calculated. This map shows
projected increase in number of
households between 2017-2047. The
actual number of housing units required
will be 17.86 million + x, with x being the
unknown housing shortage today.

**Legends**

Projected Increase in Household 2017-47

- 36323 - 75000
- 75001 - 150000
- 150001 - 250000
- 250001 - 700000
- 700001 - 5371030
11.2.2 Overcrowding

Punjab’s housing shortage does not point towards homelessness; in fact it identifies overcrowding as the main underlying issue. Research shows that multiple housing problems increase children’s risk of ill health and disability by up to 25% during childhood and adulthood e.g. children in overcrowded houses are 10 times more likely to contract meningitis.

There is no standard universal definition to categorize overcrowded housing units; the following analysis uses both people per room (PPR) and adult people per room to ensure the validity of results. Analysis of overcrowding was categorized as more than 3 persons per room or more than 2 adult persons per room following the WHO definition of overcrowding. Therefore, an objective of the policy should be to aim for 2 adult persons per room by 2047. Based on these findings, 56% of Punjab’s housing units have more than 3 persons per room used for sleeping purposes. Figure 11.5 shows the distribution of total People Per Room (PPR) for Rural Punjab, Urban Punjab and Overall Punjab.

Figure 11.5: Distribution of people per room in urban and rural Punjab

Data Source: Multiple Indicator Cluster Survey, 2014

While the figure 11.5 shows that PPR is slightly lower for urban as opposed to rural areas of Punjab, it also shows that there is an approximately equal division of housing units with 0-3 and 3-6 persons per room. These urban-rural differences and positive relations between the housing shortage and urbanization, number of industries and inter-district migration demonstrate that a greater housing burden is borne by peripheral areas classified as rural but near the urban extents.

Figure 11.6 demonstrates that 56% of 1-room units have PPR > 3 followed by 34% of 2-room housing units whereas a significantly lower percentage of 3-5 rooms housing units have PPR> 3. The distribution of number of rooms is positively related to household income level. This analysis has important implications for the future housing policies, as it shows that people don’t necessarily require an extra house but constructing an extra room will sufficiently reduce the issue of overcrowding.

11.3 HOUSING CONDITIONS AND UTILITY PROVISION

The provision of ‘adequate’ housing ensures protection from myriad vulnerabilities, which may have a negative overall impact on people’s productivity and in turn economic growth and development. Following an analysis of housing demand and persons per room, it is important to spatially delineate housing conditions existent in Punjab. The Eurostat definition of housing deprivation to classify and compare housing conditions between developed and a developing country is used to evaluate inter- and intra-district conditions in Punjab. It categorizes housing units as being deprived if the housing unit has a leaking roof, damp walls or flooring and does not have flush-toilet facilities and electricity. Based on this classification criterion, 16% of Punjab’s housing units are considered deprived. Overall deprivation for Punjab broken down district wise is provided in Figure 11.7.

Data Source: Multiple Indicator Cluster Survey, 2014

With a 2.13% increase in population every year, Punjab’s population is expected to grow to 188 million by 20471 with increase in working age population to 63% (from 59%) to up to twice its current number and decrease in dependent population. With an aim to increase urbanization to 70% and develop primary and intermediate cities to become engines of growth, it will be important to match high growth in housing demand in urban areas, with housing supply as well as provision of utilities. Furthermore, 57% of Punjab’s current population is under 24, the housing strategy should take into account these figures when planning for student housing.

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1 UN high variant
Figure 11.7: District wise deprivation for Punjab

Data Source: Multiple Indicator Cluster Survey, 2014
The data shows that there is a significant difference in urban and rural housing conditions. While on average only 2% of housing units in urban Punjab are deprived, 14.5% of housing units in rural Punjab are deprived. Furthermore, urban areas have the lowest percentage of deprived housing units highlighting the importance of housing in relation to the effect it has on rural-to-urban migration. In fact, housing conditions have a moderately negative relationship with net migration.

Deprived housing conditions are also directly related to the Multidimensional Poverty Index (MPI) and income inequality. Housing deprivation is an obvious outcome of poverty; the strong positive correlation with income inequality is shown in Figure 11.8.

Housing conditions are also related to the degree of urbanization in each district. There is a strong negative relationship between the percentage of deprived housing units in a district and the percentage of urbanized. Apart from housing conditions, utility provision is an extremely important concern relating to the housing sector. Table 2B.2 shows the percentage of Households with access to four utilities.

Figure 11.9 and 11.10 show an analysis of eight cities of Punjab’s on Air Quality and Green spaces as % of city area. The overlapping city in the analysis is Bahawalpur. There is a need for policy practitioners to devise strategies focused on cities with high levels of air pollution and insufficient green spaces to improve the housing environment in the province. With an aim to increase urbanisation to 70% there is a need to match organized city planning with the reforms proposed by PSS. The planning should ensure adequate green spaces while catering for increased housing demand.

It is imperative for law enforcers to monitor and regulate the condition of rental properties to ensure owners are not exposing tenants to unexpected increases in rent, insecurity or unacceptable conditions enforcing minimum tenant rights’ standards. The next section discusses affordability of housing in Punjab.

Figure 11.8: Relationship between gini coefficient & deprived housing conditions

Data Source: PSLM 2015 and MICS 2014

Table 11.2: Percentage of households with access to piped sewerage, piped water, piped gas and electricity

<table>
<thead>
<tr>
<th>Punjab</th>
<th>Access to Piped Water</th>
<th>Access to Piped Sewerage</th>
<th>Access to Gas Supply</th>
<th>Access to Electricity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Punjab</td>
<td>25%</td>
<td>40%</td>
<td>69%</td>
<td>99%</td>
</tr>
<tr>
<td>Rural Punjab</td>
<td>10%</td>
<td>6%</td>
<td>15%</td>
<td>93%</td>
</tr>
<tr>
<td>Total Punjab</td>
<td>14%</td>
<td>13%</td>
<td>25%</td>
<td>94%</td>
</tr>
</tbody>
</table>

Data Source: PSLM 2015
11.4 HOUSING AFFORDABILITY

The above sections have discussed components of housing ‘adequacy’ relating to people per room, housing conditions and utility provision. Affordability is another key issue in the housing sector that constrains people’s access to housing. Affordable housing is universally defined as being 3-4 years of household income and providing affordable housing to all the residents of Punjab should be a prime objective. In case of rental housing, it is defined as 30-40% of monthly household income. This 30/40-thumb rule indicates that people spending more than 30-40% household income on monthly house rent are under stress. These people are either financially overburdened or they are forced to live in squatter settlements. This rental affordability analysis used the more widely accepted 30% standard to evaluate the housing shortage with respect to income levels.

To evaluate rental housing affordability, monthly rent and property value data was retrieved from the Punjab Excise Department. Weighted averages of monthly rent and property value for all large and intermediate cities are shown in Figure 11.11, 11.12, 11.13 and 11.14

Figure 11.11 and 11.12 show that among the largest cities in Punjab, average monthly rent and property values are highest in Lahore, followed sequentially by Rawalpindi, Faisalabad, Gujranwala and Multan. This hierarchical ordering of cities by their rental values correlates positively with migration trends, industrial clustering and urbanization.

High rental and property values have critical implications for the housing sector and urban development as this phenomena forces households with low income to live in squatter settlements and dilapidated conditions. This is one of the reasons why larger cities have a greater number of registered and unregistered katchi abadis than intermediate and smaller cities.

An analysis of rental property values with respect to income levels was conducted for 50 cities of Punjab. The population was divided into 6 income brackets, and the percentage of housing units available to them to rent was calculated on the basis of 30% of their median household income. Figure 11.15 shows the gap between the percentage of urban households within the six income brackets and the proportion of housing units available to them for rental purposes. The same analysis was done for house ownership to validate and triangulate results. While the statistics in the orange boxes show the percentage of Punjab’s households that earn monthly income within the below-mentioned categorisations, the green boxes show the percentage of housing stock available to households of that specific income bracket.

The figure highlights the mismatch between the proportion of households who can afford a certain type of houses and the percentage of that type of housing units available to that population proportion. The actual housing shortage which causes people to live in overcrowded housing conditions is in fact conditioned by income levels. However, the concentration of new developments remains to serve the middle and higher income groups.
Figure 11.11: Average monthly rent (rs) of Punjab’s large cities

Data Source: UIPT data

Figure 11.12: Average property value (rs) of Punjab’s large cities

Data Source: UIPT data

Figure 11.13: Average property value of Punjab’s intermediate cities

Data Source: UIPT data

Figure 11.14: Average monthly rent of Punjab’s intermediate cities

Data Source: UIPT data
An analysis of housing schemes data highlights some important issues arising in the housing sector, which accumulatively lead to the current scenario that is only expected to worsen if the same trend continues.

### 11.5 HOUSING SCHEMES ANALYSIS

Primary data collected in Punjab from 65 MCs and 11 DCs totalled to approximately 2,650 housing schemes. They occupy an area of almost 270 sq. km and include all approved, unapproved, illegal and underprocessing housing schemes. There are approximately 0.3 million plots in housing schemes, with an average plot size of 10 Marlas.

Figure 11.16 and 11.17 give the distribution of housing schemes based on their legal status along with the area that each of these schemes is occupying.

**Figure 11.16: Area sq km of housing schemes**

<table>
<thead>
<tr>
<th>Legal Status</th>
<th>Area (sq km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td>97</td>
</tr>
<tr>
<td>Under Process</td>
<td>151</td>
</tr>
<tr>
<td>Unapproved</td>
<td>10</td>
</tr>
<tr>
<td>Illegal</td>
<td>4</td>
</tr>
</tbody>
</table>

**Data Source:** Urban Unit (Collected from Housing Department)

While there are lesser housing schemes that are still under the process of approval than the approved housing schemes, the former has a much greater amount of reserved area. Furthermore, although approximately 8% of housing schemes are illegal and another 27% are unapproved, they occupy a very small percentage of the total area of the housing schemes.
There has also been a recent escalation in the growth and approval of housing schemes. This is shown in Figure 2B.18 which shows a timeline for the approval of housing schemes. Almost 60% of the total approved housing schemes were approved after 2010. These housing schemes have been made in the peripheries of the city, sprawling outwards in the absence of proper master planning and residential growth boundaries. The argument that these housing schemes mainly serve the middle and higher income groups, is demonstrated in Figure 11.20, which shows the percentage distribution of plot sizes by the legal status of the housing scheme. The average plot size of all housing schemes is 10.1 Marlas, which is on average unaffordable for the most part of the population. In fact, approved housing schemes have the highest average plot size followed by unapproved, under process and illegal schemes respectively.

Evidence of the percentage of constructed, vacant and under-construction plots shows a mismatch between people’s affordability and availability of housing stock apparent from Figure 11.19.

Due to the unaffordability of these plots for a large proportion of the population, they are more commonly used as a speculative investment by the higher income groups. Therefore, although the cities are experiencing a rapid increase in housing schemes emerging in the peripheries, they have no effect on the actual housing shortage for the lower income groups. Policy practitioners should introduce disincentives for speculative investments in plots so that increase in housing societies can address the housing shortage.

11.6 HOUSING FINANCE

Housing finance is an important tool used internationally to address issues of housing affordability. In Pakistan, the mortgage to GDP ratio was only 0.5% in 2016 (SBP, 2016). This ratio ranges from 50-70% in developed countries, but even countries in South Asia, such as India, have a significantly higher ratio (10.6% in 2017) than that of Pakistan (World Bank, 2010). Despite this low ratio, the State Bank of Pakistan has reported an improvement in the housing finance portfolio, which is stated to have grown by 13.9% from 2015 to 2016.

The share of Islamic and Private banks in terms of gross outstanding value has grown significantly over the years and Islamic banks hold the highest share amongst all financial institutions. However, individually House Building Finance Corporation Ltd. (HBFCL) is still the largest entity in the housing finance market with 75% of all mortgage clients (SBP, 2016). Moreover, although Islamic banks have a greater share in terms of gross outstanding value than private banks, the former has a lesser number of total borrowers than private banks.

HBFCL is the only financial entity that focusses on providing loans to lower and middle-income groups. Although HBFCL is not as strict as other banks in loan eligibility requirements, the weighted average markup rate charged by HBFL (9.9%) is similar to other banks. Hence, being a deterring factor for low-income households to seek mortgage from formal institutions.

Housing finance can be a critical agent in addressing issues of the housing sector, however, its current minimal role needs to be improved.

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2 This percentage distribution is based on the 600 approved housing schemes for which data regarding approval date was available.
Figure 11.19: Percentage distribution of plots status for all housing schemes

Data Source: Urban Unit

Figure 11.20: Plot size distribution for housing schemes with approved, unapproved, under process and illegal status

Data Source: Urban Unit
11.7 PUBLIC EXPENDITURE ON HOUSING

The government plays a key role in affecting the direction and outcomes of the housing sector. Through the interplay of policies and various programmes, the government determines the outcomes of certain housing challenges. This section analyses public expenditure on housing and community, including all low-income housing projects such as Ashiana Housing. Figure 11.21 shows the allocated and actual expenditure on housing and community development in the last 3 years for Punjab. The actual expenditure has been significantly higher than what was initially allocated or planned.

Expenditure on housing and community development had almost doubled in 2014 in comparison to the other years. This was primarily due to the urgency of fulfilling the Millenium Development Goals (MDG) by 2015. The average expenditure per capita on housing and community development equals approximately Rs. 412 in 2016.

The actual expenditure has also exceeded the planned allocation in every year. This leads to questions on the initial planning, processes and policies in the housing sector. This highlights the need for improved planning and also an accurate current scenario analysis to channel the planning processes in the correct direction. Figure 11.22 shows the district-wise distribution of development expenditure on housing and community development in the last five years (2012-2016). The allocations have a significant impact on the housing sector in each district.

Figure 11.21: Allocated and actual development expenditure on housing & community development in 2014 - 2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Allocation</th>
<th>Actual Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>26,605</td>
<td>56,253</td>
</tr>
<tr>
<td>2014-15</td>
<td>61,006</td>
<td>75,080</td>
</tr>
<tr>
<td>2015-16</td>
<td>31,256</td>
<td>45,370</td>
</tr>
</tbody>
</table>

Data Source: Finance Department
Figure 11.22: District-wise distribution of total public expenditure on housing and community development from 2012 to 2016

Legend

Urban Class
- Town
- Small City
- Intermediate City
- Primary City

Administrative Boundaries
- Province Boundary
- District Boundary

Road Network
- Motorway
- National Highway

Irrigation Network
- Main Canal
- River

Data Source: Finance Department
Issues in the housing sector are cumulatively categorised under the three enveloping factors that affect the housing sector: Quality, Access & Quantity. The housing shortage and people per room analysis highlighted concerns related to the quantity, while housing conditions and the household’s access to utilities emphasised crucial concerns relating to service delivery. Access to housing relates to issues of affordability, in terms of income levels, housing finance options and in some cases forms of government interventions. The more traditional methods of the analysis show that there is a shortage of housing units, however, there is a complex interplay of various factors which aid in moving from simplistic (and often historically failed) policy solutions to a much more integrated housing strategy.

A change in private housing schemes and land subdivisions rules must be made, to ensure that large housing schemes (with more than 300 kanals of land) must provide less than 3 and 3-5 marla houses for low-income groups. A scenario-based analysis, adapted in countries such as India and United Kingdom, shows that such solutions are viably possible and successful in providing low-income groups with housing, relieving the government from a large portion of the housing burden and in enabling more inclusive urban development.

11.8.1 Scenario Analysis

A scenario analysis explains the potential impact of this policy change with two options, both showing the decrease in government pressure to ensure and provide housing to all. This model is based on the findings of affordability shortage assessment, which found that all households in the middle-income group or above are able to afford a house at market prices and these income groups remain the primary focus of private developers. Table 11.3 shows a summary of urban households distribution by income group along with the two scenarios showing the potential impact of this policy regulation. Scenario 1 states that if new housing schemes and private developers reserve 15% of their total housing stock (or equivalent plots of land) for low and very low-income households, then 4.8% of households in these income groups will be provided with subsidised housing units. Scenario 2 states that if new housing schemes and private developers reserve 20% of their total housing stock (or equivalent plots of land) for low and very low-income households, then 6.5% of households in these income groups will be provided with subsidised housing units.

These policies are especially useful for intermediate and small cities. In the case of scenario 1, 5.6% of low and very low-income households in intermediate cities, and 9% of low and very low-income households in small cities will benefit from this policy change. Similarly, in the case of scenario 2, 7.5% of low and very low-income households in intermediate cities, and 12% of low and very low-income households in small cities will benefit from this policy change. Although the proportion of reserved housing units in both scenarios is 15% and 20% of total housing stock, the equivalent land value is much lesser. In order for this strategic policy to be successful, the reserved land for low and very low-income groups should be handed over to the administrative, approval sanctioning authority who are also given the land reserved for public buildings and roads infrastructure.

As Table 11.4 shows the Policy practitioners should aim to address 40% of the total housing shortfall in the next 10 years (till 2027), fulfilling the caveat from the first ten years and adding additional 40% of the shortfall to the housing stock in the next 20 years (by 2037) and eventually adding the leftover 20% to the housing stock to meet the shortage projected in 2047.

It is not financially possible for the government to provide housing to all, however, the government must ensure the provision of housing through various mechanisms and policies. It requires a three-pronged approach, which focuses on rental housing and low-income housing to together alleviate the housing shortage. Therefore these recommended policy changes and additions are necessary for the achievement of the economic aims and goals which direct the Punjab Spatial Strategy.
### Table 11.3: Scenario analysis

<table>
<thead>
<tr>
<th>Districts</th>
<th>Total LIG Households</th>
<th>Total MIG &amp; HIG Households</th>
<th>Scenario 1 - 15% of Housing Stock</th>
<th>Scenario 2 - 20% of Housing Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td># of Housing units subsidised by MIG &amp; HIG Households</td>
<td>% of Benefiting LIG households</td>
</tr>
<tr>
<td>Attock</td>
<td>49,885</td>
<td>28,321</td>
<td>4,248</td>
<td>9%</td>
</tr>
<tr>
<td>Rawalpindi</td>
<td>93,049</td>
<td>41,031</td>
<td>6,155</td>
<td>7%</td>
</tr>
<tr>
<td>Jhelum</td>
<td>41,795</td>
<td>32,482</td>
<td>4,872</td>
<td>12%</td>
</tr>
<tr>
<td>Chakwal</td>
<td>43,334</td>
<td>28,290</td>
<td>4,244</td>
<td>10%</td>
</tr>
<tr>
<td>Sargodha</td>
<td>78,790</td>
<td>25,599</td>
<td>3,840</td>
<td>5%</td>
</tr>
<tr>
<td>Bhakkar</td>
<td>40,239</td>
<td>24,677</td>
<td>3,701</td>
<td>9%</td>
</tr>
<tr>
<td>Khushab</td>
<td>51,312</td>
<td>19,999</td>
<td>3,000</td>
<td>6%</td>
</tr>
<tr>
<td>Mianwali</td>
<td>50,058</td>
<td>19,968</td>
<td>2,995</td>
<td>6%</td>
</tr>
<tr>
<td>Faisalabad</td>
<td>146,259</td>
<td>29,510</td>
<td>4,427</td>
<td>3%</td>
</tr>
<tr>
<td>Chiniot</td>
<td>55,725</td>
<td>18,607</td>
<td>2,791</td>
<td>5%</td>
</tr>
<tr>
<td>Jhang</td>
<td>55,494</td>
<td>26,256</td>
<td>3,938</td>
<td>7%</td>
</tr>
<tr>
<td>Toba Tek Singh</td>
<td>47,383</td>
<td>28,572</td>
<td>4,286</td>
<td>9%</td>
</tr>
<tr>
<td>Gujranwala</td>
<td>146,021</td>
<td>24,911</td>
<td>3,737</td>
<td>3%</td>
</tr>
<tr>
<td>Hafizabad</td>
<td>56,533</td>
<td>14,415</td>
<td>2,162</td>
<td>4%</td>
</tr>
<tr>
<td>Gujrat</td>
<td>64,518</td>
<td>25,318</td>
<td>3,798</td>
<td>6%</td>
</tr>
<tr>
<td>Mandi bahauddin</td>
<td>46,296</td>
<td>25,373</td>
<td>3,806</td>
<td>8%</td>
</tr>
<tr>
<td>Sialkot</td>
<td>66,629</td>
<td>28,478</td>
<td>4,272</td>
<td>6%</td>
</tr>
<tr>
<td>Narowal</td>
<td>48,318</td>
<td>15,627</td>
<td>2,344</td>
<td>5%</td>
</tr>
<tr>
<td>Lahore</td>
<td>370,457</td>
<td>31,888</td>
<td>4,783</td>
<td>1%</td>
</tr>
<tr>
<td>Kasur</td>
<td>77,484</td>
<td>22,213</td>
<td>3,332</td>
<td>4%</td>
</tr>
<tr>
<td>Sheikhupura</td>
<td>94,712</td>
<td>19,022</td>
<td>2,853</td>
<td>3%</td>
</tr>
<tr>
<td>Nankana Sahib</td>
<td>41,114</td>
<td>31,223</td>
<td>4,683</td>
<td>11%</td>
</tr>
<tr>
<td>Okara</td>
<td>75,204</td>
<td>21,008</td>
<td>3,151</td>
<td>4%</td>
</tr>
<tr>
<td>Sahiwal</td>
<td>45,505</td>
<td>33,757</td>
<td>5,064</td>
<td>11%</td>
</tr>
<tr>
<td>Pakpattan</td>
<td>49,631</td>
<td>18,271</td>
<td>2,741</td>
<td>6%</td>
</tr>
<tr>
<td>Vehari</td>
<td>65,164</td>
<td>14,024</td>
<td>2,104</td>
<td>3%</td>
</tr>
<tr>
<td>Multan</td>
<td>138,508</td>
<td>22,612</td>
<td>3,392</td>
<td>2%</td>
</tr>
<tr>
<td>Khanewal</td>
<td>62,043</td>
<td>20,304</td>
<td>3,046</td>
<td>5%</td>
</tr>
<tr>
<td>D. G. Khan</td>
<td>39,615</td>
<td>37,770</td>
<td>5,665</td>
<td>14%</td>
</tr>
<tr>
<td>Rajanpur</td>
<td>43,113</td>
<td>26,022</td>
<td>3,903</td>
<td>9%</td>
</tr>
<tr>
<td>Layyah</td>
<td>37,592</td>
<td>35,063</td>
<td>5,260</td>
<td>14%</td>
</tr>
<tr>
<td>Muzaffargarh</td>
<td>69,543</td>
<td>20,883</td>
<td>3,132</td>
<td>5%</td>
</tr>
<tr>
<td>Bahawalpur</td>
<td>110,104</td>
<td>15,682</td>
<td>2,352</td>
<td>2%</td>
</tr>
<tr>
<td>Bahawalnagar</td>
<td>78,812</td>
<td>12,944</td>
<td>1,942</td>
<td>2%</td>
</tr>
<tr>
<td>Rahim yar khan</td>
<td>92,574</td>
<td>20,758</td>
<td>3,114</td>
<td>3%</td>
</tr>
<tr>
<td>Lodhran</td>
<td>49,122</td>
<td>17,285</td>
<td>2,593</td>
<td>5%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2,721,934</strong></td>
<td><strong>878,163</strong></td>
<td><strong>131,724</strong></td>
<td><strong>4.84%</strong></td>
</tr>
</tbody>
</table>

Data Source: Census Population 2017, PSLM 2015, and author’s calculations
Table 11.4: Projections to address housing shortage

<table>
<thead>
<tr>
<th>10 year projections</th>
<th>2027</th>
<th>2037</th>
<th>2047</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional housing units to be provided between 2017 and 2047, considering decrease in average household size from 6.4 to 5.8. This does not include existing housing shortage.</td>
<td>2.5 million housing units</td>
<td>6.1 million housing units</td>
<td>11.3 million housing units</td>
</tr>
</tbody>
</table>
11.9 FOCUS AREAS

- Facilitate inclusive and mixed-income urban development by regulating new housing schemes and developments for very low and low income groups.
- Provide incentives to low cost house developers and ease legal procedures: uniform legal land titling and land transfers.
- Ensure availability of innovative housing finance options for renovations and extensions in existing structures. These should be targeted towards low-income groups with houses that have 1-2 rooms used for sleeping since they are most likely to be overcrowded.
- Identification of government land for development to effectively manage unused land.
- Promote rental housing by enforcing rental laws and providing tax incentives on rental incomes.
- Amend FAR regulations to allow extension and renovation of existing houses to address overcrowding while ensuring enforcement mechanisms exist for the demolition of errant construction.
- Update land use, building and zoning regulations to encourage development of low- and middle-income units in developments.
- Tackle housing deprivation in 16% of Punjab’s housing units with a focus on improving the conditions in the most deprived areas of rural Punjab (most deprived districts are Bhakkar and Jhang).
- Adopt and promote PPP Mode for Social Housing.
- Improve access to utilities particularly piped sewerage (13% access) and water (14% access).
- Regularise informal settlements to provide residents with municipal services and security that can result in residents gradually moving out of poverty with active community participation.
- Ensure compliance with the 25% to 30% green space standard, increasing green spaces in Lahore and Bahawalpur that have been reduced due to urbanization and migration.
- Provision of more small and medium sized loans ranging from Rs. 1 to 5 million, lower mark up rates, and more flexible loan eligibility criteria.
- Create centres that obtain, analyse and use data for housing reform and other planning.
- Promote transit oriented development.
- Create disincentives for vacant plot owners using residential plots for investment.
- Provide Incentives to Private Sector to invest in Low Income Housing.