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PRESS RELEASE

Gallup Big Data Analysis of Census 2017

Volume 6

Sharp decline in overall availability of outdoor water sources was observed with a 4.35% decrease in water availability from protected wells followed by a decrease of 1.14% in tap water – Sources of Drinking Water: CENSUS YEAR 1998 AND 2017

Islamabad, November 17th, 2021

Gallup Pakistan, as part of its Big Data Analysis initiative, is looking at the National Pakistan Census 2017 ratified recently.

This series aims to present the important learnings from the census for policy makers, the general public as well as for marketers in an easy and understandable way.

Today's Topic is "Sources of Drinking Water: Census Year 1998 and 2017"

Key Findings

1) ***Availability of Drinking Water:*** Access to drinking water inside the house increased over time (water was available to 75.04% of Pakistan's housing units in 1998 and 86.09% of the housing units in 2017) while it decreased for sources outside the house (water was available to 24.96% of housing units in 1998 and to 13.91% in 2017).

2) ***Rural-Urban Breakdown (Water Availability):*** Sources of drinking water inside the housing units showed signs of improvement for both rural (15.02% increase) and urban areas (0.94% increase) over the last two decades while for outside water sources in both rural and urban areas, water availability deteriorated (15.02% decrease in rural areas and 0.94% decrease in urban areas).

3) ***Comparison with 1998 Census – Sources of Drinking Water (Inside the House):*** Tap water (availability in 28.08% of the housing units in 1998 and 32.72% of the housing units in 2017) and Electric/Hand Pump (42.07% of the housing units in 1998 and 44.28% in 2017) remained the primary sources of water inside the housing units

4) ***Rural-Urban Breakdown – Water Sources Inside the House:*** Availability of tap water inside the housing units improved in rural areas (increased from 13.37% of the housing units in 1998 to 26.93% in 2017) as compared to urban areas (a decrease from 60.22% of the housing units in 1998 to 42.22% in 2017).

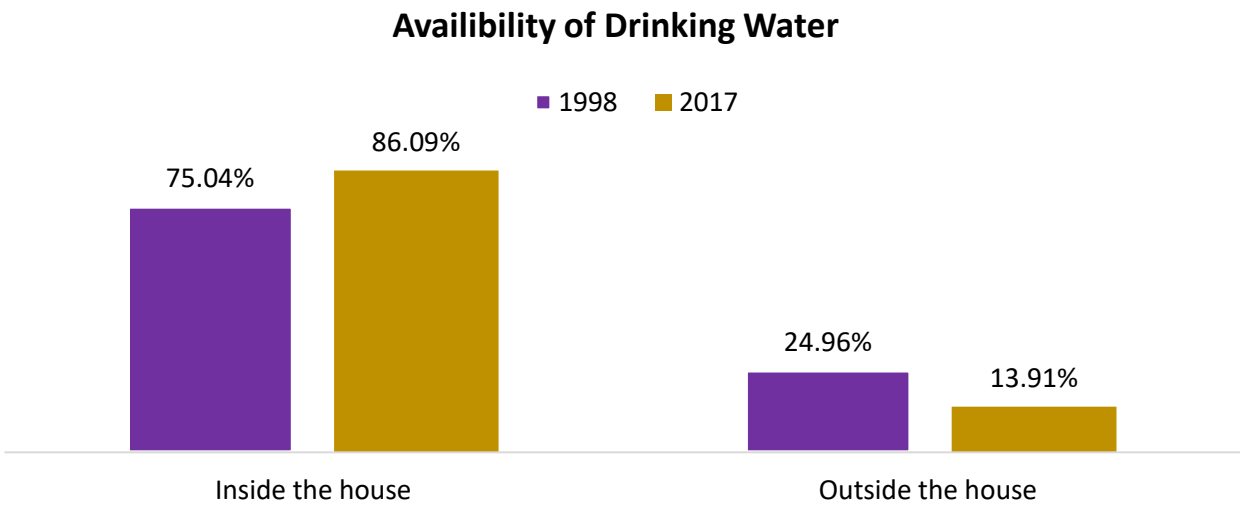
5) ***Comparison with 1998 Census – Sources of Drinking Water (Outside the House)*:** Sharp decline in overall availability of outdoor water sources was observed with a 4.35% decrease in water availability from protected wells followed by a decrease of 1.14% in tap water.

6) ***Rural-Urban Breakdown – Water Sources Outside the House:*** Supply of drinking water from all major water sources outside the house namely tap water, electric/hand pump, protected wells, canals etc. observed a decline in availability for both rural and urban areas.

1) *Availability of Drinking Water:* Access to drinking water inside the house increased over time (water was available to 75.04% of Pakistan's housing units in 1998 and 86.09% of the housing units in 2017) while it decreased for sources outside the house (water was available to 24.96% of housing units in 1998 to 13.91% in 2017).

Access to portable drinking water acts as an index of quality living**.** An analysis of the 1998 census and 2017 census highlights that the sources inside the house indicated an increase of 11.05% while sources outside the house showed a decrease of 11.05%. Moreover, the sources of drinking water inside the house increased over the years from 75.04% of the housing units in 1998 to 86.09% in 2017 while those outside the house decreased from 24.96% of the housing units in 1998 to 13.91% in 2017.

Figure 1 – Availability of Drinking Water Inside and Outside the House in 1998 and 2017 (per household units)



2*) Rural-Urban Breakdown (Water Availability):* Sources of drinking water inside housing units showed signs of improvement for both rural (15.02% increase) and urban areas (0.94% increase) over the last two decades while for outside water sources in both rural and urban areas, water availability deteriorated (15.02% decrease in rural areas and 0.94% decrease in urban areas).

The rural-urban breakdown for availability of water sources suggests that the situation improved in 2017 as compared to 1998 as the indoor water accessibility increased in both rural and urban areas. A 15.02% increase was observed in rural areas (from 68.45% in 1998 to 83.47% in 2017) and a 0.94% increase in urban areas (from 89.44% in 1998 to 90.38% in 2017). It can be seen that

the increase was greater in the rural settings as compared to urban settings. However, outdoor water accessibility had declined by 15.02% in rural areas and 0.94% in urban areas. It was discovered that the outside sources of drinking water decreased from 31.55% to 16.53% in rural areas and from 10.56% to 9.62% in urban areas between 1998 and 2017.

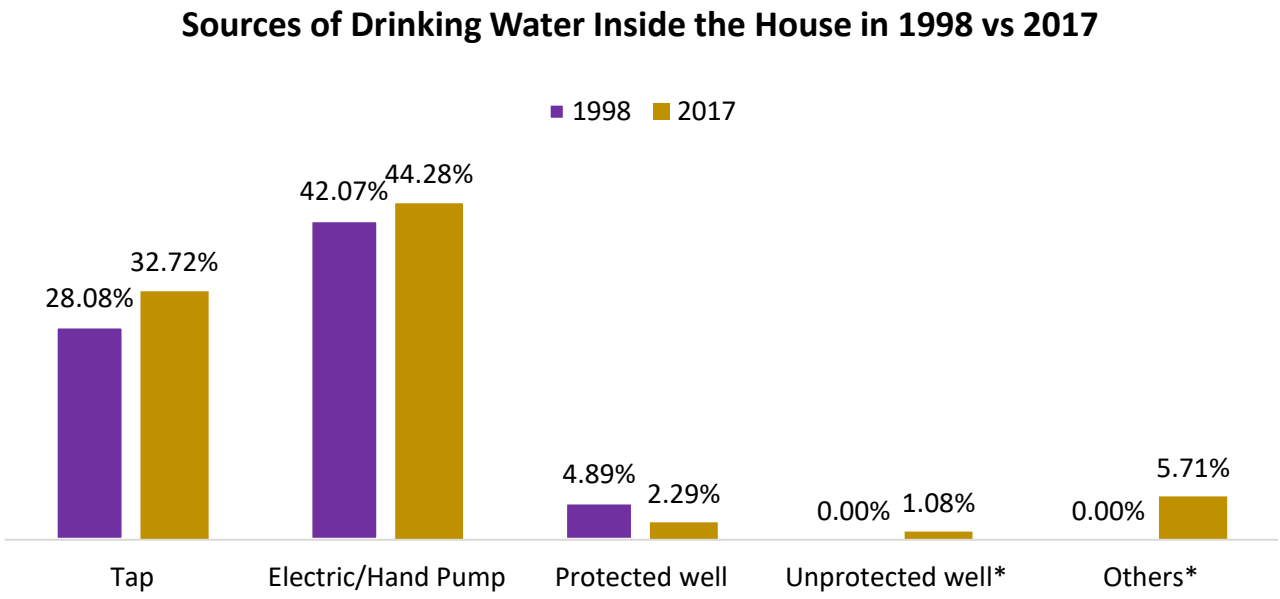
Table 1 - Rural-Urban Breakdown 2017 vs 1998 Census: Availability of Drinking Water Inside and Outside the House (per household units)

Source of Drinking Water	1998		2017	
	Rural	Urban	Rural	Urban
Inside the House (%)	68.45%	89.44%	83.47%	90.38%
Outside the House (%)	31.55%	10.56%	16.53%	9.62%

3) *Comparison with 1998 Census – Sources of Drinking Water (Inside the House):* Tap water (availability in 28.08% of the housing units in 1998 and 32.72% of the housing units in 2017) and Electric/Hand Pump (42.07% of the housing units in 1998 and 44.28% in 2017) remained the primary sources of water inside the housing units.

As per the 2017 census, the availability of tap water inside the housing units was recorded as 32.72% which indicated an increase of 4.64% from 1998 census when the availability was 28.08%. Similarly, use of drinking water through electric/hand pump inside the house increased by 2.21% from 42.07% in 1998 to 44.28% in 2017. Moreover, protected wells saw a decline in availability from 4.89% of the housing units in 1998 to 2.29% in 2017. In addition, statistics for unprotected wells and others were recorded at 1.08% and 5.71% respectively in 2017; however, similar statistics from 1998 are unavailable.

Figure 2 – Sources of Drinking Water Inside the House in 1998 vs 2017 (per housing units)



**** The options of unprotected well has been added in Census-2017. In 1998 Census there was no such distinction. Data is unavailable for others in 1998***

4) *Rural-Urban Breakdown – Water Sources Inside the House:* Availability of tap water inside the housing units improved in rural areas (increased from 13.37% of the housing units in 1998 to 26.93% in 2017) as compared to urban areas (a decrease from 60.22% of the housing units in 1998 to 42.22% in 2017). Availability of water from electric/hand pumps decreased by 3.81 percentage points in rural areas and increased by 16.15 percentage points in urban areas.

In 1998, the availability of tap water inside housing units was 13.37% in rural areas and 60.22% in urban areas. The availability increased to 26.93% in rural areas while it decreased to 42.22% in urban areas in 2017. Moreover, water availability through electric/hand pump reduced in rural areas by 3.81% (from 49.58% of the housing units in 1998 to 45.77% in 2017) and increased in urban areas by 16.15% (from 25.68% of the housing units in 1998 to 41.83% in 2017). In addition to this, the availability of water from protected wells inside homes decreased for both rural (5.50% of the housing units in 1998 to 2.87% in 2017) and urban areas (3.54% of the housing units in 1998 to 1.35% in 2017). For unprotected wells and others, the statistics were 1.52% and 6.38% for rural areas and 0.36% and 4.63% for urban areas respectively in 2017.

Table 2 - Rural-Urban Breakdown: Water Sources Inside the House 1998 vs 2017 Census (per household units)

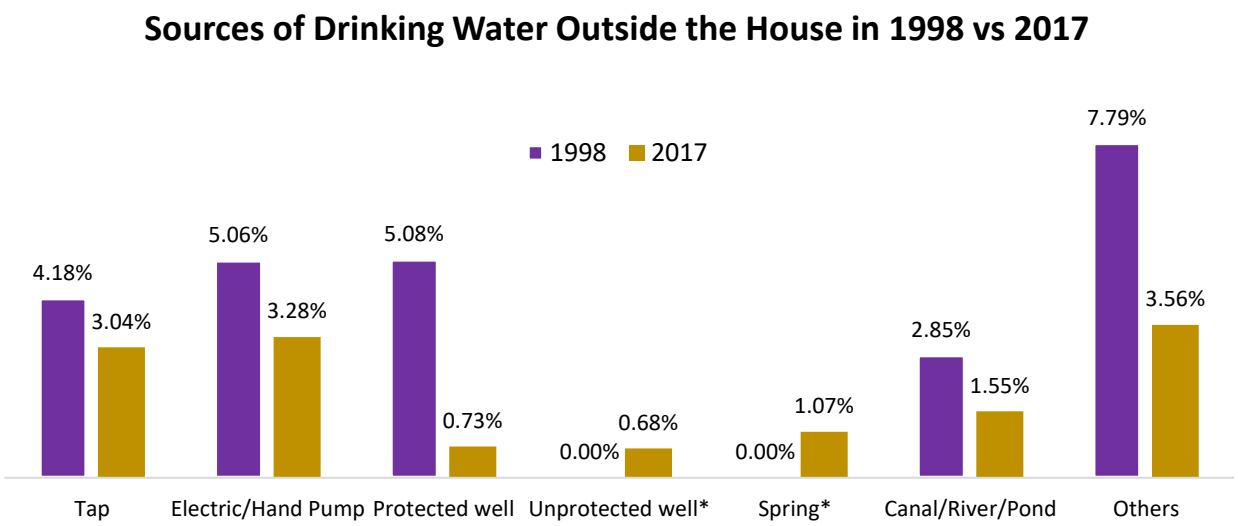
Source of Drinking Water	1998		2017	
	Rural	**Urban**	**Rural**	**Urban**
Tap	13.37%	60.22%	26.93%	42.22%
Electric/Hand Pump	49.58%	25.68%	45.77%	41.83%
Protected well	5.50%	3.54%	2.87%	1.35%
Unprotected well*	-	-	1.52%	0.36%
Others*	-	-	6.38%	4.63%

**** The options of unprotected well have been added in Census-2017. In 1998 Census there was no such distinction.***

5*) Comparison with 1998 Census* – Sources of Drinking Water (Outside the House): Sharp decline in overall availability of outdoor water sources was observed with a 4.35% decrease in water availability from protected wells followed by a decrease of 1.14% in tap water.

A comparison of census statistics from 1998 and 2017 suggests that outdoor water sources have plummeted over the years. According to reports, the greatest decline has been found for protected wells which stands at a 4.35% decrease from 5.08% to 0.73% of the housing units between 1998 and 2017. Other sources of outdoor drinking water also rapidly decreased by 4.23% from 7.79% of the housing units in 1998 to 3.56% in 2017. Outdoor water availability for tap water declined from 4.18% to 3.04%, and from 5.06% to 3.28% for electric/hand pumps. For canals/rivers/ponds outdoor water availability decreased from 2.85% to 1.55% 1998 and 2017. Furthermore, water availability from unprotected wells and springs was recorded at 0.68% and 1.07% in 2017; however, data for 1998 is unavailable.

Figure 3 – Sources of Drinking Water Outside the House in 1998 vs 2017 (per housing units)



**** The options of unprotected wells and springs have been added in Census-2017. In 1998 Census there was no such distinction.***

6) *Rural-Urban Breakdown – Water Sources Outside the House:* Supply of drinking water from all major water sources outside the house namely tap water, electric/hand pump, protected wells, canals etc. observed a decline in availability for both rural and urban areas.

Availability of outdoor water sources has decreased substantially over the years, in both rural and urban areas. The major sources of drinking water outside the home include tap water, electric/hand pump, protected wells, unprotected wells, canal/rivers/ponds, springs, and others. Analysis suggests that all major sources have showed signs of depletion. The access to tap water has decreased from 3.89% of the housing units in 1998 to 3.57 % in 2017 in rural areas and from 4.81% of the housing units in 1998 to 2.19% in 2017 in urban areas. Moreover, supply of water from electric/hand pump declined from 6.78% of the housing units to 3.93% in rural areas; however, it increased for urban areas from 1.31% of housing units to 2.20% between 1998 and 2017. Water from protected wells decreased by 5.89% in rural areas (from 6.98% in 1998 to 1.09% in 2017) and decreased by 0.76% in urban areas (from 0.91% in 1998 to 0.15% in 2017). In addition to this, 2017 census statistics show that for unprotected wells and springs, the water availability was 1.06% of the housing units and 1.67% in rural areas and 0.07% and 0.09% in urban areas respectively. Unfortunately, similar data from 1998 is unavailable. For canals/rivers/ponds, water availability decreased from 4.03% to 2.21% in rural areas and increased slightly from 0.28% to 0.47% in urban areas over the years. Water access from other sources decreased in rural areas (from 9.87% in 1998 to 3.01% in 2017) while it increased in urban areas (from 3.24% in 1998 to 4.46% in 2017).

Table 3 - Rural-Urban Breakdown: Water Sources Outside the House 1998 vs 2017 Census (per household units)

Source of Drinking Water	1998		2017	
	Rural	Urban	Rural	Urban
Tap	3.89%	4.81%	3.57 %	2.19%
Electric/Hand Pump	6.78%	1.31%	3.93%	2.20%
Protected well	6.98%	0.91%	1.09%	0.15%
Unprotected well*	-	-	1.06%	0.07%
Spring*	-	-	1.67%	0.09%
Canal/River/Pond	4.03%	0.28%	2.21%	0.47%
Others	9.87%	3.24%	3.01%	4.46%

**** The options of unprotected well and spring have been added in Census-2017. In 1998 Census there was no such distinction.***

Wish to Contribute to Gallup Big Data Analysis

Gallup Pakistan is looking for collaboration with researchers to expand both the Big Data Analysis project as well as this study of National Census 2017. If you have any ideas, please write to Bilal I Gilani, Project Director, Big Data Analysis at Gallup Pakistan.

Other Gallup Big Data Analysis reports are available on: https://gallup.com.pk/search/big%20data%20analysis

Wish to know more about National Census 2017

The 6th Population and Housing Census of Pakistan was undertaken throughout the country from 15th March to 24th May 2017. For this purpose, the country was delimited into manageable census areas i.e., Blocks, Circles, Charges and Districts. The whole exercise was successfully completed by the Pakistan Bureau of Statistics (PBS) through deployment of field staff in all the census areas with strong support from the Provincial Government Departments and the Armed Forces of Pakistan.

You can find more information on the national census and complete tables on www.pbs.gov.pk

Or visit:

https://www.pbs.gov.pk/sites/default/files//population_census/ncrpcr/NCR%20Pakistan.pdf