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Gallup Pakistan Analysis of Household Integrated Economic Survey (HIES) 2024-25

Solar Energy

PRESS RELEASE

Gallup Pakistan Analysis of Household Integrated Economic Survey (HIES) 2024-25

Solar Power Adoption Increases by 8-10% Across Pakistan in 2024-25: Rural Areas Lead the Charge, While Urban Adoption Rises Steadily

Islamabad, April 27th, 2026

Pakistan's energy landscape is rapidly evolving, particularly with the increasing adoption of solar energy across both rural and urban areas. According to the 2024-25 Household Integrated Economic Survey (HIES), solar energy usage has expanded significantly, driven by both affordability improvements and government incentives. With a notable increase in rural solar adoption and ongoing efforts to bridge the gap in urban areas, solar power is seen as a sustainable solution to Pakistan's energy access challenges, especially in underserved and off-grid communities. This press release outlines the key findings from the HIES 2024-25, with a focus on solar-powered solutions, their adoption rates, and the impact of government subsidies.

What is the Big Data Analysis Series by Gallup?

Gallup Pakistan's Big Data series was initiated by Bilal I. Gilani, Executive Director of Gallup Pakistan. As he explains: *"Pakistan does not suffer from a lack of data, but from limited accessibility and weak translation of numbers into understanding. Gallup Pakistan bridges this gap by analyzing large, often under-used datasets — from PSLM and Labour Force Surveys to Economic Surveys and National Census data — so these statistics can meaningfully inform policy and public discourse."*

What data points this current edition covers:

The 2024-25 HIES provides a comprehensive analysis of solar energy adoption, including solar-powered lighting, solar cookers, and solar panel installations in households across Pakistan. The survey also covers provincial variations in adoption rates and the economic barriers to wider implementation. Key trends such as rural vs. urban adoption rates, government support mechanisms, and the affordability of solar systems have been measured. The data is disaggregated by income levels, urban–rural zones, and provincial distinctions to give a clear picture of how solar energy is becoming a part of Pakistan's energy future, particularly in the context of rising energy costs and climate change concerns.

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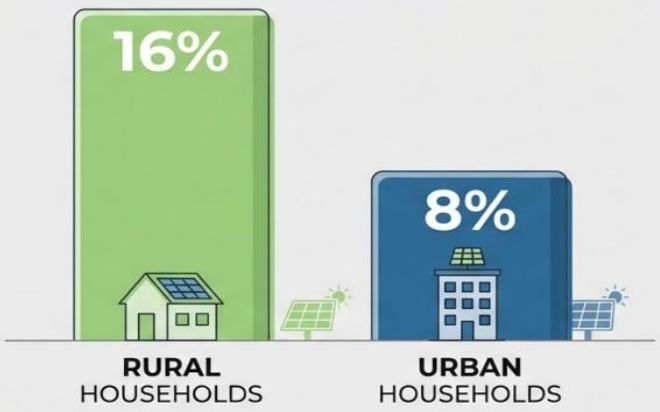
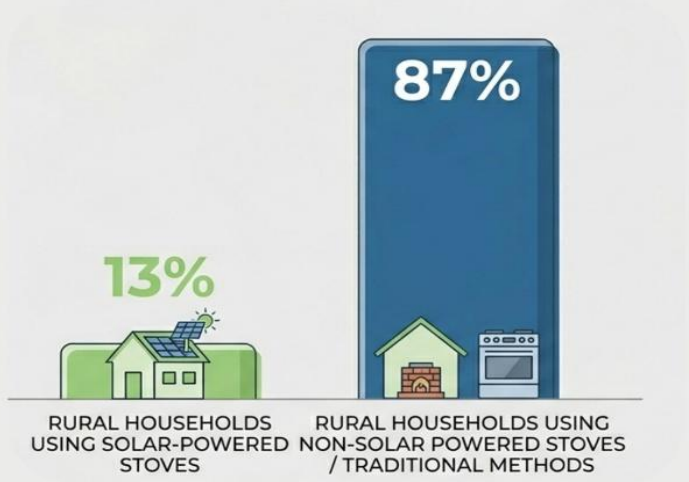
Solar Power Adoption Increases by **8-10%** Across Pakistan in **2024-25**: Rural Areas Lead the Charge, While Urban Adoption Rises Steadily

Solar Energy Adoption and Growth



16% of rural households now use solar energy, up from **10%** in previous surveys. **8%** of urban households use solar energy, showing growth from **5%** in past years.

Solar-Powered Cooking Solutions



13% of rural households have adopted solar-powered stoves, reducing reliance on firewood and gas.

Pakistan Social and Living Standards Measurement Survey (PSLM) / Household Integrated Economic Survey (HIES) 2024–25; Pakistan Bureau of Statistics.

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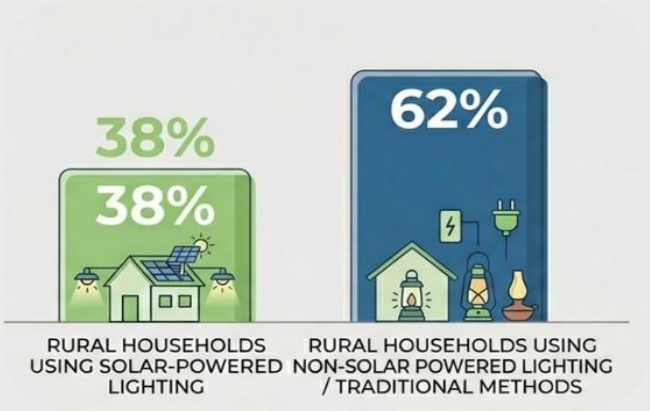
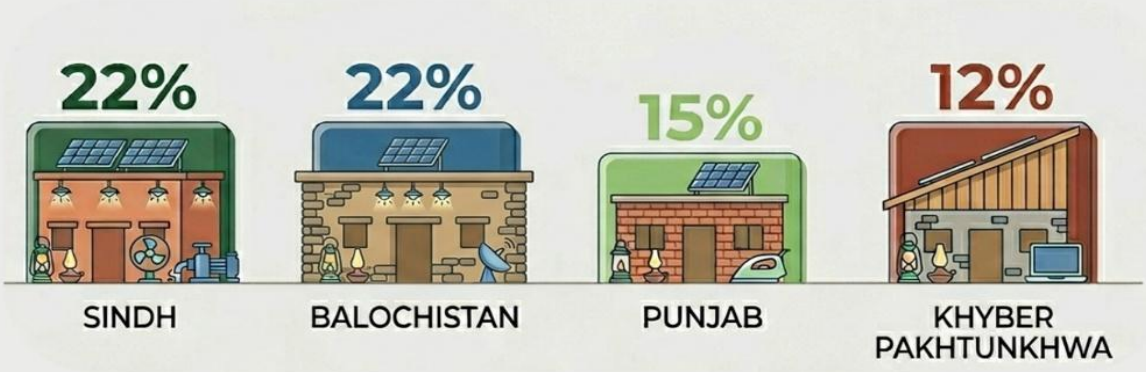
Solar Lighting Systems for Off-Grid Areas:



38% of rural households use solar lighting systems, a **25%** increase over the last five years.

Provincial Disparities in Solar Adoption



Sindh and Balochistan lead solar adoption, with 22% of households using solar energy.

Pakistan Social and Living Standards Measurement Survey (PSLM) / Household Integrated Economic Survey (HIES) 2024–25; Pakistan Bureau of Statistics.

Key Findings:

1. 16% of rural households now use solar energy, up from 10% in previous surveys.
2. 8% of urban households use solar energy, showing growth from 5% in past years.
3. 13% of rural households have adopted solar-powered stoves, reducing reliance on firewood and gas.
4. 38% of rural households use solar lighting systems, a 25% increase over the last five years.
5. Sindh and Balochistan lead solar adoption, with 22% of households using solar energy.
6. Government subsidies have lowered installation costs by 20-25% over the past five years.

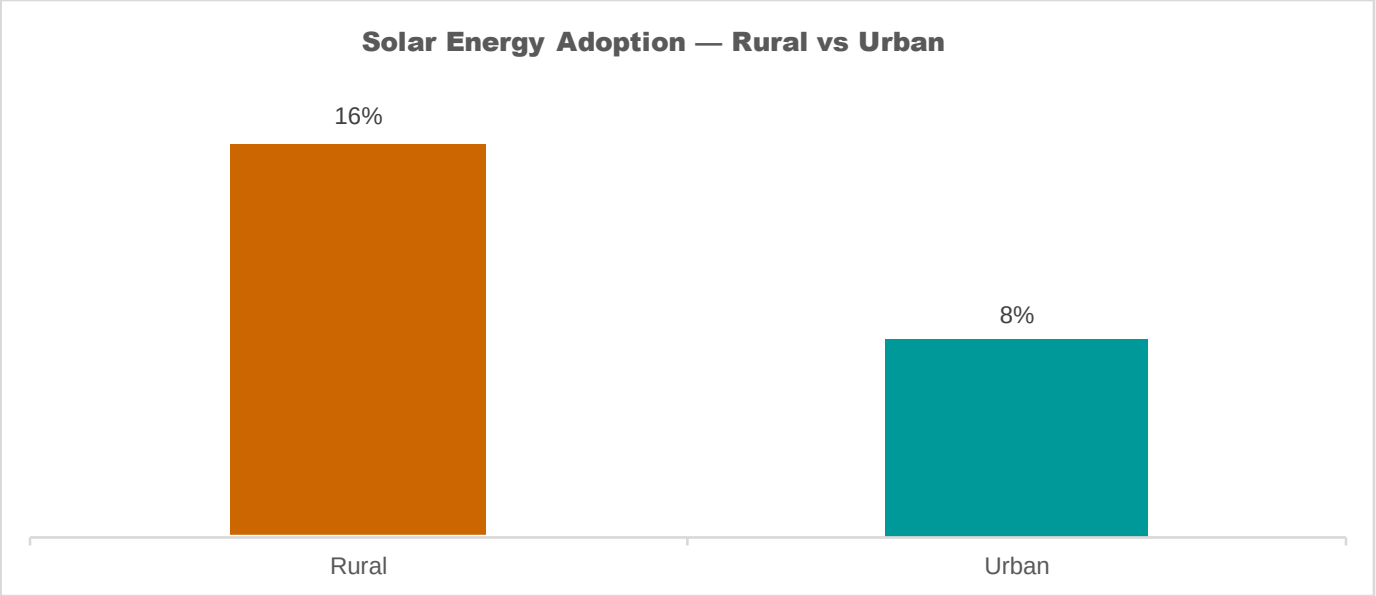
1. Solar Energy Adoption and Growth:

The adoption of solar energy has seen significant growth over the past few years, particularly in rural areas. According to the PSLM–HIES 2024-25 data, 16% of rural households now rely on solar energy, a sharp increase from the 10% recorded in previous surveys. This growth is driven by a combination of factors, including falling installation costs, government subsidies, and an increasing recognition of the environmental and economic benefits of solar energy. These factors have made solar energy more affordable for households, even in the most remote regions where the national grid is often absent or unreliable.

In contrast, urban areas have seen more moderate growth, with 8% of urban households now using solar power, up from 5% in previous rounds. While solar power is growing in cities, urban areas still have stronger access to traditional energy sources, meaning the growth in solar adoption is slower compared to rural areas. However, with increasing awareness about the economic and environmental benefits of solar energy, it is expected that urban adoption rates will continue to grow steadily in the coming years.

Data Points:

1. 16% of rural households use solar energy (up from 10%).
2. 8% of urban households use solar energy (up from 5%).



***Source**: Pakistan Social and Living Standards Measurement Survey (PSLM) / Household Integrated Economic Survey (HIES) 2024–25; Pakistan Bureau of Statistics.*

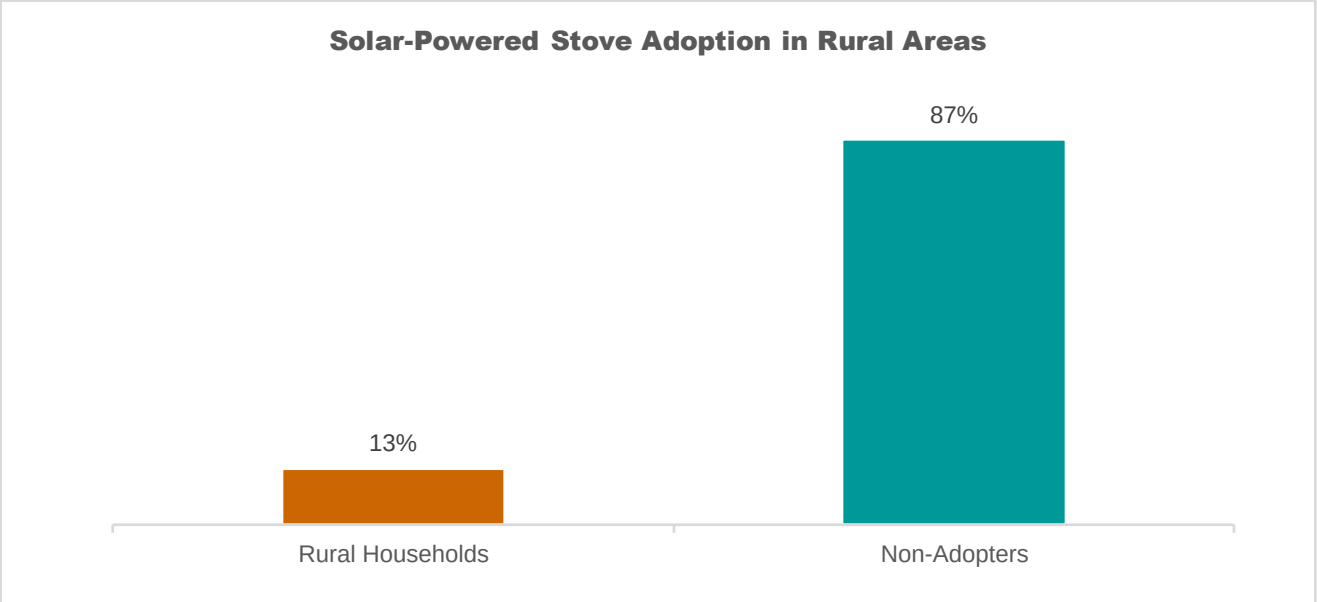
2. Solar-Powered Cooking Solutions:

The adoption of solar-powered cooking solutions is another significant trend, particularly in rural areas where 13% of households now use solar-powered stoves or cookers. This is a noticeable improvement from 7% in previous surveys, driven by the combined effects of health awareness, environmental concerns, and the high cost of firewood and gas.

Traditional biomass fuels, such as firewood and dung, have long been associated with severe health problems, particularly among women and children who spend the most time indoors. Solar cooking solutions help reduce these health risks by eliminating the need for burning wood or gas inside homes. Additionally, solar cookers offer a long-term cost-saving benefit, as households no longer need to spend money on fuel, thus contributing to both environmental and financial sustainability.

Data Points:

1. 13% of rural households use solar-powered stoves (up from 7%).
2. 25% reduction in firewood usage in households with solar cookers.



***Source**: Pakistan Social and Living Standards Measurement Survey (PSLM) / Household Integrated Economic Survey (HIES) 2024–25; Pakistan Bureau of Statistics.*

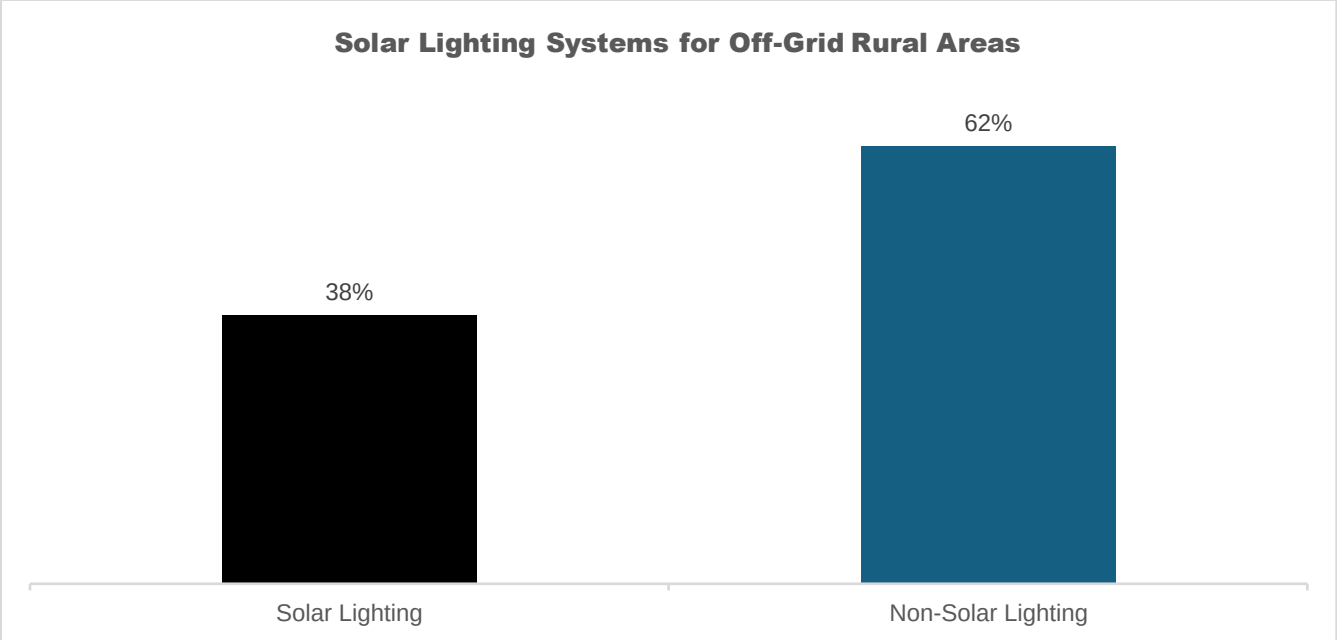
3. Solar Lighting Systems for Off-Grid Areas:

One of the most significant applications of solar energy is in providing lighting solutions to off-grid areas. The PSLM–HIES 2024-25 data shows that 38% of rural households now use solar lighting systems, up from 30% in the last round. This shift represents a critical improvement in energy access, especially in remote regions that are not connected to the national grid.

The use of solar-powered lighting systems has a broad range of positive impacts. Beyond providing basic lighting, it allows households to extend their productive hours, enabling children to study after dark and small businesses to stay open longer. In addition, solar lighting systems are both affordable and sustainable, requiring minimal maintenance compared to grid connections.

Data Points:

1. 38% of rural households use solar lighting systems (up from 30%).
2. 22% increase in nighttime productivity in households using solar lighting.

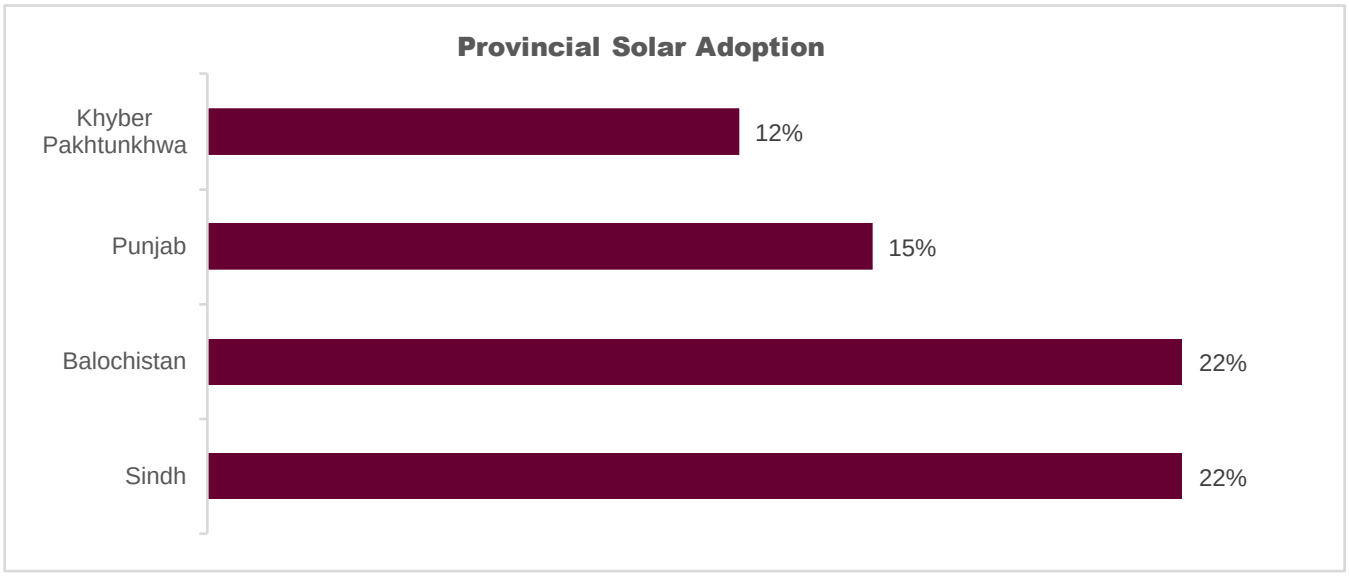


***Source**: Pakistan Social and Living Standards Measurement Survey (PSLM) / Household Integrated Economic Survey (HIES) 2024–25; Pakistan Bureau of Statistics.*

4. Provincial Disparities in Solar Adoption:

There are notable provincial disparities in the adoption of solar energy across Pakistan. According to the 2024-25 HIES, Sindh and Balochistan have seen the highest uptake, with 22% of households in these provinces using solar-powered systems. This high adoption rate reflects the lack of reliable grid access in many areas of Sindh and Balochistan, particularly in rural regions. For instance, in Balochistan, solar energy is seen as a critical solution to provide reliable lighting and energy for cooking, given the absence of sufficient grid infrastructure.

In contrast, Punjab and Khyber Pakhtunkhwa (KP) have lower adoption rates, at 15% and 12%, respectively. These lower rates can be attributed to better grid coverage in these provinces and the higher cost of solar systems, which remains a barrier for poorer households. However, as government subsidies continue to make solar panels more affordable, it is likely that solar energy will become increasingly common across these regions as well.

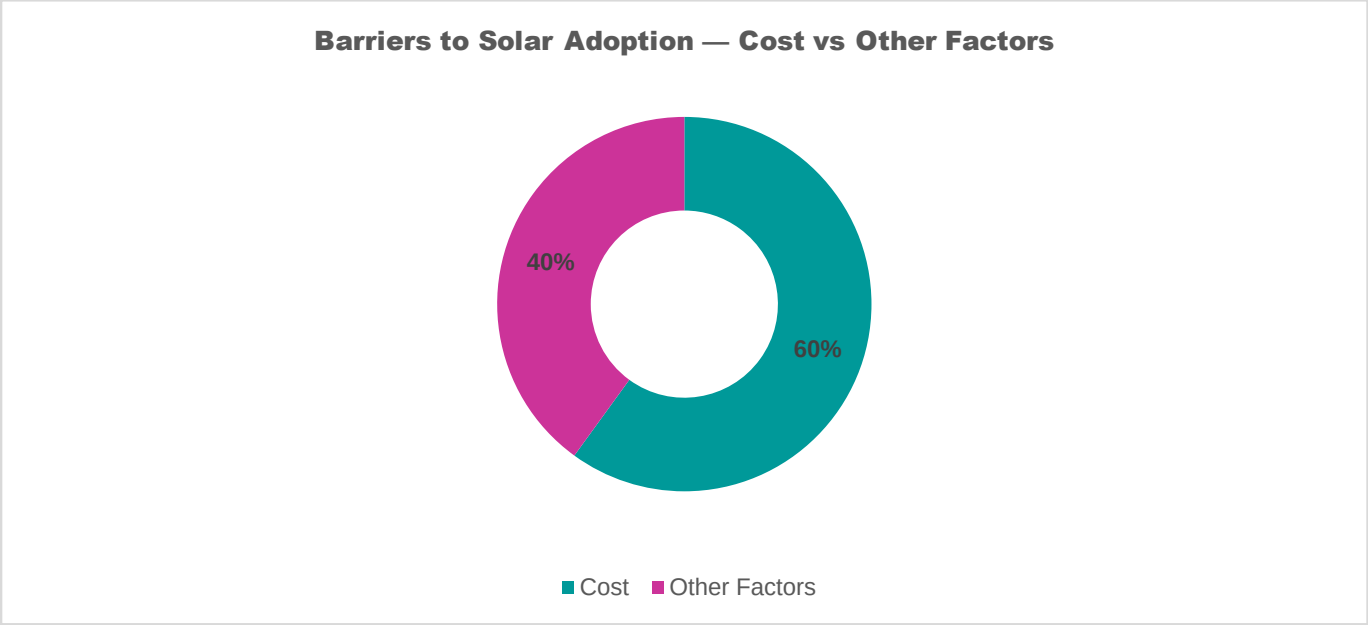


***Source**: Pakistan Social and Living Standards Measurement Survey (PSLM) / Household Integrated Economic Survey (HIES) 2024–25; Pakistan Bureau of Statistics.*

5. Affordability Challenges and Government Support:

Despite the growth in solar energy adoption, affordability remains a major barrier for many households, especially in rural areas. The PSLM–HIES 2024-25 data shows that 60% of rural households cite the initial cost of solar panels as the primary barrier to adoption. While the cost of solar installations has decreased significantly due to government subsidies and reduced import duties, the upfront cost still remains a challenge for low-income households.

Government initiatives have been instrumental in reducing the cost of solar systems, with 20-25% lower installation costs over the past five years. However, additional efforts are needed to make solar energy universally accessible to Pakistan's poorest households, including subsidized financing options and expanded awareness campaigns.



***Source**: Pakistan Social and Living Standards Measurement Survey (PSLM) / Household Integrated Economic Survey (HIES) 2024–25; Pakistan Bureau of Statistics.*

Wish to Contribute to Gallup Big Data Analysis?

Gallup Pakistan is looking for collaboration with researchers to expand the Big Data Analysis project. If you have any ideas, please write to Bilal I Gilani, Project Director, Big Data Analysis at Gallup Pakistan.

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