karmannya | CII CENTRE FOR WOMEN LEADERSHIP | ALLIANCE FOR GLOBAL GOOD GENDER EQUITY AND EQUALITY | WOMEN'S COLLECTIVE FORUM

Unveiling Gendered Mainstreaming in Public Policy:

An Impact Assessment ment of Pradhan Mantri Awas Yojana-G and Jal Jeevan Mission

Supported by

Towards a new dawn
Ministry of Women and Child Development
Government of India

Gates Foundation

Unveiling Gendered Mainstreaming in Public Policy: An Impact assessment of PMAY-G and JJM on Bridging Housing-related Gender Inequalities in India

By
N R Bhanumurthy
Aritri Chakravarty
Madras School of Economics, Chennai, India

Papaiah Koppula
Athira Thomas
Karmannya Counsel, Ahmedabad, India

Acknowledgement

This report extends the foundational work of the 2024 study, An Analytical Approach for Assessment of Gender Budgeting in India. We express our profound gratitude to all individuals and organizations whose contributions were essential to the successful completion of this study.

We extend our deepest gratitude to Smt. Smriti Zubin Irani, whose visionary leadership as former Minister for Women and Child Development catalyzed the 2024 study. As the Chairperson of the Alliance for Global Good: Gender Equity and Equality, Smt. Irani's committed support and strategic foresight have profoundly shaped the discourse on the rigorous assessment of Gender Budgeting, significantly guiding the direction of this research.

We are especially grateful to Dr. Shamika Ravi, Member of the Economic Advisory Council to the Prime Minister of India, for her critical insights and guidance since the inception of this study in 2024. Her sustained contributions have been pivotal in refining the analytical framework and ensuring the robustness of this report.

We express our sincere thanks to Ms. Devanshi Shah of Karmannya Counsel for her central role in bringing this study together. Her leadership in convening the research team, securing necessary permissions, and fostering effective collaboration, combined with her inputs at every stage, have significantly enhanced the quality and depth of our research outcomes.

We also acknowledge the substantial contributions of Dr. Bhabesh Hazarika, lead of the earlier report, whose consistent support throughout this study, particularly in refining the sampling design and finalizing the methodology, has greatly enriched this report.

We are immensely grateful to the Gates Foundation for their generous financial support, which enabled the comprehensive execution of this study. Additionally, we extend our thanks to the CII Center for Women Leadership for providing essential logistical support, which was critical to the successful release of this report.

We express our sincere appreciation to the government officials in Ajmer and Jalore districts of Rajasthan, and Nellore and Kakinada districts of Andhra Pradesh, for their vital assistance in facilitating access to critical data and establishing connections with Block Development Officers, Rural Water Supply and Sanitation officials, Assistant Engineers, Village Development Officers, Panchayat Secretaries, and other stakeholders involved in the implementation of the Pradhan Mantri Awaas YojanaGramin (PMAY-G) and the Jal Jeevan Mission (JJM) schemes.

We also wish to convey our deep appreciation to the field investigators across the four selected districts and eight blocks, whose dedication and thorough efforts ensured the successful execution of the survey. Our heartfelt thanks extend to the respondents who generously shared their time, patiently answered our questions,

and actively participated in focus group discussions. Their insights and lived experiences have profoundly enriched our understanding of the on-ground impact of these flagship schemes.

N R Bhanumurthy
Aritri Chakravarty
Papaiah Koppula
Athira Thomas

Content

List of Tables

List of Figures

Appendix

Appendix –B:

Sample Questionnaire

Executive Summary

Gender Budgeting is implemented in India since 2005. Over the last two decades, it has seen significant expansion both in terms of number of schemes and also the total allocations. In 2025-26 Budget, the total allocation has gone up to 8.86 per cent of total Budget from about 5.46 per cent in 2014-15. In absolute terms, it has increased from 0.98 lakh crore to 4.49 lakh crore. Further, it has also expanded the schemes by bringing Part C (in addition to Part A and Part B) that has scheme allocations less than 30 per cent towards women and girls. However, as the way the whole gender budget is implemented suggest that it is largely a static and accounting-based framework with little critical assessments of the schemes. Further, these schemes, while implemented, are not mapped with the gaps in standard gender related indicators.

To address this issue, in 2024, with the help of Karmannya Counsel, a framework was proposed in a study titled 'An Analytical Approach for Assessment of Gender Budgeting in India'. The study suggested for an outlay-output-outcome framework with a feedback loop to address gender gaps. Based on this framework, in this report, an attempt has been made to assess two major schemes under gender budgeting, namely, Padhan Mantri Awaas Yojana (Gramin) and the Jal Jeevan Mission, both expected to address the housing and drinking water gaps in the rural area.

The present study undertakes a primary survey in two districts each of Andhra Pradesh and Rajasthan for both the schemes and derives some empirical estimates based on mean differences and propensity score matching (PSM) methods. The results from the survey are very interesting. While at the macro level, implementation of both the schemes appear to be good, at the micro and regional level, there appears to be some limitations. And this seems to lead to differential outcomes among the beneficiaries, especially among women and children.

Survey results show that women are able to save time from unpaid work, which can be channelized towards paid work. Children could manage to get their own space for studying and this seems to have increased the number of hours that they spend on studies. There is an overall improvement in health conditions of the household with reduction in family members falling sick and less visits to hospitals. Both the schemes have led to increased involvement of women in community activities within the neighbourhood, thus, improving the social status of the household. The mobility of women also found to have increased between pre and post-scheme implementation. But, in this report, we argue that these positive outcomes do have minimal impact on gender gaps if they are not being complimented by other policy interventions. Also there are some implementation issues as well at the local level. This study argues for the feedback loop that addresses both the issues: issues within the scheme as well

as the required policy interventions after the scheme outcomes are achieved. For a query on what needs to be done to make these positive outcomes leading to better income generation, women suggested the interventions to improve skills, access to finance and financial services, policies to improve mobility, as well as support to improve nutrition levels at the household. As a feedback loop, MoWCD need to focus on these issues to channelize the outcomes of schemes under gender budgeting to reduce the gender gaps indicators as per GGI/GII.

To map gender budgeting with the outcomes indicators as per GGI or GII, it needs a separate exercise, which is lacking at present in India context. Here the role of GBCs is utmost crucial while mapping the schemes with gender indicators. And lack of this is one of the reasons that although the share of gender budgeting in India increased, its impact on gender outcomes are at best minimal. This study suggests three pathways to improve the feedback loop. First, the role of GBCs within the scheme implementation needs a major revamp at all levels of ministries/departments both at centre and states level. This could be one major reason why at the macro level these schemes are doing better while at a micro or regional level the performance is mixed and there is lot more that needs to be done at the implementing agency level to improve efficiency. Here the role of GBCs becomes utmost important to involve from designing of the scheme to identification of beneficiaries to completion of the work. And this is lacking in all the schemes that are implemented outside the MoWCD. In the absence of this, it appears that all the schemes that are included under gender budgeting is implemented independent of MoWCD (GBCs).

Secondly, role of GBCs to complement the outcomes of those schemes included in the gender budgeting for further reduction of gender gaps. This study shows that even in the regions where the schemes are implemented better, those positive outcomes have not been channelled towards enhancing women's participation in income generation activities or leading to increased asset creation or leading to improving skills. It is argued in the study that GBCs could work with beneficiaries to enhance women participation in economic activities. Skill India program, which is included in Part B, could be one scheme that may be focused on the women that have gained time due to other schemes. The other area that GBCs to handhold the women beneficiaries is in terms of enhancing access to finance and financial services.

Third issue is that the schemes under gender budgeting should be demand-driven and should be the initiative of MoWCD while the implementation could be done by any relevant line ministry/department. These demand driven schemes should be flowing from the gender gaps that are identified from GGI/GII sub-indices. These three suggested pathways should help improving the effectiveness of gender budgeting towards addressing gender disparities in the country.

Introduction

In 2005-06, the Government of India, as part of the annul Union Budget, introduced the Gender Budget Statement to make the government budgets and spending more equitable and supportive for women. Gender Budgeting (GB), or Gender-Responsive Budgeting (GRB), is a fiscal policy tool that integrates a gender perspective into budgeting processes to promote gender equality through enhanced access to public resources and opportunities especially in social, economic, and infrastructure sectors. In other words, it is an exercise to look at the country's scarce public resources distribution through a gender perspective. The implementation of gender budgeting has increased awareness of issues pertaining to gender and emphasized the need for governments to address gender inequity in their national and sub-national policies. As a result, the number of states, ministries and departments adopting gender budgeting has increased. In all about 29 states, excepting Telangana among the larger states, adopted gender budgeting in their state Budgets with Goa and Puducherry adopting it very recently. While Ministry of Women and Child Development is the key ministry in promoting and implementing gender budgeting through Gender Budget Cells (GBCs) and strategic frameworks there are another nine ministries/departments that allocate over 30 per cent of their allocation towards gender Budget, with Ministry of Finance overall monitoring the scheme. Overall, at present the Union Government allocates 8.86per cent of total Budget for gender budgeting, which is a substantial increase from 5.46 per cent in 2014-15. However, while increasing allocations is a necessary condition, to realise better outcomes, there is a need for Gender Impact Assessments of each intervention and aligning with the segregated gender gaps is crucial. Here is the role of GBCs becomes very crucial as they are expected to contribute to overall budgeting process, from generating demand to post-Budget monitoring and evaluation, audit as well as impact assessment of GB schemes at the department level to promote efficient gender outcomes. In the absence of such proactive assessments of the schemes, the gender budgeting exercise would remain as a mere accounting exercise that is unrelated to growing gender gaps. Further, it is also important that whole gender budgeting becomes a dynamic process with outcomes to outlays and vice versa. Until recently the exercise was largely static with limited feedback to the next year of gender budgeting with limited assessment of the outcomes due to current year expenditures. To address this implementation gap, Hazarika et al (2024), while undertaking various issues with regard to gender budgeting in India, proposed an analytical framework to make the whole exercise dynamic as well as mapping with the gender inequality. The study, to support the analytical framework, has also proposed an empirical assessment of one of the

Based on 2025-26 Budget, ten Ministries/Departments that are allocating more than 30 per cent to gender schemes are Ministry of WCD (81.89per cent), Department of Rural Development (65.76per cent), Department of Food & Public Distribution (50.92per cent), Department of Health & Family Welfare (41.1per cent), Ministry of NRE (40.89per cent), Department of Social Justice & Empowerment (39.01per cent), Department of Higher Education (33.94per cent), Department of School Education & Literacy (33.67per cent), Ministry of Home Affairs (33.47per cent), and Department of Drinking Water & Sanitation (31.5per cent).

https://www.pib.gov.in/PressNoteDetails.aspx?id=154811&NoteId=154811&ModuleId=3

flagship schemes of the Government of India, i.e., Pradhan Mantri Awaas Yojana (Gramin) (PMAY(G)), which is part of the 'Housing for All' scheme in the rural areas. Housing is a fundamental requirement for every human being, especially for women, as it provides safety and security. Every woman, man, youth, and child have the human right to access safe, secure, affordable, and suitable housing, ensuring a home and a community where they can live in peace and dignity. Given that housing is a crucial output for better gender outcomes, this is included under Part A of the Gender Budget with 100per cent provision towards women. The importance of PMAY(G) in overall gender budgeting could be made out from the fact that in 2025-26, out of Rs 105535.40 crores of proposed expenditure under Part A, PMAY(G) alone contributes well over half with the allocation of Rs. 54832 crores. Another flagship scheme, which was included in 2024-25 Gender Budget, is the Jal Jeevan Mission that ensure potable drinking water to every household and this is included in Part B with atleast 30 per cent provision towards women. Drinking water, especially in rural areas, has been the subject of gender studies and strongly concluded that lack of drinking water facility within a household has significant adverse impact on the outcomes among all aspects of gender gaps covering incomes, health, education, mobility, social norms, violence among others. While the details of specific schemes are provided in the later sections, in this report we look at these schemes, its implementation as well as actual gender outcomes among the beneficiary households with the help of a field survey among four districts – two districts in each – of Andhra Pradesh and Rajasthan.

The structure of the report is as follows. In the next section, although there are some severe limitations with regard to the estimates, a brief discussion of the recent gender gaps estimates (by UNDP and WEF) is provided. Section 3 briefly discusses the present state of gender budgeting in India including the recent changes. In section 4, brief discussion about the salient features of both PMAY(G) and JJM in terms its coverage as well as its progress till now are presented. Some review of existing literature on the role of availability of both housing and drinking water in reducing gender gaps is presented. In section 5, proposed analytical framework as well as the methodology, sampling design and statistical tools adopted in undertaking the empirical analysis is discussed. Section 6 presents findings of the study with the help of basic descriptive statistics as well as other statistical estimates. Following this section, an attempt would be made to discuss how the study findings could be related to relooking at the composition of gender budgeting to make it more effective in reducing gender gaps.

PMAY(G) allocations are not entirely to women as it also to men and, in many cases, in joint name. Hence, the scheme is not strictly come under Part A. Other way is to bring in only the allocations made to women under the scheme may be brought under Gender Budget (similar approach was followed under earlier version of rural housing scheme)

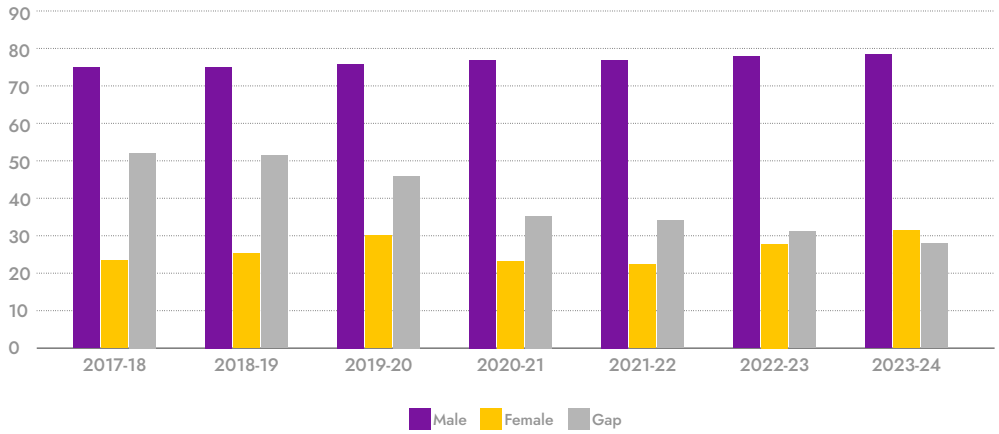
Section-2

Gender Inequality Status in India

The estimates of gender inequality are done by international agencies such as UNDP (part of the Human Development Report) and the World Economic Forum (WEF). As these are estimated across the countries, while they become widely discussed, but they are also fraught with limitations with regard to local databases and definitions. Some of these issues are discussed in Hazarika et al (2024). For instance, when it comes to political representation of women, these international estimates completely miss the women representation in the third tier governments where India enacted constitution to give one-third representation to women in the Panchayat Raj Institutions. While there is a pressing need to have a representative estimates applicable for India, in this section we discuss the recent estimates for Gender Gap Index (GGI) by WEF for the year 2025.

India's rank in GGI for the year 2025 is at 131 with a 2 rank fall compared to 2024. However, it is important to delineate this based on the index as well as sub-indices. Indeed, the index between the two years has improved marginally from 0.641 to 0.644 and, as WEF itself mentions, it is the slightly higher improvement in other countries' estimate led to India slipping 2 ranks. Out of the four sub-indices, India improves in three indices, namely economic participation & opportunity, educational attainment and health & survival. It is only in political empowerment, the index declines marginally from 0.251 to 0.245. As pointed earlier, this component does not consider women representation in third tier government and that seems to be misleading the estimates. One important observation from these estimates is the out of the 14 indicators used, apart from three under political empowerment, India may need to have special focus female labour force participation where the difference between male and female is about 41 per cent. Another area of concern is the estimated earned income, where the difference is too wide – men earn 3 times more than women. Although it has improved between 2024 and 2025 (from 0.286 to 0.299), such wide gap needs policy intervention and more so on the female labour force participation, which is a major determinant of female incomes. On the political participation, comparable countries like Indonesia score higher than India (Indonesia has a score of 0.494 while India 0.245).

With regard to labour force participation and the male to female gap, if we look at the annual PLFS data since 2017-18, it is clear that there was huge gender gap to the extent of over 50 per cent. However, if one looks at the trend since then, the gap is only narrowing and is currently at about 37 per cent and this is largely due to increased female labour force participation from 23.3 per cent in 2017-18 to 41.7 per cent (see Figure-1). WEF estimate for 2025 appear to consider data only upto 2022-23 where the WEF shows gap of 41.32 per cent, which is closer to PLFS estimate of 41.5 per cent. Updating upto 2023-24 could improve India's overall index as well as ranking.



Source: PLFS Annual report for 2023-24. These estimates are based usual status (principal + Subsidiary) for persons of age 15 years and above (in per cent).

One could also look other indicators such as wage gap, education & health gaps, mobility, empowerment and so on. Most of these indicators do suggest that there is a need for focused policy intervention to reduce the gender gap. Gender Responsive Budgeting as a powerful public policy tool should be addressing these allocations and effective implementation. In the next section we briefly look at the status and approach of Gender Budgeting in India.

Section-3

Current status of Gender Budgeting in India

The origin and progress of incorporating gender perspectives in budgeting process is detailed in various studies, including in Hazarika et al (2024). To avoid repetition, here the focus is more the Union Budget 2025-26 as well as on the States. In addition to the existing practice of categorizing various schemes under Part A with 100 per cent provision for women and girls and Part B with schemes that have atleast 30 per cent allocation to women and girls, in line with suggestion made in Hazarika et al (2024), in the 2024-25 Union Budget, the government has also brought Part C with schemes that have allocations less than 30 per cent. This is a very welcoming change in order to bring in more ministries/departments under gender budgeting exercise. In 2025-26, although Part C is adding only about 16821.28 crores towards gender budget, this will enhance awareness and gender sensitization across line ministries/departments while forming their respective programs and schemes.

On the whole, in 2025-26, there is almost an increase of about 19.3 per cent compared to 2024-25 (RE), a highest growth in recent years. As discussed in the introduction, of the total budget, gender budget constitutes as high as 8.86 per cent in 2025-26, thus, suggesting an increased focus of government in ensuring gender parity across the line department expenses. Of the three parts, it is the Part B, that has larger share among the total gender budget. However, the share of Part A, which is the program/scheme allocation that meant 100 per cent for women and girls is increasing over the period (see table-1).

▶ Table-1:

Trends and Composition of Gender Budgeting in India (in crores)

Category	2023-24 (actuals)	2024-25 (RE)	2025-26 (Budget)
Part A	71912.99 (18.70)	80733.35 (21.44)	105535.4 (23.50)
Part B	297446.3 (77.36)	281104.6 (74.66)	326672 (72.75)
Part C	15140.28 (3.94)	14690.99 (3.90)	16821.28 (3.75)
Total	384499.6	376528.9	449028.7

Source: Generated from Statement 13 of Expenditure Profile, 2025-26, GoI

Note: Figures in the parenthesis are share in the total (in percent)

Table-2:

Top Ministry/Department/Scheme in terms of Gender Budget allocation in 2025-26 Union Budget

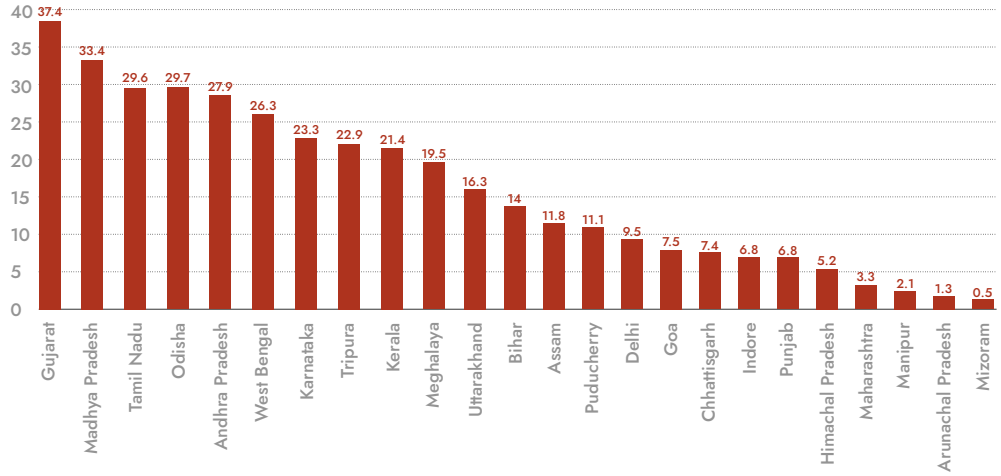
Ministry/Department/Scheme	Allocation under GB (in crores)	As per cent of total GB
Ministry of Housing & Urban Affairs	23294	5.19
Department of Rural Development	75863.99	16.90
PMGKAY	107638.8	23.97
Samagra Shiksha	12375	2.76
Department of Health and Family Welfare	39436.43	8.78
JJM	20476	4.56
MGNREGS	40000	8.91
POSHN 2.0	17207.22	3.83
Sub-total	336291.42	74.89
Total Gender Budget	449028.70	

It may be noted in table-2 that out of total allocation under gender budgeting, almost one-fourth is under PMGKAY, which is implemented by Department of Food & Public Distribution. If one adds MGNREGS to Department of Rural Development, the Rural Development Ministry alone contributes to 25.80 per cent of total allocation. Under MoHUA, it is the PMAY(Urban) that is covered under gender budgeting. In all, apart from the nodal Ministry, i.e., MoWCD, it is the Department of Rural Development and Department of Food & Public Distribution that mainly implement the gender sensitive expenditures. While MoWCD allocates 81.8 per cent of its budget towards gender budgeting, other two departments – rural development and food & public distribution - spend about 65.8 and 50.9 per cent respectively. One caution here is many of the schemes under these departments do have sunset clauses and one could see shrinking of gender budgets if not replaced by other schemes to narrow gender gaps. The schemes such as PMAY(G), JJM (two schemes considered in this study), PMAY(Urban) and few smaller schemes may reach saturation levels soon.

At the state level, as discussed earlier, until 2024-25, 27 major states and UTs have adopted the gender budgeting in their state Budgets with Karnataka being the first state to adopt in 2005-06. Recently Goa and Puducherry also adopted the gender budgeting and with this almost all major states except Telangana has adopted the gender budgets. Smaller states/UTs like Sikkim, Ladakh, and Chandigarh is yet to implement. In general, while all the states have seen increasing trend in terms of share of gender budget allocations in total expenditures, there is a wide diversity between the states.

▶Figure-2:

Gender Budget as Proportion of State Budget 2024-25



Source: Data sourced from 'Economic Policies for women-led development', ICRIER. For Andhra Pradesh, the data is for 2023-24 (https://icrier.org/epwd/data-insights/fiscal/where-is-the-budget-for-gender)

As shown in figure-2, among the larger states while Gujarat allocates over 37.4 per cent, Maharashtra's share in total budget is as low as 3.3 per cent. Such a wide divergence between the states need to be examined and intervention by MoWCD may be necessary to bridge the divergence. Following Union government, many states have also brought in Part C as part of their Budgets. Indeed, Karnataka has further expanded classification of Part A and B as Part AN and AY and Part BN and BY, respectively, with 'N' indicating individual schemes while 'Y' indicating schemes focusing on community level. Such classification should help GBCs evaluating the outcomes of these schemes better instead of bunching all the schemes together.

On the data and other resources, very recently in June 2025, the Ministry of Women and Child Development has come up with an excellent initiative of launching 'Gender Budgeting Knowledge Hub' portal that provides information on various aspects of gender budgeting both at the Union and also the State level. At the moment the portal provides the gender budget reports for all the states atleast for the last two years, i.e., for 2024-25 and 2025-26. This portal will be very useful for better understanding of the processes, outcomes as well as for better coordination between the government agencies as well as with other stakeholders.

Section-4

Policy Interventions for reducing gender gaps

In this section, we discuss two major policy interventions that Government of India initiated to address the issue of ease of living especially in the rural areas. As noted in table-3, there are a number of schemes that are included in Part –A with 100 per cent allocation to women and girls. But it is also important to note that most of these schemes are brought under gender budgeting much later, thus, suggesting that they are not necessarily the initiative of MoWCD. Rather this was brought under gender budgeting long after these schemes were implemented. For instance, Jal Jeevan Mission (JJM) was brought under gender budgeting only in the 2024-25 Budget almost after five years of its implementation. As discussed in the previous section, Part –C was brought only in the recent Budget. In this section, we discuss two flagship schemes for which better beneficiary datasets are available and also, as per literature, have significant impact on reducing gender gaps. They are the rural housing scheme, Pradhan Mantri Awaas Yojana (Gramin), and drinking water scheme, Jal Jeevan Mission. Both housing and drinking water especially in rural areas are two main gender sensitive concepts. Various rounds of Time Use Surveys suggest rural drinking water facility or the lack of it has a significant impact on rural women time spent on unpaid activity. Similarly, as noted by the NIPFP (2018) study on PMAY(G), rural housing becomes an important endowment for better women and children outcomes in terms of health, nutrition as well as education. We discuss both the schemes as well as its implementation in the following sections. But as argued in the previous section, both these schemes do have sunset clauses as both will reach saturation soon in terms of coverage. GBCs may need to look at other areas of intervention, that complements both housing and drinking water, to further reduce the gender gaps.

Pradhan Mantri Awaas Yojana (Gramin)

Housing and the neighborhood in which people live have important implications for individual health, employment, and educational outcomes, which can begin in childhood and last a lifetime. As the majority of the population resides in rural India, providing affordable houses to the most deprived in rural regions is of utmost importance. Housing needs, appearing as one of the core social concerns of the government, have led to the introduction of housing schemes, both for rural and urban areas. The Government of India introduced Indira Awaas Yojana (IAY) in 1985 as a part of the Bharat Nirman Program. Later, the program was restructured and renamed as Pradhan Mantri Awaas Yojana (PMAY). The program is implemented by Ministry of Housing and Urban Affairs (MoHUA) and Ministry of Rural Development (MoRD). The PMAY scheme aims to

provide affordable pucca houses to the poor and it has two components: PMAY-Urban (PMAY-U) launched in 2015 and PMAY-Gramin (PMAY-G) which launched in 2016. By addressing and bridging the housing gap in rural India, PMAY-G makes a substantial contribution to the "Housing for All" mission. One of the salient features of the scheme is its gender-sensitive approach. The scheme specifically emphasis that the ownership of the house should be either solely by a woman or jointly with a female member of the household.

Realizing the potential impact of housing provision on gender inequalities, governments across the world have been devising policy options to empower women through free/subsidized affordable housing. Various studies have found the importance of housing for women. A study conducted in Australia (Viljoen et al., 2020) using the Australian housing condition dataset found that an increase in the availability of affordable housing eased the financial strain and improved the mental health of Australian women. The improvement in psychological distress from improved housing was largely due to one subcomponent of housing quality, i.e crowding, and the housing quality improvements led to diminished psychological distress in women (Wells & Harris, 2007). Home ownership is a potentially significant economic resource for women (Yeates, 1999) that leads to increased economic stability (Quets et al., 2016). It can be used not only as a place to live, but also as a consumption good and a form of investment (Angelini et al., 2012). As a result, it has the potential to enhance the owners' economic status, decision-making power, and their ability to participate in the community. There is a very high correlation between home ownership and economic independence, decision-making independence and participation of women (Karami & Hamelink, 2023). Through co-ownership or registration of PMAY(G) homes in women's names, the program has enhanced their social standing, financial independence, and decision-making power within households and communities (Bhandari, 2023). Women who own some property have greater mobility and can travel independently to facilities outside their home and have greater say in decisions regarding their employment (Swaminathan et al., 2012). NIPFP (2018) showed that having a pucca house has also improved the social status of family in the village, thus, enhancing social capital for the family and especially for the women folk. The study also showed that beneficiaries of PMAY(G) scheme enjoy better outcomes compared to older scheme of IAY. One of the major reason for this is the larger convergence of PMAY(G) with other schemes such as Swachha Bharat Mission, Ujjwala, MGNREGS, among others, which was lacking in IAY.

Although both men and women value home ownership, women tend to place a higher value on the security and

practicality it provides for them and their children than on the property's market value. It is expected that women's empowerment will be improved by owning property, including land and housing, because it will increase their agency, improve their access to opportunities, promote economic independence, gain them respect from other family members, and encourage more investment, particularly for daughters (Rakodi, 2015).Viljoen et al. (2020) commented that house serves as a symbol of societal welfare, offering security and comfort and contributing to one's sense of identity. Furthermore, it facilitates connections to social circles, employment opportunities, and essential services.

▶ Table-3:

Year-Wise Percentage Distribution of PMAY-G Houses Across Gender

	Sanctioned House					Completed House				
Year	No House	Women	Men	Joint	women (Sole/ Joint)	No House	Women	Men	Joint	women (Sole /Joint)
2016-17	4182574	34.03	29.30	36.66	70.69	4091638	34.04	29.33	36.61	70.65
2017-18	3151157	28.72	30.75	40.52	69.24	3092125	28.69	30.77	40.54	69.23
2018-19	2508923	99.95	23.21	31.41	131.36	2471670	23.28	31.44	45.28	68.56
2019-20	5619268	25.35	28.88	45.76	71.12	5462261	25.38	28.89	45.73	71.11
2020-21	4147890	23.74	27.87	48.39	72.13	4023048	23.96	27.98	48.06	72.02
2021-22	6636373	25.85	23.19	50.96	76.81	6023575	25.84	23.98	50.17	76.01
2022-23	2317369	27.43	23.40	49.17	76.60	1147089	32.90	11.25	55.85	88.75
2023-24	852318	22.95	14.86	62.19	85.14	708762	23.71	15.43	60.86	84.57
2024-25	7010218	20.49	18.16	61.34	81.83	994040	21.82	14.78	63.40	85.22
2025-26	1946502	19.20	14.36	66.44	85.64	2240	26.34	13.21	60.45	86.79
Total	38372592	30.24	24.28	49.05	79.29	28016448	26.86	26.64	46.50	73.36

Source: Based on data from Awaassoft collected on 13/07/2025

The Government of India has taken a decision to construct 2 Crore more houses during the next 5 years from 2024-25 to 2025-29 financial years. This is largely to address the exclusion errors in the 2011 SECC survey. It is also reported that the construction of these two crore houses would benefit around 10 crore individuals across the states. As per table-3, 30.24 per cent of the total sanctioned PMAY(G) houses were allotted exclusively to females, while 49.05 per cent were sanctioned under joint ownership (both male and female). Similarly, among the completed houses, 26.86 per cent were owned by women, and 46.50 per cent were jointly owned. Notably, the ownership of PMAY(G) houses by women—either individually or jointly—has shown a consistent upward trend, rising from 69.76 per cent in 2016–17 to 86.79 per cent in 2025–26. Further,

irrespective of the ownership, woman of the household is being provided for 90 days' wage under MGNREGS during the period of construction of the house. This growing trend in female and joint ownership under PMAY(G) reflects a significant movement towards bridging the gender gap in rural India as well as enhancing women's economic security and empowerment.

https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2043921.

Jal Jeevan Mission

Access to safe and sustainable drinking water is essential for public health, economic development, and overall well-being. With the majority of the Indian population residing in rural areas, the problem of clean drinking water and its subsequent impact on health has become a major concern to the Indian Government. Thus, in August 2019, to provide functional household tap connections to every rural household and ensure the sustainability of water supply systems, the Central Government introduced the Jal Jeevan Mission (JJM), under the Ministry of Jal Shakti. The government intended to provide nearly 16 crore households with tap connection by 2024. The scheme aims to supply 55 liters per capita per day (lpcd) of safe drinking water to the rural households. Since launch of JJM, additional 11.79 Crore rural households have been provided tap connections. Thus, as on 14th July, 2025, out of 19.32 crore rural households in the country, provision of tap water supply has been made to 15.67 Crore (80.93 per cent) households (JJM Dashboard, Ministry of Jal Shakti). This ambitious initiative aligns with the United Nations Sustainable Development Goal 6 (SDG 6), which aims to ensure the availability and sustainable management of water and sanitation for all. Going by the trend, India could achieve this goal well before the 2030 deadline.

According to estimates by the World Health Organization (WHO), JJM will save more than 5.5 crore hours every day, mostly for women who would otherwise have to spend time fetching water. That study suggests that providing all Indian families with safely managed drinking water might avert nearly 400,000 deaths from diarrheal diseases, saving around 1.4 crore Disability Adjusted Life Years (DALYs). Kremer et al (2023), and subsequent meta-analysis based on 15 RCT studies, suggest that 'if JJM succeeds in this mission, it will prevent around 1,36,000 under-5 deaths per year. However, this will require that water delivered through JJM is free from microbiological contamination' (to be precise, prevent about 135,678 child deaths). In other words, over 30 per

cent reduction in mortality among children under 5 years due to provision of safe drinking water in India. A qualitative study conducted in Ghana found that the extension of piped water to a certain community led to significant improvements in the physical, mental, social, career, and financial well-being of women. It also highlighted how overall quality of women's life improved due to enhanced access to safe water especially in the rural areas (Ahiabli et al., 2023)

Many studies have shown that the burden of lacking access to safe

https://jaljeevanmission.gov.in/sites/default/files/2023-07/potential-reduction-in-child-mortality-through-expanding-access-to-safe-drinking-water-in-india.pdf

drinking water primarily falls on women and girls within the household, as they are often responsible for water collection (Nerkar et al., 2013; Alfredo et al., 2014; Adams et al., 2018; Hoque and Hope, 2018; Devasia, 2018). Thus, providing in-house piped water connections can cut down on the amount of time women and girls spend in fetching water from outside and in most cases from faraway places (Vanaja, 2018). Fetching water from far off places also limits the educational possibilities, reinforces gender inequality and prolongs the cycle of poverty (Kudesia, 2023; Sekhri, 2014). This would also expose women and girls to a greater risk of being physically assaulted, abused or harassed (Sommer et al., 2015; Kayser et al.,2021).

Lack of safe drinking water also leads to various health complications such as bladder cancer and breast cancer more in the case of women than compared to men (De Guzman et al., 2023). Few studies have shown that lack of safe drinking water could lead to water borne diseases such as diarrhea, cholera, trachoma, typhoid and malaria (Beer et al., 2015; Bisung and Elliot, 2017; Hunter et al., 2010; Moura et al., 2019; Sengupta, 2013). The prevalence and duration of diarrhea among children in rural India are significantly higher for families without piped water than observationally identical households with piped water facilities (Jalan and Ravillion, 2003). Drinking water and water carriage contamination can cause pregnancy problems, worsen perinatal health problems, have a negative impact on menstrual health, and raise the risk of reproductive tract infections in women (Ademas et al., 2020; Gall et al., 2015; Geere et al., 2018a; Kayser et al., 2019).

The overarching time burden associated with water collection often restricts women's ability to engage in employment, or other developmental activities. The time used for fetching water also decreases the time to take care of children and helping their cognitive development. In addition, it may induce the children to join their parents in the drudgery of the household activities such as cleaning, washing or looking after their young siblings thereby reducing the time available for educational pursuits (Choudhari and Desai, 2021). Girls often have fewer opportunities than boys due to the burden of domestic responsibilities (Ravichanthran and Bhoopathi, 2005). According to a mixed method study conducted in Ethiopia, girls and women spend three to four hours a day fetching water, which equates to 37 to 51 days of lost education annually. (Demie et al.,2016). According to a cross-sectional study of 500 Indian households that examined the attendance records of children (ages 13 to 14), female students missed school nearly twice as frequently as male students because of household duties including fetching water. When faced with restricted access to water, female students missed five or more days of school per month, which is two to ten times more than their male counterparts (Kookana et al., 2016).

Thus, investments in water infrastructure has potential to increase economic participation and enhance quality of life by reducing time spent on

domestic tasks and increasing time spent on social and formal employment or other paid work (Mishra, 2024). Thus, for the 2025-26 budget, the Central Government allotted Rs 67,000 crores for the scheme and the scheme is extended till 2028. Since its implementation, 15.67 crore rural households have benefited from the scheme. The highest allocation under part B of the gender budget 2024-25 is under Jal Jeevan Mission, which is about 10 per cent (4.56 per cent of total gender budget, see Table-2).

Following the implementation of the Jal Jeevan Mission (JJM), a study by Singh & Naik (2024) shows that the time taken to fetch drinking water has significantly reduced at the national level and across most states, with the exception of a few north-eastern states. The study shows proportion of households spending more than 30 minutes to collect water declined from 6.75 per cent in 2015–16 to 4.87 per cent in 2019–21, particularly in the high-focus Empowered Action Group (EAG) states and some low-focus states. Similarly, the share of adult women responsible for fetching drinking water dropped from 82.25 per cent to 75.89 per cent over the same period. Although the change is marginal, the proportion of female children fetching water from distant sources also declined slightly, from 2.82 per cent in 2015–16 to 2.81 per cent in 2019–21. However, this was the early years of JJM when only 37.64 per cent households were covered by 2020-21. Now with over 80.93 per cent of total target of 19.36 crore households covered under by JJM by 14th July 2025, the impact could be much larger than what was shown by Singh & Naik (2024).

▶ Table-4:
Proportion of Households with Tap Connections

Year	HH Provided with Tap Water through JJM	HH with Tap connection	Per cent households connected with tap (target 193638780)
Before 2019	_	32362838	16.71
2019-20	8262187	40625025	20.98
2020-21	32261522	72886547	37.64
2021-22	20133683	93020230	48.04
2022-23	23275312	116295542	60.06
2023-24	29926447	146221989	75.51
2024-25	9443159	155665148	80.39
2025-26	1038496	156703644	80.93
Total	124340806	156703644	80.93

Source: Calculations based on the information from JJM Dashboard, as on 14 July 2025.

The table-4 presents the progress of households with tap water connections over the years. Prior to the implementation of the Jal Jeevan Mission (JJM), only about 3.24 crore households, or 16.71 per cent of the total 19.36 crore targeted households, had access to tap water. The primary objective of the JJM was to provide in-house tap connections to every rural household in India. Since its launch in 2019–20, there has been a consistent and steady increase in coverage. As of 14th July 2025, the number of households with tap connections has reached 15.67 crore, which accounts for 80.93 per cent of the total target. Notably, the period between 2021–22 and 2023–24 witnessed the most significant surge in connections. Approximately 3.3 crore households (around 19 per cent) are still to be covered to achieve the mission's goal of universal tap water access. However, based on the speed of progress, it would not be a surprise that it could lead to saturation within next two years' time.

The swift progress in JJM implementation should have some impact on the time use pattern of the women and girls. The release of the latest Time Use Survey Data for 2024 provides an opportunity to compare the same with earlier report released for 2019. Between the two surveys it is found that while female (6 years and above) participation in unpaid activities in rural areas remained relatively constant, there was a notable increase in paid work participation (from 17.7 per cent to 21.8 per cent) and average time spent on unpaid activities decreased from 317 minutes to 314 minutes and for paid activities it increased from 55 minutes to 62 minutes. JJM could have some role in this reduction in time spent in unpaid activities, but need to assess the partial impacts empirically. The increase in female participation and time for culture, leisure, mass media and sports (time from 141 to 148 minutes and participation rate from 85.3 per cent to 90.7 per cent) also indicates a positive trend. Participation in education among children aged 6–14 also increased, suggesting that the JJM may have contributed to more time for schooling, especially for girls. These shifts, even though indirect, jointly indicate that JJM may be having a positive effect on rural time-use patterns, mainly by easing the domestic burden on women and children. However, this needs to be assessed with micro data. The present study tries to address this issue with a survey data among the beneficiaries of the scheme.

While both the schemes, PMAY(G) and JJM, are two flagship schemes that are implemented better and reaching saturation stage, its impacts on gender outcomes is not often examined. Although both the schemes are included under gender budgeting, it is only a necessary condition. It is also important to be complemented by an in-depth analyses of its gender impacts, integrating feedback loops to ensure effective gender mainstreaming. Here GBCs have a larger role in terms of impact assessment, reporting and data, and future strategies to augment and/or bring in complementary interventions to make these existing schemes' outcomes to further reduce gender

disparity. Towards this direction, this study analysis the outcomes of both the schemes through a gender lens and provide some lead after the outcomes are assessed through a simple framework.

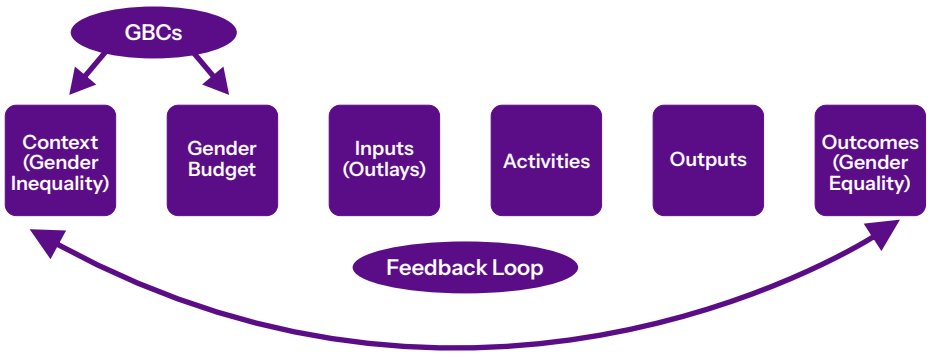
Section-5

Analytical framework, Sampling Design, and Empirical Methodology

Analytical framework

As discussed in Hazarika et al (2024), assessment of any public schemes from a gender lens need to have clear pathways in terms of outlay-output-outcome framework and mapping with some of the indicators that determine gender gaps. However, the outcome under a scheme may just be an output in a gender framework. For instance, completion of a house in a rural area may be treated as outcome under PMAY(G). However, in a gender framework, it could be at best an output and the tangible and intangible benefit that a household, especially women and girls, derive from the house is the outcome from gender perspective. In other words, having housing is at best a necessary condition as it will be an instrument to address gender gaps in the next stage. Hence, the feedback loop that is specified in Figure-6 becomes more crucial than the housing itself. As argued earlier, schemes such as PMAY(G) and JJM are nearing completion and the feedback loop should identify other policy interventions to supplement housing/drinking water in order to reduce the gender gaps. Here there is a bigger role for GBCs, at line departments/schemes (both at Union and States) to identify those supplementing interventions.

▶Figure-2:
Gender Budget as Proportion of State Budget 2024-25



Source: Hazarika et al (2024)

Another concern with the present practice of gender budgeting in India is that it is not demand driven and largely accounting framework (this is more so in most of the states). Right now the flow of information is from the line departments/schemes to gender budgeting. ideally, the MoWCD need to look at each component of either GGI or GII, and identify the intervention paths as well as departments for policies. However, in most cases, this seems to be lacking. For instance, JJM was independently initiated by Ministry of Jal Sakthi way back in 2019. However, this was brought under gender budgeting only under 2024-25 Union Budget, thus, suggesting a limited or no role of GBCs or MoWCD in framing and implementation

of the scheme in the initial stage. Many other schemes that are being implemented for a long time, though have less than 30 per cent, was brought under Part C only recently. This suggest that, apart from schemes under MoWCD and few other schemes such as POSHN, there appears to be a limited role for GBCs in design and implementation of many of the flagship schemes that are gender sensitive. And this is the main thrust of this report, especially when existing big and flagship schemes under gender budgeting are nearing saturation and while there are still persisting gender gaps across some of the sub-indices of GII/GGI. This study tries to implement the framework as proposed in figure-3 in the case of PMAY(G) and JJM in two states, namely Andhra Pradesh and Rajasthan. Up front, it is also important to mention here that this study not meant to evaluate the two schemes per se. Rather it is to focus more on gender outcomes of these schemes as well as complementarities required to maximise the outcomes.

Sampling Design

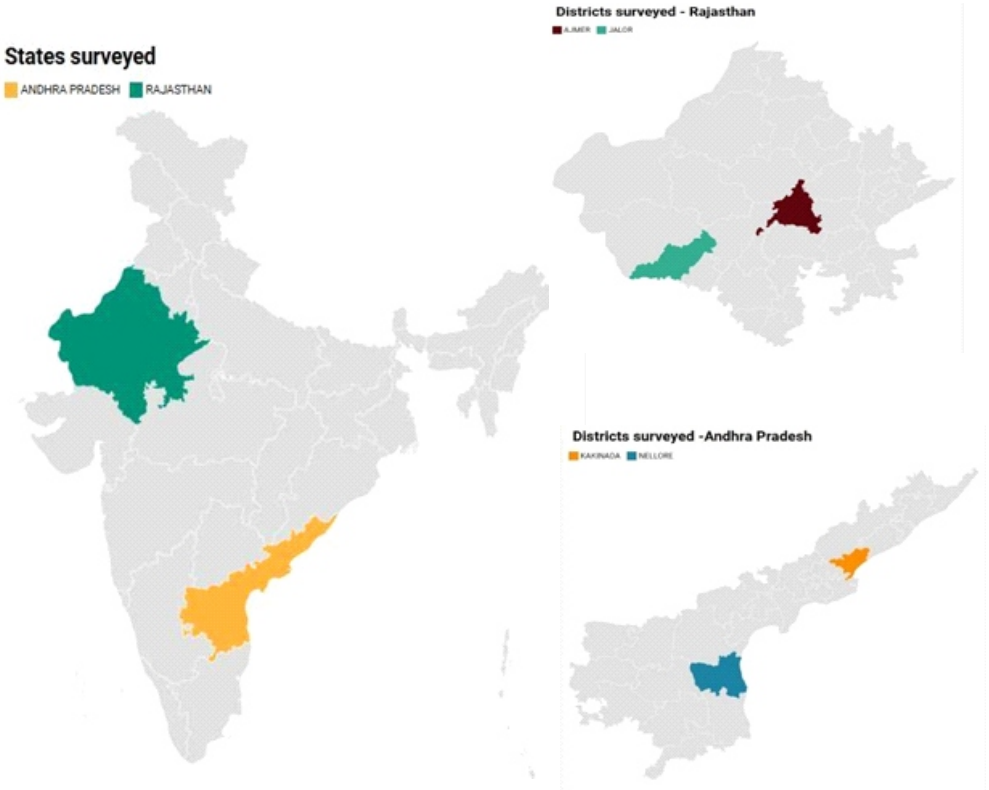
The sampling strategy adopted in this study is designed to capture the regional and performance-based diversity across two critical infrastructure policies with a special focus on the rural areas. These schemes are Pradhan Mantri Awas Yojana-Gramin (PMAY-G) and Jal Jeevan Mission.

We have selected two states - Rajasthan (North) and Andhra Pradesh (South) - which differs significantly in terms of geographical conditions and implementation performance. The study also ensures a meaningful comparative framework where two districts have been selected from each state. Two districts have been chosen from Rajasthan, namely Jalore, which is a desert district and Ajmer, which falls in the category of plain region. On the other hand, the two districts from Andhra Pradesh are Sri Potti Sriramulu Nellore (in short, Nellore) and Kakinada, which are located on the northern and southern (drier) region of Andhra Pradesh. This selection not only ensures a comparative framework but also helps to capture a wide range of performance indicators, particularly to housing completion rates and water supply connections (see figure-4). Further, from each district, we have selected two blocks. The selection of these states, districts and blocks was purposive as we looked for variability in terms of regional and performance diversity. However, within each selected blocks, the study employed random sampling of households. This ensures the representation at the micro level and minimizes the selection bias in the data collection. Further, the houses surveyed under both the schemes are mutually exclusive. The beneficiary list in the case of PMAY(G) is taken from Awaasoft while in the case of JJM, the list is collected from District headquarters.

A total of 1000 households have been surveyed which are almost equally distributed across the two states. For each state, out of the 500 households, 250 are for PMAY(G) and 250 for JJM. Table 0 shows the sampling distribution. However, to avoid errors and dropouts we have collected about 5 per cent more samples (see table-5).

▶Figure-2:

Gender Budget as Proportion of State Budget 2024-25



▶ Table-5:

Distribution of Sample across States

States	District	Blocks	PMAY-G	JJM	Total
Rajasthan	Ajmer	Ajmer Rural	125	125	250
		Shrinagar			
	Jalore	Bhinmal	125	125	250
		Jaswantpura			
Sub-total					500
Andhra Pradesh	Nellore	Sangam	125	125	250
		Sydapuram			
	Kakinada	Pithapuram	125	125	250
		Kothapalli			
Sub-total			500	500	500
Total					1000

Distribution of PMAY-G and JJM connections at state, district and block level:
Distribution of PMAY-G Houses:

As mentioned above, the selection of Rajasthan and Andhra Pradesh is purposive due to several reasons. Firstly, the two states are diverse in terms of the geographical location. Secondly, both the states have highest housing sanction rates to the targets of Ministry of Rural Development (MoRD), where Rajasthan and Andhra Pradesh have 97.5 and 99.93 percent respectively. Thirdly, although the sanction rates are very high in both the states, there are differences in terms of completion rates as Rajasthan has 71.78 per cent and Andhra Pradesh has just 35.8 per cent of completion rate as on 13 July 2025. Therefore, this contrast enables us to explore more about the systemic and operational performance with respect to PMAY(G) scheme.

The selection of districts also shows a similar trend with respect to the completion rates. The districts of Rajasthan show almost similar to the states average, where Ajmer has about 72.65 per cent and Jalore has about 76.62 per cent of completion rates. On the other hand, Nellore district on the southern region of Andhra Pradesh shows just 21 per cent of completion rate as opposed to 36 per cent in Kakinada district, which has a relatively better completion rate.

In both the selected districts from each state, we have selected two blocks from each district that have a moderate to high completion rates, in order to maintain enough sample size and diversity. The two blocks selected from Ajmer are Ajmer rural and Shrinagar, which have high completion rates with 82.1 per cent and 83.5 per cent, respectively. Similarly, two blocks have been selected from Jalore district, namely Bhinmal and Jaswantpura, which also shows a similar completion rate of 80.9 per cent and 83.7 per cent, respectively. As these two districts have just 5 blocks each and housing completion rates are also high, the selected blocks of Rajasthan offered sufficient units to conduct a random sampling.

However, even after high sanction rates, Andhra Pradesh state exhibits low completion rates across districts and blocks. Since each district has large number of blocks (Nellore has 37 blocks and Kakinada has about 20 blocks), the selection of the blocks posed a sampling challenge as the absolute number of completed houses are very less in many of the blocks. Since the required sample size from each district (from two blocks) was 125, we have considered both percentage of completion rate and the absolute number of houses completed. Therefore, we have selected Sangam and Sydapuram blocks in Nellore district, which exhibits lower completion rates with 17.6 per cent and 23.6 per cent, but they had a comparatively higher number of completed houses when compared to other blocks in the district. On the other hand, from Kakinada, the two selected blocks namely, Pithapuram and Kothapalli show a higher percentage of completion rates with 56 per cent and 54 per cent. Although, these blocks exhibit higher completion rates, their absolute number becomes more critical in selection of the block as they have 115 and 151

completed houses. Even though, the blocks show higher percentage of completion rates, these blocks had very low absolute number of completed houses where most of the blocks have less than 100 completed houses.

Therefore, while the percentage of the houses completed is high, the absolute number of houses completed houses within the blocks became a key factor in the selection of blocks for AP to ensure the availability of sufficient sample.

https://rhreporting.nic.in/netiay/homereports/HomeCumulativeDataReport.aspx?type=3.
https://rhreporting.nic.in/netiay/homereports/HomeCumulativeDataReport.aspx?type=4.

Distribution of Functional Household Tap Connections (FHTCs) under JJM

Under JJM, in terms of distribution, Rajasthan has about 56.69 per cent of FTTH compared to 73.93 per cent in Andhra Pradesh as on July 2025. At the district level, both Jalore and Ajmer of Rajasthan have about 55.9 per cent and 57.07 per cent households have tap connections, respectively. On the other hand, the districts of Andhra Pradesh show a higher percentage of tap connections, where Nellore and Kakinada have about 86.7 per cent and 81.25 per cent respectively. The districts selected also shows a variation in terms of moderate and high performing districts (at the block level) within each state in terms of JJM tap connections.

As discussed earlier, we have selected two blocks from each district. We have selected Ajmer Rural and Srinagar from the Ajmer district, which have about 71.85 per cent and 60.5 per cent of tap connections. On the other hand, the two blocks from Jalore namely Bhinmal and Jaswantpura have just 54.09 per cent and 66.36 per cent of tap connections. The other blocks of Ajmer show mixed results in terms of tap connections as come blocks namely Pisagan (85.46 per cent) and Arian (70.17 per cent) have relatively higher tap connection, while Sawar (43.39 per cent) and 41.01 per cent) which shows a relatively lower percentage of tap connections. Similarly, the blocks like Bhinmal and Jaswantpura also shows a similar trend, which has moderate number of connections as compared to Jalore block (81.04 per cent) and Raniwara (80 per cent) which have higher percentage of tap connection. The blocks like Sayla and Sanchore exhibit relatively lower number of tap connections.

While Andhra Pradesh shows higher percentage of tap connections, there are some blocks that have relatively moderate number of connections. The blocks of Nellore district namely Sangam and Sydapuram have higher percentage of tap connections with 88.67 per cent and 91 per cent, respectively. Although Kakinada as a whole shows a higher percentage of tap connections at the district level, there are few blocks which have relatively moderate percentage of tap connection. The blocks like Pithapuram and Kothapalli have about 68 per cent and 57 per cent, respectively, of coverage compared to other blocks in the district that have more than 80 per cent of the coverage while there are few blocks which falls in the range of 55 to 80 percentage. Therefore, the blocks of JJM were chosen to represent a mix of high, moderate and low levels of water tap connection coverage. This variation

also allows us to assess how the level of infrastructure provisioning through these schemes influence the outcomes at the ground level.

For both the schemes separate structured questionnaires were prepared and a pilot survey was conducted in Jalore district of Rajasthan before finalising. The questionnaires are also translated into local language to help both field investigators as well as respondents to understand easily. The sample questionnaires for both the schemes are provided in the appendix. During the field it is also ensured that there are no common respondents for both the programs so that there are no overlapping responses.

https://ejalshakti.gov.in/jjmreport/JJMIndia.aspx

Methodology

The study incorporates simple statistical and econometric methods to understand the impact of the two schemes on women, children and the household. We identify five major aspects pertaining to employment, time, education and health. The outcome variables are shown in the table-6 below for PMAY(G) and JJM.

▶ Table-6:

Outcome Variables

Outcome Variable	Hypothesis	Indicator	Scheme
Self-employment of women in principal activity	+	Employment	PMAY(G) and JJM
Self-employment of women in subsidiary activity	+	Employment	PMAY(G) and JJM
Number of times fallen ill	-	Health	PMAY(G) and JJM
Study hours of children/Study Space	+	Education	PMAY(G) and JJM
Study space	+	Education	PMAY
Time spent by women in fetching water	-	Time Use	JJM
Community Time spent by women	+	Social capital/ Time Use	PMAY(G)

The sign of the hypothesis represents the expected change in the outcome variable due to the treatment. The variable “Self-employment of women in principal activity” and “Self-employment of women in subsidiary activity” is constructed from the data and is represented as a binary variable with value 1 if the women are self-employed and takes value 0 if the women are in regular wage/salary work or casual labour. The method of analysis starts with some basic descriptive statistics for some socio-economic, demographic, health, education, time-use indicators across districts. These statistics give us an indication of the association between these variables and the programme for each district.

For better understand of the programmes' effects we look into the mean differences in various outcomes at the household level as well as the individual (women and children) level. The differences in outcome between treatment and control are checked using t-statistic for its statistical significance.

The treatment are the programmes, which is a dummy variable, I, denoted by 1 if the household is a beneficiary and 0 otherwise. The outcome variables, mentioned above, are denoted by O (see equation-1 below). Assuming O is a linear function of the treatment dummy and a vector of explanatory variables (X), the equation can be written as

$$O = I + X + \quad (1)$$

and are vectors of parameters to be estimated, and is an error term. The impact of information on O is measured by the parameter . However, will accurately measure the impact if households are randomly assigned to beneficiaries or non-beneficiaries (Stefanides & Tauer, 1999; Faltermeier & Abdulai, 2009). However, treatment might not be random and there can be selection bias. In this case, an OLS estimation of equation (1) does not account for this self-selection which may lead to biased results. To overcome this, we use treatment fixed effects at the state, block and village level to control for biases emanating at village levels.

We also use propensity score matching (PSM) method for JJM beneficiaries in Rajasthan where we divide the sample into a new treatment category indicating the quality of water received by households. PSM does not require linearity, or parametric or distributional assumptions, and it also does not require exogeneity of covariates to identify the causal effect of interest (Diagne & Demont, 2007; Heckman & Vytlacil, 2007), which are required by the instrumental variable (IV) method in quasi-experimental settings.

The choice of covariates is grounded in theory or in stylised facts. For example, we see from the literature that treatment can be correlated with individual characteristics, household's socio-economic characteristics and villagers' demographic characteristics like age, education and sex among others. The PSM estimator of average treatment effect (ATT) is given as

$$ATT\_PSM = E\_(P(X)|I=1)\{E[TE(1) \ \ I=1,P(X)] - E[TE(0) \ \ I=0,P(X)]\} \quad (2)$$

This gives the mean difference in outcomes over the common support, appropriately weighted by the propensity score distribution of participants. In practice, the true propensity score is unknown, and is estimated using a logit or probit model. This study uses a logit model with the covariates displayed in the next section in Appendix A3.

Section-6

Empirical findings

This section presents some descriptive statistics as well as some econometric results based on the household survey conducted in Rajasthan and Andhra Pradesh covering four districts (two from each state) and eight blocks (two from each district). They mainly encompass the socio-demographic distribution and health, nutrition, income-expenditure and time-related outcomes

PMAY(G): Social and Demographic Composition

Table-7:

Social Category wise distribution PMAY-G Houses across Districts in Percentage

District	OBC	Others	SC	ST	Total
Jalore	19.53	14.06	35.94	30.47	24.7 (128)
Ajmer	52.67	2.29	41.22	3.82	25.89 (131)
Nellore	15.08	7.94	31.75	45.24	24.9 (126)
Kakinada	47.58	31.45	20.97	0	24.51 (124)
Total	33.79 (172)	13.75 (70)	32.61 (166)	19.84 (101)	509

Figures in parentheses represent the frequencies

Table 7 presents a comparison of the distribution of respondents from various social groups across four districts. Overall, Other Backward Classes (OBCs) and Scheduled Castes (SCs) constitute the largest shares, followed by Scheduled Tribes (STs) and Others, accounting for 19.84 per cent and 13.75 per cent, respectively. At the district level, Jalore has the highest proportion of respondents from the SC community (35.94 per cent), followed by STs (30.47 per cent), OBCs (19.53 per cent), and Others (14.06 per cent). In Ajmer, the distribution is dominated by OBCs (52.67 per cent) and SCs (41.22 per cent), with minimal representation from STs and Others. Nellore shows a higher concentration of STs (45.24 per cent) and SCs (31.75 per cent), while Kakinada has the largest share of OBC respondents (47.58 per cent), followed by Others (31.45 per cent) and SCs (20.97 per cent). This distribution highlights regional variations in the social composition of respondents across the districts.

Table-8:

Gender-wise Distribution of PMAY(G) Houses across Districts in Percentage

District	Female	Joint	Male	Total
Jalore	55.20	2.40	42.40	100 (125)
Ajmer	33.59	0.76	65.65	100 (131)
Nellore	59.52	0	40.48	100 (126)
Kakinada	36.29	0	63.71	100 (124)
Total	46.05 (233)	0.79 (4)	53.16 (269)	100 (506)

Figures in parentheses represent the frequencies

The distribution of PMAY(G) ownership among women across the four districts is presented in table-8. Overall female ownership stands at 46.05 per cent as against 53.16 for males. Within each district, the ownership across genders varies particularly in Ajmer and Kakinada where only 33.59per cent and 36.29per cent of the beneficiaries are women as against 65.65 per cent and 63.61 per cent for male. On the other hand, in Jalore and Nellore districts, the ownership among women is higher in comparison to male counterparts with 55.20 per cent and 59.62 per cent as against 42.40 per cent and 40.48 per cent. This clearly signifies a higher skewness in the districts of Ajmer and Kakinada with higher share of ownership among men compared to women and also the inter district variations in the ownership of houses can be found within the states.

▶ Table-9:

Gender-wise Distribution of PMAY(G) Houses across Social Group in Percentage

Social Group	Female	Joint	Male	Total
SC	49.08	0.61	50.31	100 (163)
ST	52	1	47	100 (100)
OBC	44.19	0.58	55.23	100 (172)
Others	34.78	1.45	63.77	100 (69)
Total	46.03	0.79	53.17	100 (504)

Figures in parentheses represent the frequencies

Table 9 presents the gender-wise distribution of PMAY-G house ownership across different social groups, namely OBCs, Others, Scheduled Castes (SCs), and Scheduled Tribes (STs). Overall, female ownership stands at 46.03 per cent, compared to 53.17 per cent for males. Among the social groups, SCs and STs report the highest proportion of female ownership, reflecting a strong emphasis on promoting women's ownership of important assets within these marginalized communities. In contrast, the "Others" category shows a clear male dominance, with 63.77 per cent of the ownership held by men. The OBC group presents a relatively less male dominance compared to “others”, with 55.23 per cent male and 44.19 per cent female ownership. For SCs and STs, the male-female ownership is much more balanced and equitable. These figures indicate a focused effort under PMAY(G) to bridge the gender gap in asset ownership, particularly among SC and ST households.

Monetary Indicators

Cost of Repair and Maintenance of Houses

Survey data suggest a change in quality of household expenditure on housing from repair and maintenance of homes before PMAY(G) to investments in the post-scheme period across both the states (see appendix-). The results suggest that significant proportion of households (45 per cent) spent between 2,001 and 5,000 on repair and maintenance. In Jalore and Kakinada, around 20 to 30 per cent of households reported spending between 1–2,000 to as high as 10,000–20,000.

In contrast, a large share of households in Nellore (42 per cent) reported spending nothing on repairs, with only 10 per cent to 20 per cent falling within the 1–2,000 to 10,000–20,000 range. However, after moving into the PMAY-G house it suggest a significant shift, with a large number of households reporting zero spending on repairs & maintenance (approximately 30, 45 and 60 per cent of households in Jalore, Nellore, and Kakinada, respectively). However, it is noted that number of households spending over Rs 50,000 has increased compared to pre-PMAY(G), thus, suggesting an increased investment on new housing, which suggest a clear shift from repairs and maintenance to investments. Overall, it indicates a clear reduction in higher and more scattered repair costs in the pre-PMAY(G) period, shifting to lower or no expenditure in the post-PMAY-G period. Rather it seems to have shifted to investments. This highlights the positive impact of the scheme in improving the structural stability and durability of the houses.

Food and Related Expenditure

At the district level, the trend in Andhra Pradesh districts, compared to Rajasthan districts, appear to show clear improvement with Nellore and Kakinada show improved expenditures on food and related items in the post-PMAY(G), especially in the higher expenditure bracket of above 50,000. Notably, in Nellore, there is a significant rise in the percentage of households in the higher bracket from approximately 5 per cent to 15 per cent in the post-PMAY-G period. In other words, housing appear to have increased the disposable incomes of the rural households that are helping to spend on food and nutrition.

Health and Nutritional Indicators

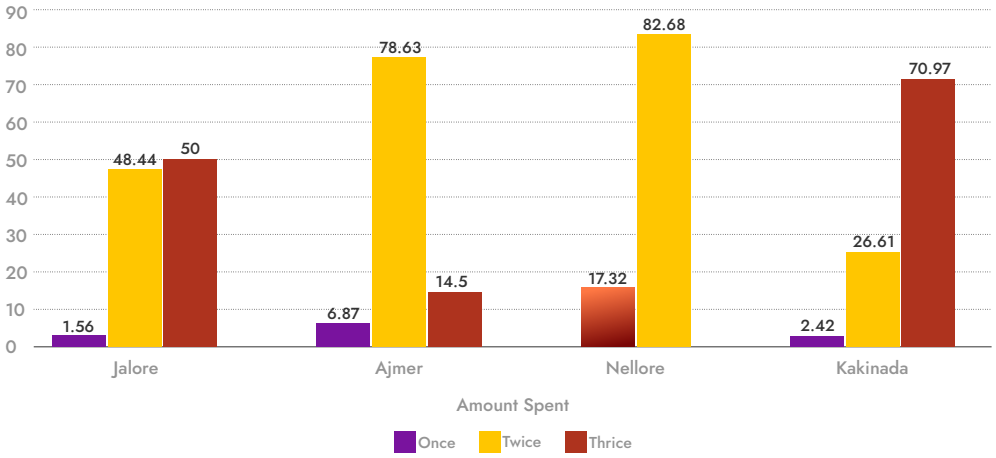
As housing is expected to improve the hygiene conditions of the household, it is expected that the overall health condition of the household to improve. The survey results suggest a clear shift with more households reporting lower or zero medical expenses in the post-PMAY-G period, suggesting improved access to healthcare or financial protection. Notably, Jalore and Ajmer saw a significant reduction in higher-cost brackets, indicating a decline in catastrophic health spending. Similarly, Nellore and Kakinada showed a skewed shift from higher to lower spending categories. Overall, the trend suggests that PMAY-G may have contributed to reducing the out-of-pocket burden on households.

Meals per Day

To understand the role housing played on their food in-take, we asked the beneficiary about number of times their had their meals a day.

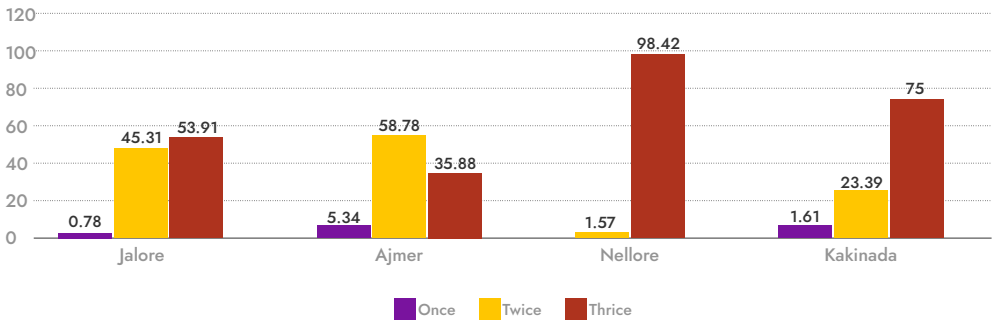
▶Figure-5a:

District-wise Pre-PMAY-G Meals per day in Households



▶Figure-5b:

District-wise Post-PMAY-G Meals per day in Households



Figures 5a and 5b illustrate the number of meals consumed per day by households before and after moving into PMAY(G) houses. In Figure 5.a, it is evident that around 80 per cent of households in Ajmer consumed two meals per day, while only about 15per cent consumed three meals. After shifting to PMAY(G) housing, the proportion of households consuming three meals a day increased by 20 per cent, indicating a significant improvement in food intake. Similarly, in Nellore, there is a notable change. During the pre-PMAY(G) period, approximately 18 per cent of households consumed only two meals a day, which dropped to just 2 per cent in the post-PMAY(G) period. This reflects a positive shift in household food security and nutritional access.

Quality and composition of food in-take

While the households across the four districts do suggest improved quality with respect to food in-take after moving to PMAY(G) housing, it will also be interesting and easy to extract information on the shift in composition of expenditures. The survey focused on household spending on fruits. Pre and post-PMAY(G) show some significant changes. The number of households reporting 'never purchased'

have declined significantly—most notably in Jalore, where it dropped from 60.94 per cent to 29.37 per cent, and in Kakinada, where it reduced to zero. The 'rarely purchased' category also decreased across districts, although it remains relatively high in Jalore. Meanwhile, the frequency of fruit consumption—'once a week' and '2 to 3 times a week'—has increased noticeably in all districts. Notably, Nellore shows a significant rise in daily fruit consumption, indicating improved dietary practices

Occupation

Housing is supposed to help the beneficiary to shift from low-wage jobs to high and better quality of jobs. However, the survey throws up some counter-intuitive results, where it suggests there is no major shift in occupational pattern between pre and post-PMAY(G).

▶ Table-10a:

Principal Activity Status of Individuals Pre and Post PMAY-G across Gender

Principal Activity	Pre-PMAY-G			Post PMAY-G		
Occupation	Male	Female	Total	Male	Female	Total
MGNREGS	19.89	20.82	20.3 (135)	18.87	22.15	20.3 (134)
Casual Labour in Agriculture	40.86	36.86	39.09 (260)	41.24	35.64	38.79 (256)
Casual Labour in non-agriculture	16.4	17.75	16.99 (113)	16.44	16.61	16.52 (109)
Regular Wage/ Salaried in agriculture	3.49	2.73	3.16 (21)	3.77	3.11	3.48 (23)
Regular Wage Salaried in non-agri	5.38	5.8	5.56 (37)	5.93	5.54	5.76 (38)
Self-employed in agriculture	5.38	5.12	5.26 (35)	4.85	4.5	4.7 (31)
Self-employed in animal husbandry	1.61	1.37	1.5 (10)	2.43	2.77	2.58 (17)
Self-employed in non-agriculture	0.81	1.71	1.2 (8)	1.35	2.08	1.67 (11)
Self-employed in other agri activities	2.96	4.44	3.61 (24)	2.7	3.81	3.18 (21)
Self-employed in other agri activities	1.61	3.07	2.26 (15)	1.62	2.77	2.12 (14)
Unemployed	1.61	0.34	1.05 (7)	0.81	1.04	0.91 (6)
Total	100 (372)	100 (293)	100 (665)	100 (371)	100 (289)	100 (660)

Figures in parentheses represent the frequencies

Table 10a represents the shifts in occupational structure before and after receiving the PMAY(G) house across different gender groups. Overall, the occupational structure and participation rates remained largely unchanged across all categories. However, unemployment declined marginally from 1.05 per cent to 0.91 per cent, indicating a modest improvement in access to work. But there are few interesting results. While participation in MGNREGS remained stable across both periods,

female participation increased by 1.3 per cent in the post-PMAY(G). Casual labour in agriculture, which accounted for the largest share of employment at the village level, declined slightly from 39.09 per cent to 38.79 per cent. A small increase was observed in regular salaried employment in both agricultural activities (from 3.16 per cent to 3.48 per cent) and non-agricultural activities (from 5.56 per cent to 5.76 per cent). Notable improvements in the occupational structure are seen in self-employment, particularly in animal husbandry (increased from 1.5 per cent to 2.58 per cent) and non-agriculture (increased from 1.2 per cent to 1.67 per cent). Although the changes are not substantial, the findings indicate a gradual diversification of income sources following the receipt of PMAY(G) housing. However, to make this significant, some more policy interventions required to augment jobs and incomes.

Table 10b represents a comparison of pre- and post-PMAY-G subsidiary activities and reveals that the trends in occupational structure largely align with the patterns observed in principal activity occupations. However, participation in MGNREGS and casual labour in non-agriculture increased marginally, while casual labour in agriculture experienced a slight decline. This indicates a shift in casual labour from agricultural to non-agricultural activities. Overall, the analysis suggests that while housing under PMAY-G did not lead to a drastic transformation in occupational structure, there is a clear decline in the unemployment rate and a modest shift

▶ Table-10b:

Subsidiary Activity Status of Individuals Pre and Post PMAY-G across Gender

Principal Activity	Pre-PMAY-G			Post PMAY-G		
Occupation	Male	Female	Total	Male	Female	Total
MGNREGS	19.89	20.82	20.3 (135)	18.87	22.15	20.3 (134)
Casual Labour in Agriculture	40.86	36.86	39.09 (260)	41.24	35.64	38.79 (256)
Casual Labour in non-agriculture	16.4	17.75	16.99 (113)	16.44	16.61	16.52 (109)
Regular Wage/ Salaried in agriculture	3.49	2.73	3.16 (21)	3.77	3.11	3.48 (23)
Regular Wage Salaried in non-agri	5.38	5.8	5.56 (37)	5.93	5.54	5.76 (38)
Self-employed in agriculture	5.38	5.12	5.26 (35)	4.85	4.5	4.7 (31)
Self-employed in animal husbandry	1.61	1.37	1.5 (10)	2.43	2.77	2.58 (17)
Self-employed in non-agriculture	0.81	1.71	1.2 (8)	1.35	2.08	1.67 (11)
Self-employed in other agri activities	2.96	4.44	3.61 (24)	2.7	3.81	3.18 (21)
Self-employed in other agri activities	1.61	3.07	2.26 (15)	1.62	2.77	2.12 (14)
Unemployed	1.61	0.34	1.05 (7)	0.81	1.04	0.91 (6)
Total	100 (372)	100 (293)	100 (665)	100 (371)	100 (289)	100 (660)

Figures in parentheses represent the frequencies

Education

One of the main objectives of PMAY(G) scheme, compared to IAY, is to provide more space in the house so that it will be airy as well as provide sufficient space for children and for their education. Below graphs suggest that in all the four districts, beneficiaries report that under PMAY(G), they could have a separate space for children's studies and this is a major outcome for the scheme.

▶ Table-11:

Separate Space for Studying inside House Pre-PMAY-G and Post-PMAY_G across districts (%)

	Pre-PMAY			Post-PMAY		
District	No	Yes	Total	No	Yes	Total
Jalore	98.53	1.47	100	5.88	94.12	100
Ajmer	84.06	15.94	100	23.19	76.81	100
Nellore	58.82	41.18	100	15.38	84.62	100
Kakinada	80.65	19.35	100	6.45	86.36	100

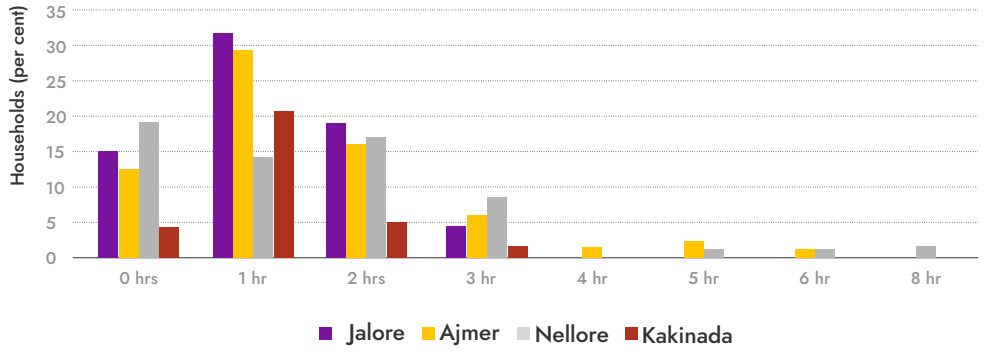
The data in table-11 shows an increased level of access to separate study space within households following the adoption of PMAY(G) in all four districts. In Jalore, there was just 1.47 per cent of households with a study space prior to PMAY(G), which jumped immensely to 94.12 per cent upon receiving a PMAY(G) home. Ajmer also experienced a high increase, with the percentage rising from 15.94 per cent to 76.81 per cent. At Nellore, the proportion of houses with study area increased from 41.18 to 84.62 per cent after PMAY(G). Likewise, in Kakinada also increased from 19.35 to 86.36 per cent. The above statistics indicate that the PMAY(G) housing scheme has contributed significantly to enhancing the learning environment of the households by making more houses conducive to offering a separate space for studying.

Similarly, with regard to children spending time for studies have also seen a structural shift. It may be noted in figures 6a and 6b that children spending between 1 hour to 3 hours have increased in the post-PMAY(G).

The post-PMAY(G) graph shows a significant change, with more kids, particularly in Ajmer and Jalore, studying for two to four hours per day. Additionally, fewer children are reported under studying for zero hours every day. This suggests a general improvement in home study time after PMAY(G), most likely as a result of improved study spaces and housing conditions made possible by the program. In addition, convergence with other schemes must have also led to this positive structural shift in the case of children's education.

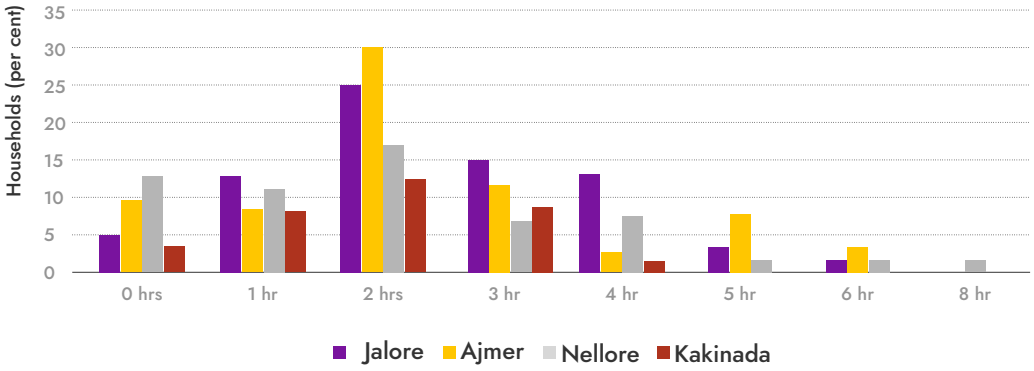
▶Figure-6a:

District-wise Time Spent on Studying Pre-PMAY-G



▶Figure-6b:

District-wise Time Spent on Studying Post-PMAY-G



Jal Jeevan Mission: Social and Demographic Composition

▶ Table-12:

Category wise distribution of FHTCs across Districts in Percentage

District	OBC	Others	SC	ST	Total
Jalore	47.54	18.58	28.42	5.46	100 (183)
Ajmer	65.03	10.49	23.78	0.7	100 (143)
Nellore	9.02	12.03	31.58	47.37	100 (133)
Kakinada	43.94	31.06	24.24	0.76	100 (132)
Total	42.3 (250)	17.94 (106)	27.07 (160)	12.69 (75)	100 (591)

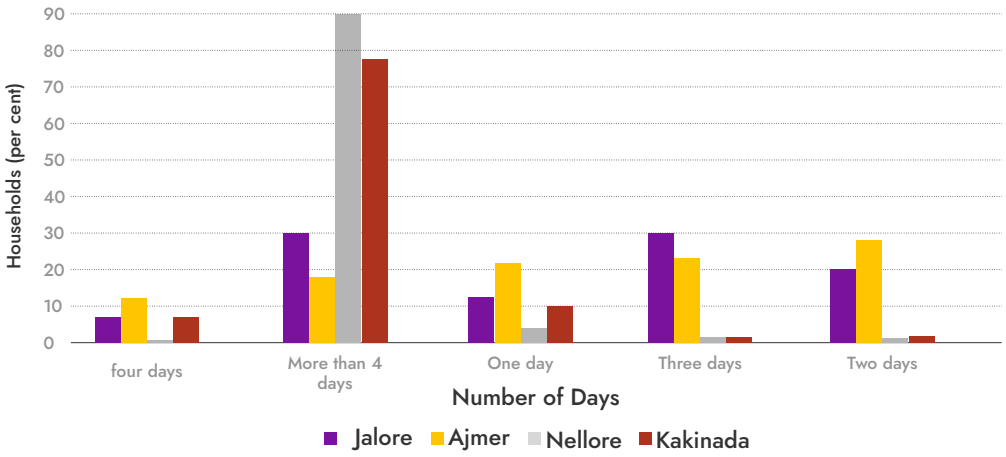
Figures in parentheses represent the frequencies

Table 12 compares the distribution of respondents from various social groups across four districts. Overall, OBCs (42.3 per cent) and SCs (27.07 per cent) form the majority, followed by Others (17.94 per cent) and STs (12.69 per cent). In Ajmer, Jalore, and Kakinada, OBCs make up the largest share of respondents, while Nellore stands out with a high proportion of STs (47.37 per cent) and SCs (31.58 per cent). SC representation remains fairly consistent across districts, ranging from 23.78 per cent to 31.58 per cent. Kakinada shows a more balanced distribution among OBCs, SCs, and Others, with a minimal ST presence. These patterns highlight regional variations in the social composition of JJM tap water connection beneficiaries, reflecting both the demographic factors and targeted outreach among marginalized communities.

With respect to gender-wise distribution of JJM tap connections, it was noted that till now the scheme has covered more of male owned houses. However, as the scheme, irrespective of ownership, benefits the female members of the household more than male members, ownership distinction need not be a serious policy issues. Moreover, as the scheme is going to be universal, sooner all the households should be covered.

►Figure-7:

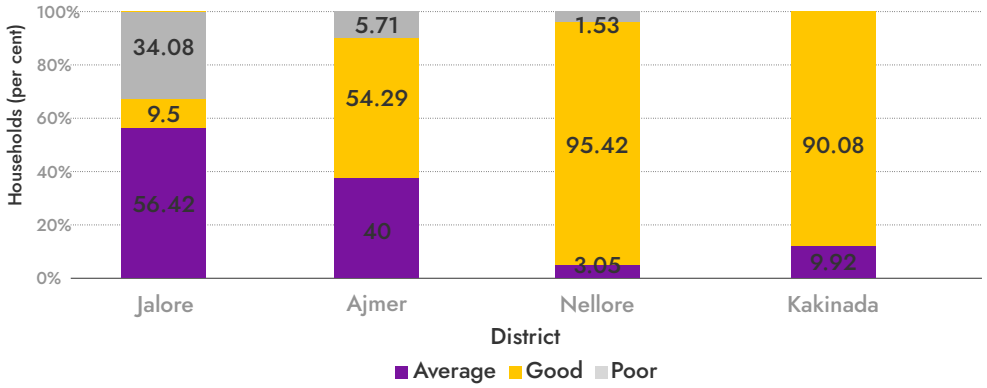
District-wise Number of Days Water Supplied per Week through FHTCs



The figure 7 illustrates the number of days' water is supplied during a typical week across the four districts. Nellore and Kakinada, both located in Andhra Pradesh, show a significant proportion of households receiving water on more than four days a week, indicating a relatively consistent and reliable supply. In contrast, Jalore and Ajmer, districts from Rajasthan, display considerable irregularities in water supply, with distributions spread across various frequencies. In Jalore, around 30 per cent of households receive water every three days and another 30per cent more than four days, while 20 per cent receive it every two days, highlighting inconsistency. Ajmer reflects particularly poor supply frequency, with most households receiving water only two to three days a week. Overall, the data suggests that the southern districts of Andhra Pradesh had a more consistent and frequent water supply compared to the Rajasthan districts.

▶Figure-8:

District-wise Quality of Water Supplied under JJM

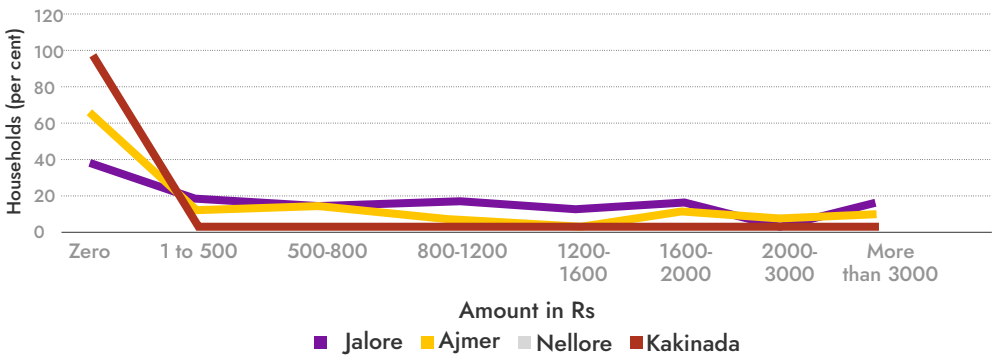


Water quality received by JJM tap connection households across the four selected districts are presented in figure 13. Jalore reports that nearly 90 per cent of households receive either poor or average quality water, with only 9.5 per cent stating they receive good quality. Ajmer performs moderately better, with 54.29 per cent of households reporting good water quality, while 40 per cent rate it as average. In contrast, both districts from Andhra Pradesh—Kakinada and Nellore—report high satisfaction, with over 90 per cent of households receiving good quality water. These responses highlight significant regional disparities in the availability of good quality water, with southern districts showing better outcomes compared to northern districts like Jalore, where, concerns over water quality remain prominent. Because of quality of water being relatively poor in both the districts of Rajasthan, compared to Andhra Pradesh, a significant proportion of households in the state is found to spend for getting good drinking water.

Expenditure

▶Figure-9:

District-wise Amount Spent on Buying Water Post JJM



Under JJM, another important aspect that is needed to be looked at is the monthly expenditure that households spend on buying safe drinking water and that is presented in figure 9. A significantly higher proportion of households in Kakinada (97.73 per cent) and Nellore (96.99 per cent) reported no spending on water from private sources such as tankers, indicating widespread access to free or publicly provided water. In contrast, dependence on private water sources is prominent in Jalore and Ajmer. In Jalore, around 10–15 per cent of households spend between 1– 2,000 per month on water, with notable shares in each expenditure bracket. In Ajmer, while 62.94 per cent of households reported zero spending, about 8–10 per cent spend between 1 and 800, and a smaller segment (about 7 per cent) incurs monthly costs of 1,600– 2,000. These figures highlight a stark contrast between the southern districts, where water access is largely free, and the northern districts, where many households continue to bear a financial burden for water.

In terms of medical expenditure, a key observation is that in Jalore, were limited households reported receiving safe drinking water, a high concentration of households continued to incur medical expenses between 5,001– 10,000 in both pre- and post-JJM phases. Meanwhile, in Nellore and Kakinada, expenses remained more evenly distributed with minimal change. Overall, the trends suggest that the JJM had limited direct impact on reducing high medical expenses in Andhra Pradesh, with most households continuing to incur similar levels of expenditure. However, in Rajasthan, there appears to be continued pressure on medical expenses due to limited availability of safe drinking water.

Time spent in fetching water

▶ Table-13a:

District-wise Time Spent by Adult Women in Fetching Water Pre-JJM (per cent)

District	1- 3 hours	3-5 hours	<30min	30min-1hour	None	Total
Jalore	14.75	1.09	32.79	41.53	9.84	100 (183)
Ajmer	9.86	0.7	31.69	51.41	6.34	100 (142)
Nellore	27.48	3.82	29.77	29.01	9.92	100 (131)
Kakinada	17.56	0	45.8	32.82	3.82	100 (131)
Total	17.04 (100)	1.36 (8)	34.75 (204)	39.18 (230)	7.67 (45)	100 (587)

Figures in parentheses represent the frequencies

▶ Table-13b:

District-wise Time Spent by Adult Women in Fetching Water Pre-JJM (per cent)

District	1-3 hours	3-5 hours	<30min	30min-1hour	None	Total
Jalore	8.24	0.55	43.41	30.77	17.03	100 (182)
Ajmer	5.84	0	43.8	32.12	18.25	100 (137)
Nellore	6.11	3.05	64.12	11.45	15.27	100 (131)
Kakinada	0.76	0	64.12	12.21	22.9	100 (131)
Total	5.51 (32)	0.86 (5)	52.84 (307)	22.55 (131)	18.24 (106)	100 (581)

Figures in parentheses represent the frequencies

Tables 13a and 13b compares the amount of time adult women spent fetching water before and after the implementation of JJM tap water connections. Prior to JJM, a large proportion of women (39.18 per cent) spent 30 minutes to 1 hour collecting water, which has now reduced to 22.55 per cent. In contrast, the share of women spending 30 minutes or less has significantly increased from 34.75 per cent to 52.84 per cent, marking a notable improvement. This positive shift is especially evident in Kakinada and Nellore, where around 65 per cent of households reported that women now spend less than 30 minutes to fetch water. These changes clearly reflect the positive impact of JJM in reducing the time burden on women for water collection at the household level.

▶ Table-14a:

District-wise Time Spent by Adult Men in Fetching Water Pre-JJM (per cent)

District	1-3 hours	3-5 hours	<30min	30min-1hour	None	Total
Jalore	10.44	0.55	28.02	24.18	36.81	100 (182)
Ajmer	9.15	0.7	29.58	50.7	9.86	100 (142)
Nellore	21.26	3.15	30.71	25.98	18.9	100 (127)
Kakinada	7.09	0	35.43	40.16	17.32	100 (127)
Total	11.76 (68)	1.04 (6)	30.62 (177)	34.6 (200)	21.97 (127)	100 (578)

Figures in parentheses represent the frequencies

▶ Table-14b:

District-wise Time Spent by Adult Men in Fetching Water Post-JJM (per cent)

District	1-3 hours	3-5 hours	<30min	30min-1hour	None	Total
Jalore	8.2	0.55	22.95	27.32	40.98	100 (183)
Ajmer	5.63	0	38.73	31.69	23.94	100 (142)
Nellore	5.34	1.53	55.73	13.74	23.66	100 (131)
Kakinada	0	0	62.5	7.03	30.47	100 (128)
Total	5.14 (30)	0.51 (3)	42.81(250)	20.89 (122)	30.65(179)	100 (584)

Figures in parentheses represent the frequencies

Since JJM affects both women and men in terms of fetching water, we looked at the amount of time spent by adult men in post-JJM. The proportion of men spending less than 30 minutes increased from 30 per cent to 42 per cent, indicating a significant improvement, while those spending 1 to 3 hours declined from 12 per cent to 5 per cent (see tables 14a and 14b). A comparison between men and women reveals that men were already more likely to spend less time fetching water, but the JJM tap connection had a more substantial impact on women, who traditionally bear the primary responsibility for water collection. As a result, women have benefitted more, with a noticeable reduction in time spent and the number of trips required to collect water, thereby easing their domestic burden.

Table-15a:

District-wise Time Spent by Elder Girl-child in Fetching Water Pre-JJM (per cent)

District	1-3 hours	3-5 hours	<30min	30min-1hour	None	Total
Jalore	6.59	0.55	19.23	25.82	47.8	100 (182)
Ajmer	7.3	0	19.71	42.34	30.66	100 (137)
Nellore	14.17	1.57	19.69	11.81	52.76	100 (127)
Kakinada	0.83	0	32.23	18.18	48.76	100 (121)
Total	7.23 (41)	0.53 (3)	22.22 (126)	25.04 (142)	44.97 (255)	100 (567)

Figures in parentheses represent the frequencies

Table-15b:

District-wise Time Spent by Elder Girl-child in Fetching Water Post-JJM (per cent)

District	1-3 hours	3-5 hours	<30min	30min-1hour	None	Total
Jalore	12.15	0	16.57	22.1	49.17	100 (181)
Ajmer	4.35	0	28.99	31.88	34.78	100 (138)
Nellore	1.56	1.56	35.16	4.69	57.03	100 (128)
Kakinada	0	0	42.5	1.67	55.83	100 (120)
Total	5.29 (30)	0.35 (2)	29.28 (166)	16.23 (92)	48.85 (277)	100 (567)

Figures in parentheses represent the frequencies

JJM is supposed to reduce the time spent by elder girl in the household in fetching water. The data in tables 15a and 15b clearly shows an overall improvement across all districts. Post-JJM, the proportion of girls spending less than 30 minutes increased from 22.22 per cent to 29.28 per cent, while those spending 30 minutes to 1 hour dropped from 25.04 per cent to 16.23 per cent, indicating a reduced time burden. Additionally, the share of girls not involved in water collection rose from 44.97 per cent to 48.85 per cent. The improvement is most notable in the Andhra Pradesh districts, where more than 55 per cent of girls reported spending no time on water collection after JJM, along with a sharp rise in the under 30-minute category. These changes highlight the positive impact of JJM in reducing domestic responsibilities for elder girls, especially in southern districts, potentially enabling greater focus on education and personal development.

Table-16a:

Principal Activity Status of Individuals Pre and Post JJM across Gender

Principal Activity	Pre-JJM (per cent)			Post-JJM (per cent)		
Occupation	Female	Male	Total	Female	Male	Total
MGREGS	43.98	3.15	14.24 (87)	51.52	4.73	17.41 (106)
Casual Labour in Agriculture	16.87	18.43	18 (110)	18.18	21.4	20.53 (125)
Casual Labour in non-agriculture	6.63	20.9	17.02 (104)	6.06	20.5	16.58 (101)
Regular wage/ salaried in agriculture	0.6	6.97	5.24 (32)	0.61	6.76	5.09 (31)
Regular wage/ salaried in non-agri	3.01	14.16	11.13 (68)	3.03	14.41	11.33 (69)
Self-employed in agriculture	9.04	17.75	15.38 (94)	7.88	15.99	13.79 (84)
Self-employed in animal husbandry	9.64	4.49	5.89 (36)	1.21	0.9	0.99 (6)
Self-employed in non-agriculture	1.2	2.47	2.13 (13)	1.21	2.25	1.97 (12)
Self-employed in other agri activities	2.41	4.04	3.6 (22)	2.42	4.5	3.94 (24)
Others (pension, remittances, etc.)	3.01	5.39	4.75 (29)	2.42	5.18	4.43 (27)
Unemployed	3.61	2.25	2.62 (16)	5.45	3.38	3.94 (24)
Total	100(166)	100(445)	100 (611)	100 (165)	100 (444)	100 (609)

Figures in parentheses represent the frequencies

Tables 16a and 16b compares the principal and subsidiary occupational activities of respondents before and after the implementation of JJM tap connections. Overall, the occupational structure remained relatively stable, with some minor shifts. Participation in MGNREGS increased from 14.24 per cent to 17.41 per cent, especially among females (from 43.98 per cent to 51.52 per cent), indicating a greater reliance on public employment schemes. Employment in casual agricultural labour also rose slightly from 18 per cent to 20.53 per cent, while casual non-agricultural labour remained nearly constant. Regular salaried work in both agriculture and non-agriculture saw minimal change, maintaining a share of around 5 per cent and 11 per cent, respectively. Notably, there was a sharp decline in self-employment in animal husbandry, falling from 5.89 per cent to just 0.99 per cent, likely reflecting reduced dependence on livestock-related livelihoods. Other forms of self-employment showed slight variations but remained consistent overall. These trends suggest that while JJM did not drastically alter the overall occupational structure, it may have contributed to minor shifts, especially by enhancing participation in public employment and reducing reliance on time-intensive activities like animal husbandry.

Table-16b:

Subsidiary Activity Status of Individuals Pre and Post JJM across Gender

Subsidiary Activity	Pre JJM (per cent)			Post JJM (per cent)		
Occupation	Female	Male	Total	Female	Male	Total
MGREGS	40.27	10.89	18.93 (103)	48.99	11.36	21.65 (118)
Casual Labour in Agriculture	13.42	14.43	14.15 (77)	14.09	16.92	16.15 (88)
Casual Labour in non-agriculture	6.71	14.94	12.68 (69)	6.71	15.4	13.03 (71)
Regular wage/ salaried in agriculture	0.67	6.08	4.6 (25)	0.67	5.56	4.22 (23)
Regular wage/ salaried in non-agri	2.01	7.34	5.88 (32)	2.01	7.83	6.24 (34)
Self-employed in agriculture	4.7	11.65	9.74 (53)	4.03	11.11	9.17 (50)
Self-employed in animal husbandry	8.72	6.58	7.17 (39)	1.34	2.78	2.39 (13)
Self-employed in non-agriculture	2.01	1.27	1.47 (8)	0.67	1.26	1.1 (6)
Self-employed in other agri activities	3.36	4.56	4.23 (23)	4.7	4.8	4.77 (26)
Others (pension, remittances, etc.)	2.68	4.81	4.23 (23)	2.68	5.3	4.59 (25)
Not Working	15.44	17.47	16.91 (92)	14.09	17.68	16.7 (91)
Total	100 (149)	100 (395)	100 (544)	100 (149)	100 (396)	100 (545)

Figures in parentheses represent the frequencies

In terms of subsidiary occupational activities among male and female respondents, the distribution remains largely consistent, with minor shifts across categories. Participation in MGREGS as a subsidiary activity increased from 18.93 per cent to 21.65 per cent, particularly among females (rising from 40.27 per cent to 48.99 per cent), indicating continued reliance on public employment. Unemployment levels remained nearly unchanged, with a marginal decline from 16.91 per cent to 16.7 per cent. Casual labour in both agriculture and non-agriculture saw slight increases, reflecting limited diversification in secondary income sources. A notable shift is observed in self-employment in animal husbandry, which dropped significantly from 7.17 per cent to 2.39 per cent, mirroring the trend seen in principal activities, possibly due to reduced dependence on livestock. Other forms of self-employment and salaried work remained relatively stable. These patterns suggest that while JJM may not have drastically transformed subsidiary occupations, it has contributed to reducing reliance on time-intensive and traditional livelihoods like animal husbandry, particularly for women. It is also important to asses if this shift has led to any increase in the household incomes.

Education

The survey data illustrates that there is a significant change in the number of hours children studied per household before and after the JJM was implemented. Prior to JJM, a considerable portion of household, especially in Jalore, indicated that children did not engage in studying (0 hours), while only a handful of households observed study times exceeding 2–3 hours. Post-JJM, while a significant portion in Jalore continued to report 0 study hours, there was a noticeable rise in the number of households with children studying for 2 to 3 hours across all districts, particularly in Ajmer and Nellore. This indicates that JJM has a small but beneficial effect on children's study time.

In sum, while JJM has been implemented across all the sample districts, the gender outcomes of the scheme are mixed. While women and children are spending less time on fetching water in post-JJM, there are regional differences. And the difference is due to less frequent release of safe drinking water. Since Rajasthan is releasing less frequently, its impact on women and children is minimal compared to Andhra Pradesh. This is one area where GBCs could play a major role in ensuring better gender outcomes across the country. Further, while there are time saving as well as increase in disposable incomes due to lower medical and water expenditure, more so in Andhra Pradesh, this has not led to major change in employment status among the beneficiaries. This suggest that water connection, and for that matter housing, is only a necessary condition in the process of improving gender outcomes. These schemes need top-ups both within the scheme but also in schemes that could complement the outcomes. In the next section we undertake some econometric tests to understand the outcomes of both the schemes through both mean-difference tests, simple regressions, as well as through Propensity

Mean/Proportion Difference Test

The results of the mean difference tests across some major indicators are given in the tables 17a and 17b below separately for PMAY(G) and JJM.

Table-17a:

Mean Difference across some Major Indicators for PMAY-G

Variable	Control	Treatment	Mean Difference	t-stat
Food Expenditure (Rs)	36641.69	41492.17	-4850.48	-1.8432*
Cloth Expenditure (Rs)	7641.18	11228.54	-3587.36	-2.6867*
The number of meals per day	0.54	0.66	-0.11	-3.4994*
Quality of Meals	0.88	1.00	-0.12	-7.7283*
Play time	. 034787	0.02	0.02	0.8357
Elderly care time	0.34	0.46	-0.01	-3.5211*
TV watching time	0.23	0.38	-0.14	-4.6945*
Community Time	0.39	0.57	-0.17	-5.2272*
Children Academic Performance	0.55	0.77	-0.22	-4.5718*
Number of times Fallen ill	0.07	0.06	0.00	0.2491
Number of visits to the hospital	0.05	0.05	0.01	0.4599
Allowed to go out of the village (women)	0.93	0.96	-0.03	-1.9846*
Allowed to go to the market (women)	0.92	0.96	-0.04	-2.7838*
Taking care of animals	0.35	0.37	-0.03	-0.4664
Diarrhoea	0.05	0.03	0.01	1.0645
Vomiting	0.29	0.27	0.02	0.5078
Mosquito borne disease	0.07	0.07	0.01	0.2910
Principal activity in agriculture	0.55	0.54	0.00	0.0205
Principal activity as casual labour in agri	0.16	0.15	0.00	0.1910
Principal activity in self-employment	0.05	0.05	0.00	-0.2451
Subsidiary activity in agriculture	0.43	0.40	0.02	0.6260
Subsidiary activity as casual labour in agri	0.07	0.06	0.00	0.3464
Subsidiary activity in self-employment	0.03	0.02	0.00	0.3333

***, ** and * represent significance at 1, 5 and 10 percent respectively. Here, mean difference is control-treatment.

At the household level, an increase in food and clothing expenditure for beneficiaries as well as an improvement in the quality and number of meals is observed. At the individual level, we find that time for watching TV, taking care of elderly and community time has gone up for beneficiaries. For children, the academic performance has gone up for the PMAY-G beneficiaries. Also, the women's movement outside their homes independently shows an improvement for the treated

▶ Table-17b:

Mean Difference across some Major Indicators for JJM

Variable	Control	Treatment	Mean Difference	t-stat
Food Expenditure (Rs)	37614.31	37458.98	155.33	0.0406
Cloth Expenditure (Rs)	9134.58	9625.41	-490.83	-0.6684
The number of meals per day	0.53	0.57	-0.04	-1.1582
Quality of Meals	0.99	1.00	-0.01	-1.1319
Play time	0.00	0.13	-0.13	-1.4639
Elderly care time	0.37	0.44	-0.07	-2.051*
TV watching time	0.31	0.35	-0.04	-1.4
Community Time	0.40	0.50	-0.10	-3.03***
Children Academic Performance	0.74	0.79	-0.05	-1.1038
Number of times Fallen ill	0.18	0.12	0.06	2.49**
Number of visits to the hospital	0.13	0.09	0.04	2.07**
Principal activity in self-employment	0.04	0.02	0.02	2.7**
Subsidiary activity in agriculture	0.53	0.49	0.03	1.0248
Subsidiary activity as casual labour in agri	0.08	0.09	-0.01	-0.7771
Subsidiary activity in self-employment	0.04	0.02	0.01	2.37**
Time taken by adult women to fetch water	0.18	0.04	0.13	6.3***
Principal activity in agriculture	0.59	0.56	0.02	0.7749
Principal activity as casual labour in agri	0.12	0.12	-0.01	-0.61
Time taken by elder girl child to fetch water	0.05	0.01	0.04	3.34***
Time taken by younger girl child to fetch water	0.06	0.02	0.03	2.32**
Allowed to go out of the village (women)	0.97	0.97	0.00	-0.0110
Allowed to go to the market (women)	0.95	0.96	0.00	-0.3025
Taking care of animals	0.40	0.36	0.04	0.4544
Diarrhoea	0.03	0.03	-0.01	-0.6043
Vomiting	0.08	0.07	0.01	0.4825
Mosquito borne disease	0.07	0.04	0.03	1.5934

***, ** and * represent significance at 1, 5 and 10 percent respectively. Here mean difference is control-treatment

For JJM beneficiaries Table-17b shows that frequency of illness and hospital visits have reduced at the household level while there is no significant difference in expenditure and quality of meals. At the individual level, the major observation is that the time for fetching water by women has come down post JJM while time spent by individuals in community and taking care of elderly has gone up. There is also a significant rise in the individuals' self-employment in both principal and subsidiary activities. However, no significant difference is shown for the academic performance of children as was visible in PMAY(G).

Regression Results

The OLS regressions coefficients to capture the impact of treatment on the outcome variables using the treatment fixed effects are given below for PMAY and JJM in Tables 18a and 18b. The full tables with all the covariates are given in Appendix A3 and A40.

▶ Table-18a:

Regression coefficients for PMAY-G Beneficiaries across Major Outcome Variables

Outcome	Coefficient	Robust SE	T-stat
Children Study Space	0.79	0.013	58.48***
Self-employment as principal activity	0.001	0.006	0.29
Self-employment as secondary activity	-0.00	0.005	-0.13
Time Sent with Community Members	0.12	0.16	7.82***
Number of times Fallen ill	-0.007	0.010	-0.75

***, ** and * represent significance at 1, 5 and 10 percent respectively

The coefficients here show that beneficiaries of PMAY(G) have significantly gained more time to spend in the community as compared to the non-beneficiaries. This indicates a gain in social capital and social status due to better housing under PMAY(G). It is also found that children in the beneficiary households manage better study space compared to non-beneficiaries. Our results here suggest that, although there are gaps, PMAY(G) has led to better social and educational outcomes.

▶ Table-18b:

Regression coefficients for JJM Beneficiaries across Major Outcome Variables

Outcome	Coefficient	Robust SE	T-stat
Time spent in fetching water	-0.153	0.024	-6.34***
Self-employment as principal activity	-0.014	0.006	-2.32**
Self-employment as secondary activity	-0.01	0.01	-1.73*
Children Study Hours	0.26	0.11	2.47**
Number of times Fallen ill	-0.070	0.21	-3.33***

*, ** and *** represent significance at 1, 5 and 10 percent respectively

The regression results for JJM shows that at the household level there has been a significant reduction in the incidence of illness. The education indicator captured by time spent on studying has shown a significant rise for households with female beneficiaries. The negative sign indicates that self-employment activities both as principal and secondary status for women has gone down for beneficiary households. This means that for the women, casual labour and regular wage activities have shown a slight rise in the principal and subsidiary status as compared to self-employment. A significant reduction in time spent in fetching water is observed for the women as indicated by the negative coefficient of the variable. Overall, JJM has led to better outcomes in health, education, employment and time for women and children.

Propensity Score Matching

As discussed in the methodology section, we could do PSM in the case of JJM as among the surveyed households there are many households report poor or low water supply through the new connections. As our purpose is to understand the differences in outcomes due to scheme, the households that are report poor or low water supply has been used as control group and the households reported more frequent water supply is considered as a treatment group and those results are presented in table-19.

Table-19:

Average Treatment effect for JJM Beneficiaries across Various Outcomes in Rajasthan

Sample	Treated	Controls	Standard Error	T-stat
Time spent in fetching water				
ATT (Matched)	0.12	0.24	0.05	-2.23**
Unmatched	0.12	0.15	0.02	-1.69
Self-employment as principal activity				
ATT (Matched)	0.024	0	0.008	3.03***
Unmatched	0.024	0	0.11	2.10**
Self-employment as secondary activity				
ATT (Matched)	0.3	0	0.01	3.36***
Unmatched	0.3	0	0.13	2.33**
Children Study Hours				
ATT (Matched)	1.67	1.23	0.24	1.9*
Unmatched	1.62	1.93	0.21	-1.25
Number of times Fallen ill				
ATT (Matched)	0.12	0.39	0.12	-2.20**
Unmatched	0.16	0.32	0.049	-3.22**

The PSM shows that the impact of better quality of water through JJM has been beneficial across major outcomes. It has brought down the time for fetching water by women leading to more time for them to be involved in self-employment activities as shown by the average treatment effects in the above Table-19. Thus, for the state of Rajasthan, availability of better quality of water has led to an increase in self-employment activities (both principal and subsidiary) for women. The logit model used to find the propensities is given in Appendix A3 and the associated graphs for the matching of the outcomes between treated and control groups is given in the Appendix (Figure A1). More time has also increased the study hours for children although the statistical significance is at 10 percent. In terms of health, the beneficiaries have a lower incidence of falling ill compared to the non-beneficiaries. Overall, better quality of water supply leads to an improvement in the above outcomes supporting our hypotheses.

Section-7

Empirical outcomes to strengthen feedback loop

In order to make gender budgeting more effective, there is a need for a framework specific to gender sensitive schemes in all the GBCs at line departments as well as the state level. As discussed in Hazarika et al (2024) and also in this report, inclusion of schemes under gender budgeting in many cases is after thought. The case of including JJM as well as the schemes under Part C into gender budgeting is only a recent development in the gender budgeting practice in India. Including schemes under gender budgeting is only a necessary condition, more of an accounting framework. To map gender budgeting with the outcomes indicators as per GGI or GII needs a separate exercise, which is lacking at present in India context. And this is one of the reasons although the share of gender budgeting in India increased more than four times since 2014-15, its impact on gender outcomes are at best minimal. To address this, disconnect, in this study we have undertaken the evaluation of two flagship project under gender budgeting but are implemented by two different agencies. These schemes are PMAY(G) and JJM that are supposed to address the housing deficit as well as drinking water to all households in a mission model. 'Housing for All' and 'Har Ghar Nal Jal' are the two mission mode schemes that are initiated post 2016. One major advantage of these two schemes are, unlike other central sector schemes, both are expected to reach saturation level soon.

At the macro level, as shown in secton-4, the implementation of both PMAY(G) and JJM has been very satisfactory both in terms of financial allocation, fund flow, as well as completion rate. Indeed, in the case of PMAY(G), the scheme was almost saturated until the new 2 crore houses added in 2014-15 Budget to address exclusion errors in SECC list prepared in 2011. What is important to be noted here is the outcomes for implementing line departments (MoRD and Ministry of Jal Shakti for PMAY(G) and JJM, respectively) are very different from the outcomes of MoWCD. While housing or a tap is an outcome for MoRD and MoJS, they are just outputs in the case of MoWCD. In other words, housing as well as tap connection are just a necessary condition for reducing gender gaps.

The present study actually delineates this issue with a micro household level survey among the beneficiaries of both housing and tap connection. This study shows, even with these schemes the impressions that are coming from the field level is different from the macro level conclusions. AS mentioned in the earlier section, this study was not meant to evaluate the two schemes. Rather, it meant to bring in the role of MoWCD (GBCs) in ensuring better outcomes for the massive allocations both Centre and State governments are making. And it is the last mile that the co-ordination between GBCs and the scheme implementing agencies need to focus on to derive maximum gender outcomes. Women during the survey mentioned that there are some key challenges that they face while involving in economic activities. They are lack of skilling, lack of financial access, poor nutrition levels, and awareness. This is precisely the feedback loop that we propose in this study that

MoWCD (GBCs) have a major role in bridging the last mile gap.

Three pathways are suggested here. First, the role of GBCs within the scheme implementation and it needs a major revamp at all levels of ministries/departments both at centre and states level. As shown in this study, the outcomes of the two schemes under widely differs between the regions. While a state (Andhra Pradesh) had better outcomes, especially in JJM, the other state (Rajasthan), despite having infrastructure in place, could not perform as desired. From this it is rationale to conclude that while at the macro level these schemes are doing better, at a micro or regional level, there is lot more that needs to be done at the implementing agency level to improve efficiency. Here the role of GBCs becomes utmost important to involve from designing of the scheme to identification of beneficiaries to completion of the work. And this is lacking in all the schemes that are implemented outside the MoWCD. As there are PMCs for major projects, GBCs or its representatives need to act as PMCs to all the schemes under gender budgeting. In the absence of this, it appears that all the schemes that are included under gender budgeting is implemented independent of MoWCD (GBCs). This issue needs to be addressed at the earliest. Else as both schemes are nearing saturation there is a risk

While undertaking major studies on both PMAY(G) and PMAY(U), a number of discussions were held across the line department to beneficiary at the field in over 8 states. However, in no instance GBCs were involved or participated. See NIPFP (2018) and NIPFP(2019)

that both the schemes could end with minimal or no significant impact on the gender outcomes.

Secondly, role of GBCs to complement the outcomes of those two schemes (or any other scheme that are included in the gender budgeting) to further reduce gender gaps. As shown in this study, even in the regions where the schemes are implemented better, those positive outcomes have not been channelled towards enhancing women's participation in income generation activities or leading to increased asset creation or leading improving skills. Under both the schemes, women have expressed that they get more time from unpaid work in the post-scheme period and channelling these extra time for income generation activity or any such activity that reduces gender gaps should be the focus of GBCs. Indeed, some women expressed that they need skills as well as awareness to utilise the additional time they get after receiving housing/tap benefit. Two examples that may be highlighted here where GBCs could work with beneficiaries to enhance women participation in economic activities. Skill India program, which is included in Part B, could be one scheme that may be focused on the women that have gained time due to other schemes. The other area that GBCs to handhold the women beneficiaries is in terms of enhancing access to finance and financial services. The female beneficiaries of PMAY(G) or the joint beneficiaries after getting the pucca

house could have clearly improved the creditworthiness for accessing finance. Complementing them with additional finance should go a long way in improving women's income and employment opportunities. For instance integrating these women beneficiaries to various schemes such as DAY-NRLM, which is included in Part A, (or DAY-NULM) should be the role of GBCs.

Third issue is that the schemes under gender budgeting should be demand-driven and should be the initiative of MoWCD while the implementation could be done by any relevant line ministry/department. These demand driven schemes should be flowing from the gender gaps that are identified from GGI/GII sub-indices. For instance, as per WEF, India ranks 114th in literacy. To reduce this, GBCs need to initiate a policy intervention to address this and make the relevant line department

While undertaking major studies on both PMAY(G) and PMAY(U), a number of discussions were held across the line department to beneficiary at the field in over 8 states. However, in no instance GBCs were involved or participated. See NIPFP (2018) and NIPFP(2019)

to implement instead of waiting for line department's initiative. Another area that GBCs may focus is on enhancing women's mobility so that they can involve in more paid activities rather than spending their additional time for leisure. Recently, there are many states that initiated free bus services to women folk and is turning out to be a major gender responsive intervention. MoWCD could work with line departments to make this as a national scheme jointly with states. On skills, right now there is only a meagre allocation of Rs 625.59 crore under Skill India under Part B. This is one area that MoWCD, as a demand driven approach, can work with Ministry of Skill Development and Entrepreneurship. On female (both women and girls) nutrition, MoWCD has a much largely role to play than Ministry of Food and Public Distribution. While not getting to cash versus kind debate, as many states have already implemented, cash transfer scheme for women folk to complement other schemes at the national level could be a game changer in the gender

Summary and Conclusions

In this study an attempt has been made understand the existing gender budgeting framework in India. However, as noted in Hazarika et al (2024), there were large number of gaps in the present structure of the gender budgeting and identified a feasible framework that links outlays to outcomes not just in the schemes' outcomes but to the outcomes that are required to reduce gender gaps. The proposed framework tries to link with line departments' outlays to MoWCD's gender outcome objectives. Towards this end, in this study, an attempt has been made to look at two major schemes included under the gender budget, namely PMAY(G) and the JJM that address the housing as well as drinking water gaps at the household level.

By using the structured survey method across 1000 households in two districts of Rajasthan and two districts of Andhra Pradesh on both schemes, the study brings out some interesting findings. However, we argue that the outcomes of these schemes are just outputs when it comes to gender gaps. In other words,

implementation of these schemes are only necessary but sufficient conditions for reducing gender gaps in India.

Survey results suggest that, unlike at the macro level, at micro level the implementation of schemes differ from region to region. However, in terms of gender perspective, the results are interesting. Overall, it was found that women could save time from unpaid work that can be channelized towards paid work. Children could manage to get their own space for studying and this seems to have increased the number of hours that they spend on studies. There is an overall improvement in health conditions of the household with less visits to hospitals. Both the schemes have led to increased involvement of women in community activities within the neighborhood, thus, improving the social status of the household. However, these positive outcomes do have minimal impact on gender gaps if they are not being complimented by other policy interventions. Also there are some implementation issues as well at the local level. This study argues for the feedback loop that addresses both the issues: issues within the scheme as well as the required policy interventions after the scheme outcomes are achieved.

The study suggests three path ways: one, revamping the role of GBCs in improving within the scheme implementation; second, role of GBCs in complementing major scheme outcomes to further reduce gender gaps; and third, demand-driven

References

Adams, E. N., Clark, H. M., Galano, M. M., Stein, S. F., Grogan-Kaylor, A., & Graham-Bermann, S. (2021). Predictors of housing instability in women who have experienced intimate partner violence. Journal of interpersonal violence, 36(7-8), 3459-3481.

Ademas, A., Adane, M., Sisay, T., Kloos, H., Eneyew, B., Keleb, A., Lingerew, M., Derso, A., Alemu, K., (2020). Does menstrual hygiene management and water, sanitation, and hygiene predict reproductive tract infections among reproductive women in urban areas in Ethiopia? PLoS One 15, e0237696. https://doi.org/10.1371/journal.pone.0237696.

Agarwal, B. (1994). Gender and Command Over Property: A Critical Gap in Economic Analysis and Policy in South Asia. World Development, 22(10), 1455–1478. https://doi.org/10.1016/0305-750X(94)90031-0

Ahiabli, P., Adatara, P., & Cross, R. (2023). 'There is water available and so our hearts are at peace': exploring the impact of access to safe water on women's subjective well-being in Ghana. Journal of Water, Sanitation and Hygiene for Development, 13(9), 735-748.

Angelini, V., Laferrere, A., & Weber, G. (2012). Home-ownership in Europe: How did it happen? Advances in Life Course Research, 18, 83–90. https://doi.org/10.1016/j.alcr.2012.10.006

Beer KD, Gargano JW, Roberts VA, et al. Surveillance for waterborne disease outbreaks associated with drinking water—United States, 2011–2012. MMWR Morb Mortal Wkly Rep 2015;64:842–8.

Bhandari, M. (2023). PMAY Scheme and Socio-Economic Empowerment of Women in Rural India. Available at SSRN 4927318.

Bisung, E., Elliott, S.J., Abudho, B., Schuster-Wallace, C.J., Karanja, D.M., 2015. Dreaming of toilets: using photovoice to explore knowledge, attitudes and practices around water-health linkages in rural Kenya. Health Place 31, 208–215. https://doi. org/10.1016/j.healthplace.2014.12.007

Choudhuri, P., & Desai, S. (2021). Lack of access to clean fuel and piped water and children's educational outcomes in rural India. World Development, 145, 105535.

De Guzman, K., Stone, G., Yang, A. R., Schaffer, K. E., Lo, S., Kojok, R., ... & Kayser, G. L. (2023). Drinking water and the implications for gender equity and empowerment: A systematic review of qualitative and quantitative evidence. International Journal of Hygiene and Environmental Health, 247, 114044.

Diagne, A. and Demont, M. (2007) Taking a New look at Empirical Models of Adoption: Average Treatment Effect Estimation of Adoption Rate and Its Determinants. Agricultural Economics, 37, 30

Faltermeier, L., & Abdulai, A. (2009). The impact of water conservation and intensification technologies: Empirical evidence for rice farmers in Ghana. Agricultural Economics, 40(3), 365–379.

Gall, A.M., Marinas, ˜ B.J., Lu, Y., Shisler, J.L., 2015. Waterborne viruses: a barrier to safe drinking water. PLoS Pathog. 11, e1004867 https://doi.org/10.1371/journal.ppat.1004867.

Geere, J.-A.L., Cortobius, M., Geere, J.H., Hammer, C.C., Hunter, P.R., 2018a. Is water carriage associated with the water carrier's health? A systematic review of quantitative and qualitative evidence. BMJ Glob Health 3, e000764. https://doi.org/10.1136/bmjgh-2018-000764.

Hazarika, Bhabesh., N R Bhanumurthy, Himanshu Gaydhani, 2024. An Analytical Approach for Assessment of Gender Budgeting in India, Karmanya & FICCI

Heckman, J., & Vytlacil, E. (2007). Econometric evaluation of social programs, part 2 of Using the marginal treatment effect to organize alternative economic estimators to evaluate social programs and to forecast their effects in new environments. In J. Heckman, & E. Leamer (Eds.). Handbook of econometrics (Vol. 6). Amsterdam: Elsevier Science.

Hunter, P.R., MacDonald, A.M., Carter, R.C., 2010. Water supply and health. PLoS Med. 7, e1000361 https://doi.org/10.1371/journal.pmed.1000361

Jalan, J., & Ravallion, M. (2003). Does piped water reduce diarrhea for children in rural India?. Journal of econometrics, 112(1), 153-173.

Kremer, Michael, Stephen Luby, Ricardo Maertens, Brandon Tan, and Witold Więcek, 2023. Water Treatment and Child Mortality: A Meta-analysis and Cost-effectiveness Analysis, Development Innovation Lab, Working Paper No. 2022-26, January

Kremer, Michael, Akanksha Saletore., Witold Wiecek., Arthur Baker, 2023. Potential Reduction in Child Mortality through Expanding Access to Safe Drinking Water in India, Development Innovation Lab, University of Chicago.

Karami, S., & Hamelink, W. (2023). The effect of home ownership on the

independence and participation of Kurdish women in society. A quantitative study of Sanandaj in Iran. Studies in Ethnicity and Nationalism, 23(3), 369-388.

Kayser, G.L., Chokhandre, P., Rao, N., Singh, A., McDougal, L., Raj, A., 2021. Household sanitation access and risk for non-marital sexual violence among a nationally representative sample of women in India, 2015-16. SSM - Population Health 13, 100738. https://doi.org/10.1016/j.ssmph.2021.100738.

Kookana, R.S., Maheshwari, B., Dillon, P., Dave, S.H., Soni, P., Bohra, H., Dashora, Y., Purohit, R.C., Ward, J., Oza, S., Katara, P., Yadav, K.K., Varua, M.E., Grewal, H.S., Packham, R., Jodha, A.S., Patel, A., 2016. Groundwater scarcity impact on inclusiveness and women empowerment: insights from school absenteeism of female students in two watersheds in India. Int. J. Incl. Educ. 20, 1155–1171. https://doi. org/10.1080/136031

Mishra, S. (2024). The Impact of In-House Water Access on Time Allocation and Household Expenditures: An Empirical Analysis. https://dx.doi.org/10.2139/ssrn.4984714

Moura, I.P. da S., Ferreira, I.P., Pontes, A.N., Bichara, C.N.C., 2019. Toxoplasmosis knowledge and preventive behavior among pregnant women in the city of Imperatriz, Maranhao, ˜ Brazil. Ci ˆencia Saúde Coletiva 24, 3933–3946. https://doi. org/10.1590/1413-812320182410.21702017.

NIPFP, 2018. Impact of PMAY(G) on income and employment, https://tinyurl.com/2aw8erjx .

NIPFP (2019): Assessing Employment Generation under Pradhan Mantri Awaas Yojana (Urban). https://mohua.gov.in/upload/uploadfiles/files/NIPFP Report_Final.pdf

Choudhuri, Pallavi and Sonalde Desai. Lack of access to clean fuel and piped water and children's educational outcomes in rural India. World Development, 145: 105535, 2021.

Patil, S. R., Nanda, S., Yadav, R. A., & Premalatha, K. P. Potential Health and Economic Gains from Jal Jeevan Mission: A Comparative Analysis. Journal of Research Administration, 5(2), 1389-1401.

Quets, G., Duggan, A., & Cooper, G. (2016). A gender lens on affordable housing. Online journal with the name Re:Gender. https://www.icrw.org/wp-content/uploads/2016/11/gender_lens_on_affordable_housing_by_regender_final-

1.pdf

Rakodi, C. (2015). Addressing gendered inequalities in access to land and housing. Gender, Asset Accumulation and Just Cities: Pathways to Transformation, 81-99. Routledge

Ravichandran, M., & Boopathi, S. (2005). Environmental, Gender and Institutional Dimensions of Drinking Water Supply: a district level case experience in rural Tamil Nadu. Indian Journal of Social Work, 66(2), 156.

Sengupta, P. (2013). Potential health impacts of hard water. International journal of preventive medicine, 4(8), 866.

Sheetal Sekhri. Wells, water, and welfare: the impact of access to groundwater on rural poverty and conflict. American Economic Journal: Applied Economics, 6 (3):76–102, 2014.

Singh, A., & Naik, G. (2024). Rural drinking water supply program and societal development: Evidence from the early implementation phase of India's Jal Jeevan Mission. PLoS One, 19(11), e0312144.

Sommer, M., Ferron, S., Cavill, S., House, S., 2015. Violence, gender and WASH: spurring action on a complex, under-documented and sensitive topic. Environ. Urbanization 27, 105–116. https://doi.org/10.1177/0956247814564528.

Stefanides, Z., & Tauer, L. (1999). The empirical impact of Bovine Somatropin on a group of New York dairy farms. American Journal of Agricultural Economics, 81(1), 95–102.

Swaminathan, H., Lahoti, R., & Suchitra, J. Y. (2012). Women's property, mobility, and decisionmaking: evidence from rural Karnataka, India. https://hdl.handle.net/10568/153885

Vanaja, S. (2018). Access to piped water, time savings and absenteeism in school: Evidence from India. DOI: 10.22004/ag.econ.275954

Viljoen, C., Lowies, B., Lushington, K., & McGreal, S. (2020). Female perspectives on housing quality and household characteristics, perceptions and challenges: Evidence from Australia. Habitat International, 105, 102276.

Wells, N. M., & Harris, J. D. (2007). Housing quality, psychological distress, and the mediating role of social withdrawal: A longitudinal study of low-income women. Journal of Environmental Psychology, 27(1), 69-78.

Yakubovich, A. R., Bartsch, A., Metheny, N., Gesink, D., & O'Campo, P. (2022). Housing interventions for women experiencing intimate partner violence: a systematic review. The Lancet Public Health, 7(1), e23-e35.

Yeates, N. (1999). Gender, Familism and Housing: Matrimonial property Rights In Ireland. Women's Studies International Forum, 22(6), 607–618. https://doi.org/10.1016/S0277-5395(99)00071-0

Appendix

Table-A1:

Number of Households Having Assets Before and After PMAY-G

Asset	Pre PMAY	Post PMAY
Car	0	3
Motorbike	96	180
Cycle	48	71
TV	133	241
Cooler/Fan	148	353
AC	5	11
Refrigerator	49	116
Washing machine	5	20

Table-A2:

Number of Households Having Assets Before and After JJM

Asset	Pre JJM	Post JJM
Car	9	15
Motorbike	222	291
Cycle	76	90
TV	228	287
Cooler/Fan	329	403
AC	8	15
Refrigerator	107	151
Washing machine	19	30

Table-A3:

Logit estimates for Jal Jeevan Mission

VARIABLES	(1) Water fetching time by adult women	(2) Self-emp principal activity	(3) Self-emp subsidiary activity	(4) Child study hours	(5) No.of times Fallen ill
Beneficiary or not (base: beneficiary)					
Non-beneficiary	-0.153***	-0.0144**	-0.0115*	0.264**	-0.0709***
	(0.0242)	(0.00619)	(0.00664)	(0.107)	(0.0213)
Quality of JJM Water (base: bad)					
Good	-0.0829*	0.0452***	0.0556***	-0.306	-0.170***
	(0.0469)	(0.0126)	(0.0134)	(0.280)	(0.0646)
Age	-0.00298**	-0.000553**	-0.000570**	0.000252	-0.00135
	(0.00131)	(0.000259)	(0.000251)	(0.00492)	(0.00107)
Subsidiary Activity (Self-employment in non-agriculture)					
Self-employment in agri	0.0424			0.0878	0.104
	(0.0825)			(0.765)	(0.0671)
Principal Activity (self-employment in non-agriculture)					
Self-employment in agriculture	-0.0811			0.221	-0.0566
	(0.0692)			(0.790)	(0.0538)
Unpaid/paid labour (No)					
Yes	-0.00909	0.0687***	0.0847***	0.144	-0.0509*
	(0.0298)	(0.0147)	(0.0160)	(0.128)	(0.0283)
Highest level of Education (base: below primary)					
Graduate	0.103	-0.00627	-0.0233**	0.180	-0.110*
	(0.0851)	(0.00791)	(0.0105)	(0.181)	(0.0629)
Higher Secondary	-0.0121	0.00295	-0.0102	0.355*	-0.0828
	(0.0693)	(0.00693)	(0.00970)	(0.192)	(0.0509)

Illiterate	0.00137	0.000584	-0.0200	-0.225	0.00591
	(0.0362)	(0.00946)	(0.0129)	(0.141)	(0.0344)
Post-graduate	-0.218**	-0.0103	-0.0339	3.151**	0.364
	(0.0861)	(0.118)	(0.119)	(1.570)	(0.330)
Secondary	0.00786	-0.00305	-0.0182	0.221	-0.0258
	(0.0388)	(0.00838)	(0.0121)	(0.153)	(0.0408)
Average amount spent on healthcare	-1.34e-06	5.24e-06**	4.24e-06*	-2.03e-06	1.67e-05***
	(2.03e-06)	(2.21e-06)	(2.22e-06)	(1.04e-05)	(3.50e-06)
Bank Account or not (base: no)					
Yes	-0.0131	0.0135***	0.0156***	0.144	-0.000514
	(0.0513)	(0.00479)	(0.00500)	(0.121)	(0.0389)
Gender of the Beneficiary (base: female)					
Male	-0.0354	-0.00133	0.00617		-0.00375
	(0.0277)	(0.00694)	(0.00760)		(0.0240)
Household Size	-0.000245**	-2.63e-05	-4.91e-05	0.000712	-2.61e-06
	(0.000105)	(6.32e-05)	(6.40e-05)	(0.00126)	(8.70e-05)
Type of family (base: joint family)					
Nuclear family	-0.0365	0.0101	0.0200***	-0.348***	0.0756***
	(0.0340)	(0.00718)	(0.00522)	(0.116)	(0.0226)
Staying alone	0.105	0.00333	0.0139	-1.112***	-0.00885
	(0.0898)	(0.0116)	(0.0108)	(0.413)	(0.0689)
Dwelling Unit (base: Others)					
Owned	-0.471**	-0.0253**	-0.0246		0.0639
	(0.204)	(0.0126)	(0.0157)		(0.107)
Rented	-0.543**	-0.0415**	-0.0411**	0.823*	0.103
	(0.222)	(0.0164)	(0.0195)	(0.476)	(0.111)
Caste (OBC)					
Others	0.0363	0.00319	0.0105	0.0743	-0.0723**
	(0.0393)	(0.00874)	(0.0101)	(0.111)	(0.0281)
SC	-0.0640**	-0.00754	-0.0135**	0.295**	-0.0697**
	(0.0309)	(0.00675)	(0.00681)	(0.130)	(0.0273)
ST	0.121**	0.0213	0.0200	-0.270	-0.0798**
Trips to the water source (*base: more than 5 trips a week*)	(0.0615)	(0.0150)	(0.0150)	(0.385)	(0.0394)
One trip every day	0.0344	0.0105	0.0101	0.720**	0.0328
	(0.0366)	(0.00782)	(0.00843)	(0.282)	(0.0265)
Two trip every day	0.239***	0.0162	0.0179	-0.462*	0.0357
	(0.0502)	(0.0145)	(0.0142)	(0.280)	(0.0336)
Weekly one trip	0.0781	-0.00495	-0.0108	0.0417	0.152***
	(0.0600)	(0.00860)	(0.00910)	(0.149)	(0.0556)
Weekly two trip	0.0861	0.0224	0.0161	-0.228	-0.000108
	(0.0596)	(0.0177)	(0.0179)	(0.227)	(0.0536)
Weekly three trip	0.142	0.0353	0.0260	-0.163	-0.0220
Primary Source of Water before JJM (*Base: Lake or Pond*)	(0.0951)	(0.0314)	(0.0310)	(0.396)	(0.0800)
Muncipality Water	0.207	0.0276**	0.0529**		-0.170
	(0.154)	(0.0134)	(0.0242)		(0.174)
Others	0.174	0.0227	0.0436**	-0.130	-0.121
	(0.151)	(0.0173)	(0.0216)	(0.154)	(0.175)
Public Well	0.223	0.0249*	0.0537***	-0.404**	-0.170
	(0.155)	(0.0131)	(0.0208)	(0.188)	(0.175)
Tanker	0.111	0.0163	0.0398*	-0.206	-0.103
State (*Base: Rajasthan*)	(0.156)	(0.0140)	(0.0211)	(0.138)	(0.176)
Andhra Pradesh	0.125	-0.0683***	-0.101***	0.531*	0.199*
Block (*Base: Bhinmal*)	(0.115)	(0.0239)	(0.0278)	(0.297)	(0.104)
Jaswantpura	-0.0316	0.0313***	0.0385***	-0.934***	-0.135*
	(0.0573)	(0.0119)	(0.0123)	(0.253)	(0.0754)
Sangam	-0.166	0.0500	0.0804**	-0.709	-0.128
	(0.133)	(0.0311)	(0.0338)	(0.462)	(0.111)
Sydapuram	0.0135	0.0877***	0.136***	-1.167***	-0.240**
	(0.130)	(0.0269)	(0.0351)	(0.307)	(0.108)
Pithapuram	-0.217*	0.0623***	0.0888***	-0.774**	-0.197*
	(0.120)	(0.0237)	(0.0260)	(0.324)	(0.106)
Kothapalli	-0.148	0.0651**	0.104***		-0.276**
	(0.132)	(0.0269)	(0.0299)		(0.109)
Ajmer Rural	-0.113**	0.00860	0.0140*	-0.475*	0.0266
	(0.0488)	(0.00610)	(0.00716)	(0.248)	(0.0570)
Shreenagar	-0.0102	0.0675**	0.102***	2.876***	-0.0405
	(0.0825)	(0.0342)	(0.0392)	(0.453)	(0.0806)
Constant	0.748***	-0.0459**	-0.0790***	1.765***	0.409**
	(0.253)	(0.0209)	(0.0292)	(0.284)	(0.205)
Observations	734	1,392	1,392	735	733
R-squared	0.212	0.167	0.187	0.438	0.220

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) Quality of water (Good=1, Bad=0)		
Sex	0.223		
	(0.164)		
Age	0.0164**		
Principal Activity (*Base: Casual non-agriculture*)	(0.00645)		
Casual Lab Agri PA	-0.426		
PA (*Base: Self-emp in non-agri*)	(0.392)		
Self-employment in agriculture	1.438***		
Unpaid/paid labour (base: No)	(0.523)		
Yes	-0.366*		
Highest level of Education (base: below primary)	(0.215)		
Graduate	0.233		
	(0.331)		
Higher Secondary	-0.400		
	(0.318)		
Illiterate	-0.226		
	(0.250)		
Post-graduate	0.0772		
	(0.670)		
Secondary	-0.278		
	(0.237)		
Average amount spent on health	3.84e-05*		
Bank Account (*Base: No*)	(1.96e-05)		
Yes	-0.940***		
Gender of the Beneficiary (base: female)	(0.220)		
Joint	-		
Male	-0.283		
	(0.179)		
Household Size	-4.30e-05		
Type of family (*base: Joint*)	(0.000924)		
Nuclear family	-0.618***		
	(0.187)		
Single	-3.187***		
Dwelling unit (*base: others*)	(1.189)		
Owned	3.667***		
	(0.697)		
Rented	-		
Caste (*base: OBC*)			
Others	-0.516*		
	(0.306)		
SC	-1.064***		
	(0.227)		
ST	-1.269**		
Trips to the water source (*Base: more than 5 times a week*)	(0.646)		
One trip every day	-0.599*		
	(0.347)		
Two trips every day	0.426		
	(0.371)		
Weekly one trip	-0.713**		
	(0.361)		
Weekly two trips	1.238***		
	(0.480)		
Weekly three trips	-		
Primary Source of Water before JJM (*Base: Lake or Pond)*			
Muncipality Water	-0.0997		
	(0.223)		
Others	1.110***		
	(0.236)		
Public well	-		
Block (*Base: Bhinmal*)			
Jaswantpura	-2.999***		
	(0.363)		
Pithapuram	-		
Ajmer rural	-3.575***		
	(0.335)		
Shreenagar	-4.919***		
	(0.468)		
Constant	1.368*		
	(0.790)		
Observations	1,212		

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

▶ Table-A4:

Logit estimates for Pradhan Mantri Awaas Yojan (Gramin)

VARIABLES	(1) Self-Employment SA	(2) Self-Employment PA	(3) Study Space	(4) Community time	(5) Falling ill
Non-beneficiary	-0.001	0.002	0.793***	0.126***	-0.008
	(0.005)	(0.007)	(0.014)	(0.016)	(0.010)
Age	-0.000	-0.000	-0.001	-0.001	0.001**
	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)
Unpaid/paid labour (No)					
Yes	0.059***	0.118***	0.030	0.044**	-0.020
	(0.007)	(0.009)	(0.019)	(0.019)	(0.012)
Graduate	-0.025**	-0.008	-0.016	0.017	0.041
	(0.010)	(0.021)	(0.035)	(0.055)	(0.041)
Higher Secondary	-0.035***	-0.003	-0.002	0.137***	0.062**
	(0.009)	(0.017)	(0.030)	(0.038)	(0.028)
Illiterate	-0.001	0.007	-0.017	0.012	-0.022
	(0.010)	(0.012)	(0.023)	(0.030)	(0.020)
Post-graduate	-0.006	-0.017	0.025	0.094	-0.009
	(0.025)	(0.061)	(0.065)	(0.169)	(0.056)
Secondary	-0.004	0.013	0.006	0.120***	-0.004
Bank Account (base: no)	(0.010)	(0.012)	(0.021)	(0.029)	(0.020)
Yes	0.007	0.003	0.003	0.123***	-0.031*
Gender of the Beneficiary (*base: female*)	(0.005)	(0.008)	(0.020)	(0.025)	(0.016)
Joint beneficiary	-0.007	0.008	0.003	-0.262***	0.027
	(0.009)	(0.011)	(0.025)	(0.070)	(0.025)
Male beneficiary	0.004	0.017*	-0.026	-0.016	0.011
	(0.006)	(0.009)	(0.017)	(0.019)	(0.012)
HH Size	0.000	0.000	-0.000	0.000	-0.000
Type of family (base: Joint)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Nuclear family	0.009	0.011	0.056***	-0.028	0.048***
	(0.007)	(0.008)	(0.019)	(0.021)	(0.014)
Staying Single	0.009	0.021	-0.003	-0.211***	-0.091***
	(0.022)	(0.027)	(0.038)	(0.057)	(0.033)
Others	-0.091	-0.111	0.322**	-0.349*	0.122
Type of house (*base: others*)	(0.073)	(0.093)	(0.151)	(0.212)	(0.087)
owned	-0.070	-0.080	0.433***	-0.162	0.158**
	(0.070)	(0.090)	(0.132)	(0.166)	(0.063)
rented	-0.060	-0.076	0.610***	-0.353*	0.219*
Caste (*base:OBC*)	(0.069)	(0.091)	(0.136)	(0.194)	(0.127)
Others	0.003	0.010	-0.026	0.094***	0.015
	(0.013)	(0.015)	(0.026)	(0.036)	(0.022)
SC	-0.025***	-0.025**	-0.018	0.011	-0.011
	(0.009)	(0.012)	(0.023)	(0.025)	(0.018)
ST	-0.033***	-0.049***	-0.047	0.037	0.014
	(0.010)	(0.013)	(0.031)	(0.031)	(0.017)
Control Variable:					
State	Yes	Yes	Yes	Yes	Yes
District	Yes	Yes	Yes	Yes	Yes
Block	Yes	Yes	Yes	Yes	Yes
Village	Yes	Yes	Yes	Yes	Yes
Constant	0.025	-0.027	0.638***	0.683***	-0.192***
	(0.069)	(0.092)	(0.135)	(0.214)	(0.066)
Observations	3,080	3,080	1,698	3,068	3,080
R-squared	0.096	0.187	0.700	0.228	0.474

Robust standard errors in parentheses

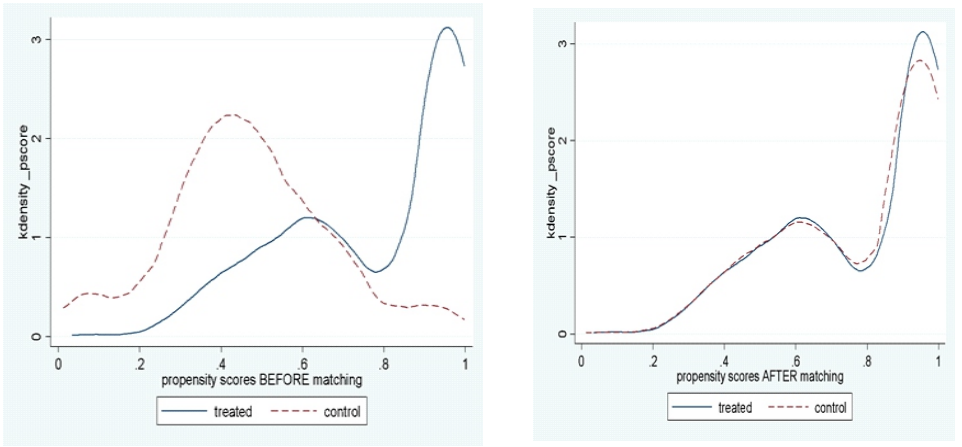
*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

▶Figure-A1:

Propensity score before and after Matching for between Treatment and Control Group



Appendix -B

Sample Questionnaire for PMAY(G)

● Identification of sample household

1.Name of the respondent:
2.Name of the state:
3.Name of the district:
4.Name of the village:
5.Name of Head of Household (HoH)-
6.Are the HoH and respondent the same? Yes-1 , No-2
7.Mobile No. of Respondent/HoH
8.Beneficiary or not? Yes-1 , No-2
9.Name of the beneficiary:
10.Gender of the Beneficiary: Male -1 , Female-2 , Joint -3 (male and female)
11.Beneficiary registration number:
12.Date of Inception:
13.Date of Completion:

1. Household's Socio-Economic Characteristics

1.1 Household characteristics:

Household type	
Social Group	
Religion	

Are you the main earner in your family? (Yes -1, No -2)	
If No, then who?	
Household Size	
Dwelling unit (owned-1, rented-2, none-3, others-4)	
Structure of dwelling unit (katcha-1, semi-pucca-2, pucca-3)	
Land Owned (in acres)	
Homestead	
Agricultural – Cultivation	
Agricultural – Livestock	
Leased-out	
Others	
Whether the household has leased-in land (Yes-1, No-2)	
If Yes to the above, what is the rent?	
Has the household bought any land recently (Yes-1, No-2)	
If Yes to the above, what was the purpose?	
If Yes, the cost of land	

Household type (to be determined based on the source of major income of the household): self-employment in: crop production -1, farming of animals -2, other agricultural activities -3, non-agricultural enterprise -4; regular wage/salaried earning in: agriculture -5, non- agriculture-6; casual labour in: agriculture – 7, non-

agriculture-8; others (pensioners, remittance recipients, student, engaged in domestic duties, etc.) -9

Social Group: Scheduled Caste-1, Scheduled Tribe -2, OBC-3, Others-4

Religion: Hindu-1, Muslim-2, Christian-3, Others-4

Type of Family: Nuclear-1, Joint-1, Staying single/others-3

1.2. Household consumption expenditure in the last one year

Items	Amount spent	
	Pre-PMAY	Post-PMAY
Cost of repair and maintenance of the house		
Medical and hospital-related		
School or college		
Jewellery and ornaments		
Marriages		
Food and related items		
Transport equipment, repair and maintenance		
Clothing and household appliances		
Vacation and holidays		

1.3. Does the household own any of the following items? (Ask Both current and with respect to PMAY)

Item	Yes-1, No-2	If yes, is it pre-PMAY -1; post-PMAY-2
Car		
Motor bike		
Cycle		
TV		
Cooler/fan		
AC		
Refrigerator		
Washing Machine		

1.4. In the last two years, has the household borrowed from any sources?

Source	Yes-1, No-2	Purpose	Amount	Amount pending
Bank/govt prog				
Micro finance, community group/NGO/SHGs				
Money lender				
Employer				
Relatives/friends				
Other Source				

Code- Purpose: Buy/build house – 1, Buy Land/field – 2, Marriage expenses – 3, Agri/related equipment – 4, Start business – 5, Household consumption – 6, Buy car/vehicle- 7, Education – 8, Medical expenses – 9, Sump or any related investment post PMAY -10, Others – 11

1.5. Do you own any livestock such as cows, buffalo or chicken?

Yes – 1
No – 0

1.6. If yes, the total number of livestock and any income earned from selling milk, eggs, meat in the last year? If yes, what have you used it for?

Animal	Nos	Income earned from selling milk, eggs		Income earned from selling animals/meat		What have you used it for?
Buffalo/cows		Pre	Post	Pre	Post	
Sheep/						
Chicken						

Code: Nos: none- 1, 1 to 5 – 2, 5 to 10 – 3, more than 10 – 3; Income earned: none – 1, <10000 – 2, 10000 to 25000 – 3, 25000 to 50000 – 4, 50000 to 1 lakh – 5, 1 lakh to 3 lakh – 6, more than 3 lakh – 7; What have you used it for: Buying land – 1, Buying new livestock – 2, Saved in bank – 3, Bought household items – 4, Bought vehicle- 5, Education – 6, Marriage – 7, Others - 8

1.7. Who in the household helped take care of the animals and how often did you take care of animals?

Family member	Relationship to HH	How often/how much time on a daily basis	
		Pre PMAY	Post PMAY

Code: How often: Never – 1, rarely – 2, Regularly – 3; If the answer is in terms of time (Code)- Time- 0 to 1 hour- 1, 1 to 3 hours- 2, 3 to 5 hours- 4, more than 5 hours- 6.

1.8. Details of family members:

Srl No.	Name of the member	Sex	Relationship to Hoh	Age	Marital Status	Highest Level of Education	Principal Activity in last 12 months		Subsidiary Activity in last 12 months		Income earned/ Wages in last 12 months	Total hours worked in last 12 months
							Pre PMAY	Post PMAY	Pre PMAY	Post PMAY		

Relationship to HoH: Head-1, Wife/Husband-2, Son-3, Daughter-4, Mother-5, Father 6, Brother-7, Sister-8, Son-in-law-9, Daughter in law-9, Grandson-10, Granddaughter-11;

Sex: Male – 1, Female – 2; Marital status: Married – 1, Unmarried – 2, Others – 3.

Level of education: Illiterate- 0, Below primary –1, Secondary (5th-10th)—2, Higher secondary (12th)—3, Graduate—4, Postgraduate—5.

2. Education

2.1. Education Details of Children:

Srl. No.	Name	sex	age	Standard	Type of School	Medium of Instruction	How many days was absent in last 30 days	Reason for absent	Not enrolled, specify the reason

CODE: - Type of school- Government-1, Govt Aided-2, Private-3, Other/Open school-4. Medium of instruction: Local language (State) – 1, English – 2. Not enrolled: Lack of finance – 1, Distance to school – 2, Child not interested – 3, Lack of facilities at school – 4, others – 5.

2.2. Spending on education:

Srl No.	Sex	Amount spent on fees	Amount spent on books, uniform, and other materials	Amount spent on transport	Tuition fees	Total amount	Received any scholarship Yes-1/No-0

2.3. Facilities at School:

Sex	Availability of toilet - Yes-1 No-0	Is the toilet functional Yes-1, No-0	Availability of water tap Yes-1, No-0	Mid-day meal available Yes- 1, No- 0

2.4. Educational Performance

	Pre	Post
How many hours did/ do the children study at home		
Did/do your child have a proper space to study at home?		
What is your child's average academic performance? (Based on school reports or observation)		

3. Financial Independence and Decision-Making of Women

3.1. How often do the household members engage in recreation activities?

Member of HH	Relationship to HH	Time spent on TV, radio, newspaper etc.,		Playing		Engaging with other members of the community		Care for elderly/children	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post

Code: Time- 0 to 1 hour- 1, 1 to 3 hours- 2, 3 to 5 hours- 4, more than 5 hours- 6.

3.2. Who in the household makes decisions related to day-to-day expenses or activities?

Husband – 1
Wife – 2
Father-in-law – 3
Mother-in-law – 4

3.3. Do you and your family members have an account in a bank or in any other financial institution that you use?

Member	Account Yes – 1, No - 0		ATM card Yes – 1, No - 0		How often do you withdraw money	Type of deposit/loan
	Pre PMAY	Post PMAY	Pre PMAY	Post PMAY		

Code: Type of loan: Loan for women related schemes – 1, Agricultural loan – 2, agricultural relief – 3, Marriage purpose – 4, House purpose – 5, others – 6.

3.4. Are you usually allowed to go to the following places

Places	Alone- 1, Someone else only- 2, Not at all- 3	Pre PMAY	Post PMAY
To the market			
Hospital/health centre			
To places outside the village			
Marriages/functions			

3.5. How frequently the women are harassed in your village?

Rarely – 1
Sometimes – 2
Often – 3

3.6. How many children did your husband want?

Children number .....
Until a son – 1
Until a daughter – 2
Up to God – 3

3.7. How many cases were lodged in the last one year (related to harassment and violence)?

Total number of cases.....

3.8. Does your household have access to an LPG connection?

Yes – 1
No – 0

3.8. If No in 3.8, what is the main source of energy for cooking?

Firewood – 1
Dung – 2
Gobar gas – 3
Electric – 4
Charcoal – 5

3.8. If firewood, who collects the firewood and how much time is spent on this activity?

HH Member	Who collects	How much time is spent in a week to collect the wood	If buying the wood? How much money is spent on buying the wood

Code: Time- 0 to 1 hour- 1, 1 to 3 hours- 2, 3 to 5 hours- 4, more than 5 hours- 6; Money spent:

4. Health and Nutrition

4.1. Dietary and Nutrition Indicators

4.1.1. Weight and Height

HH member	Weight	Height

Weight in kg, Height in feet

4.1.2. Number of Meals and Quality

		Pre PMAY	Post PMAY
How many times a day do you or your household members eat?	Once -1 Twice -2 Thrice -3 More -4		
How would you rate the quality of your meals?	Excellent -1 Good -2 Fair -3 Poor -4		
How often do you include fruits in your family's diet?	Daily -1 2–3 times a week -2 Once a week -3 Rarely -4		

4.1.3. What prevents you from including more nutritious food in your meals?

High cost of fruits and vegetables -1
Lack of availability in the village -2
Don't know about nutritious foods -3
Family doesn't prefer these foods -4

4.1.4. What do you think are the primary reasons for malnutrition among women in rural areas?

Inadequate dietary intake -1
Early marriages and pregnancies -2
Poor healthcare access -3
All of the above – 4

4.1.5. Does anyone have these problems in your family (children and women)?

Stunting and wasting -1
Hypertension -2
Obesity -3
Arthritis -4

4.2. Food Security

Please answer the following questions regarding food security and coping mechanisms

		Pre PMAY	Post PMAY
Did your household, have to reduce spending on essential items like hygiene products, water, baby items or healthcare to afford food?	Almost Every day -1 At least once a week -2 Less than once a week -3 Not at all -4		
How many days did the women in your household consume less food so children could eat?	Never-1 Rarely (1-5 days)-2 Sometimes (6-15 days)-3 Often (16-25 days)-4 Always (26-30 days)-5		
Do you ever have to choose between buying food and paying bills?	A lot Sometimes - 1 Rarely -2 Never -3		
How often do you eat leftover food the next day?	Always -1 Sometimes -2 Rarely -3 Never -4		

4.3. Hygiene and Sanitation

Please answer the following questions regarding hygiene and sanitation facilities

		Pre	Post
How often do you wash your hands?	Yes-1 No-2		
Do you have a dedicated space for hand washing?	Yes-1 No-2		
Does your household have mosquito bed nets for sleeping?	Yes-1 No-2		
Where do you and your household members (excluding children under 5) usually go for defecation?	Own Toilet-1 Community Toilet-2 Open Field-3		
Are adequate and accessible sanitation facilities in your house for women and girls to manage menstrual hygiene safely and privately?	Yes-1 No-2 Partially-3 Don't Know-4		

4.4. Hospital Visits and Diseases

4.4.1. Does your family have a history of chronic illnesses (e.g., diabetes, hypertension)

Yes, multiple members have chronic illnesses -1
Yes, one member has a chronic illness -2
No history of chronic illnesses -3

4.4.2. Who primarily cares for a family member when they fall sick, especially among the elderly?

	Pre	Post
Spouse-1 Son- 2 Daughter3 Hired care giver-4 No one- 5		

4.4.2. Can you please tell me about your health history?

HH member	Relation to HH	No: visits to the Hospital		No of times fallen ill		Has anyone experienced the following diseases?		What is the average amount spent on healthcare in your household per month?	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post

Code: Diseases: Diarrhoea-1, Cholera-2, Typhoid-3, Hepatitis A and E-4, Malaria-5, Dengue-6, Chikungunya-7, Yellow Fever-8, Asthma-9, Bronchitis-10, Pneumonia-11, Tuberculosis (TB)-12, Cancer-13, Others (Vomiting, Nausea,etc.,)-14

4.4.4. Where do women in your household primarily seek health-related information?

Government healthcare workers (e.g., ASHA, Anganwadi) -1
Family and friends -2
Social Media / TV -3
Don't actively seek information -4

4.4.5. Which type of healthcare facility does your family prefer for treatment?

Government hospital or primary health centre -1
Private clinic or hospital -2
Traditional or home remedies -3
Pharmacy or over-the-counter medicine -4

4.4.6. How far is the nearest healthcare facility from your home?

Less than 1 km -1
1–3 km -2
3–5 km -3
More than 5 km -4

4.4.7. Did you or any family member benefit from Anganwadi schemes or services?

Yes-1
No-2

4.4.8. If yes, specify the benefits received:

Nutritional support for children -1
Nutritional support for pregnant/lactating mothers -2
Pre-school education for children -3
Health checkups and immunization -4
Menstrual Awareness Classes -5

5. About the Programme

5.1. How did you get to know about the PMAY-G scheme?

a)Newspaper/ Radio/TV-1
b)Neighbours -2
c)Gram Sabha-3
d)PR officials-4
e)Others (please specify)-5 .....

5.2. How did you get to know that you were selected?

a)Neighbours-1
b)Gram Sabha-2
c)PR officials-3
d)List displayed on walls -4
e)Others (please specify)-5 .....

5.3. Are you currently staying in the PMAY-G-funded house?

Yes-1 ☐
No-2 ☐

5.4. If yes in 6.3, for what purpose do you use your previous house since you have a PMAY-G house now?

a)Other members are still residing in the kutcha house-1
b)As cattle shed-2
c)Storage purpose-3
d)For other household/economic activities -4
e)Rebuild the structure as new PMAY house-5
f)Not using the previous house -6

5.5. Do you use the new house to help you start any self-employment activities?

5.6. If yes in 6.5, select that apply

a)Tailoring or embroidery services -1
b)Running a home-based shop (e.g., grocery, snacks, or small-scale retail) -2
c)Producing and selling homemade food items (e.g., pickles, snacks, or sweets) -3
d)Operating a day-care or tuition centre for children -4
e)Livestock rearing (e.g., poultry, goats) with shelter in the house premises-5
f)Handicrafts or cottage industry work (e.g., basket weaving, pottery, or handmade products)-6
g)Other (Specify: _____)

5.7. Do you rent the new house for additional income or any other purposes?

Yes-1 ☐

No-2 ☐

5.8. Have you availed of any loan from a bank using your PMAY-G house as collateral?

Yes-1 ☐

No-2 ☐

5.9. If yes, how much money did you borrow?

.....

5.10. How many doors, windows, ventilators & rooms are in your house?

	Pre PMAY	Post PMAY
Door		
Windows		
Rooms		
Ventilations		

5.11. What are the basic amenities you have access to

	Pre PMAY	Post PMAY
LPG		
Electricity		
Drinking water		
Toilet		
Drainage System		

5.12. Are any of the above-mentioned facilities availed through any government schemes? If yes, please specify the name of the scheme for each facility.

a)LPG: .....
b)Electricity:.....
c)Safe Drinking water:.....
d)Toilet:.....
e)Drainage System:.....

5.13. Was the house constructed on your land or land provided by the government?

a)Own land-1
b)Land provided by the government -2

5.14. If the government provided the land for your PMAY-G house, is it near your previous house?

Yes-1 ☐

No-2 ☐

5.15. If the land is not near your previous house, do other communities live in the new area?

Yes-1 ☐

No-2 ☐

5.16. Do your children play with the kids belonging to other communities?

Yes-1 ☐

No-2 ☐

5.17. How has owning a pucca house changed the following aspects of your life?

(Compare your situation before and after PMAY-G ownership.)

		Pre PMAY	Post PMAY
How would you describe the quality of life in your household?	Excellent -1 Good -2 Poor-3		
How would you rate your respect or social status in the community?	High -1 Moderate -2 Low -3		
Did you attend festivals or functions (e.g., marriages) organised by people from other communities?	Never -1 Rarely -2 Occasionally -3 Frequently -4		
Did you invite people from other communities to your festivals or functions (e.g., marriages)?	Never -1 Rarely -2 Occasionally -3 Frequently -4		
Do you feel a sense of safety living in your house?	Yes -1 Somewhat-2 No -3		

If you felt unsafe in the house (Pre-PMAY), specify the reasons:……..

5.18. Are you or your household members using the PMAY house for any income-generating activity?

HH Member	Relation to HoHH	Activity 1	Activity 2	Total income

Code: If yes 1 (specify the activity from the occupation list), If No- 2

5.19. Did you need an additional amount to complete the house?

Yes-1 ☐

No-2 ☐

5.20. If yes, how did you arrange the additional funds?

a)Loan from a bank-1
b)Loan from family/friends-2
c)Money Lenders-3
d)Savings-4
e)Other-5 (Specify: _____)

5.21. Now that you have a pucca house, have you started saving for other purposes

Yes-1 ☐

No-2 ☐

5.22. If yes, what are you saving for?

a)Children's education-1
b)Healthcare expenses-2
c)Agriculture or business investment or self-employment-3
d)Other-4 (Specify: _____)

5.23. Will you allow your child to continue studying after Class 8?

a)Only boy child
b)Only girl child
c)Both boy and girl child
d)None

5.24. Was the construction of your PMAY-G house supported through the MNREGA program (e.g., for labour)?

Yes-1 ☐

No-2 ☐

5.25. If yes, did you receive the payment under MNREGA for the house construction work?

Yes-1 ☐

No-2 ☐

5.26. If not, what was the reason for not receiving the payment?

a)Payment is delayed-1
b)Documentation issues-2
c)Not eligible for payment-3
d)Others-4 (Specify: _____)

5.27. Have you found any increase in work opportunities since you were a part of the construction of your house?

a)Yes, in the village itself
b)Yes, in nearby villages/ cities
c)No
d)Can't say

5.28. Do you still have to look for employment activities in other towns/cities?

Yes = 1
No = 0

5.29. Have you found any increase in work opportunities since you were a part of the construction of your house?

a) Lack of opportunities in the village
b) Better wages in cities or nearby areas
c) Any other

Sample Questionnaire for JJM

Identification of sample household

1.Name of the respondent:
2.Name of the state:
3.Name of the district:
4.Name of the village:
5.Name of Head of Household (HoH)
6.Are the HoH and respondent the same? Yes-1 ☐, No-2 ☐
7.Mobile No. of Respondent/HoH
8.Beneficiary or not? Yes-1 ☐, No-2 ☐
9.Name of the beneficiary:
10.Gender of the Beneficiary: Male -1 ☐, Female-2 ☐, Joint -3 (male and female) ☐
11.Beneficiary registration number:
12.Date of Inception:
13.Year of JJM water connection:

1. Household's Socio-Economic Characteristics

1.1 Household characteristics:

Household type	
Social Group	
Religion	

Are you the main earner in your family? (Yes -1, No -2)	
If No, then who?	
Household Size	
Dwelling unit (owned-1, rented-2, none-3, others-4)	
Structure of dwelling unit (katcha-1, semi-pucca-2, pucca-3)	
Land Owned (in acres)	
Homestead	
Agricultural – Cultivation	
Agricultural – Livestock	
Leased-out	
Others	
Whether the household has leased-in land (Yes-1, No-2)	
If Yes to the above, what is the rent?	
Has the household bought any land recently (Yes-1, No-2)	
If Yes to the above, what was the purpose?	
If Yes, the cost of land	

Household type (to be determined based on the source of major income of the household): self-employment in: crop production -1, farming of animals -2, other agricultural activities -3, non-agricultural enterprise -4; regular wage/salaried earning in: agriculture -5, non- agriculture-6; casual labour in: agriculture – 7, non-

agriculture-8; others (pensioners, remittance recipients, student, engaged in domestic duties, etc.) -9

Social Group: Scheduled Caste-1, Scheduled Tribe -2, OBC-3, Others-4

Religion: Hindu-1, Muslim-2, Christian-3, Others-4

Type of Family: Nuclear-1, Joint-1, Staying single/others-3

1.2. Household consumption expenditure in the last one year

Items	Amount spent	
	Pre-PMAY	Post-PMAY
Cost of repair and maintenance of the house		
Medical and hospital-related		
School or college		
Jewellery and ornaments		
Marriages		
Food and related items		
Transport equipment, repair and maintenance		
Clothing and household appliances		
Vacation and holidays		

1.3. Does the household own any of the following items? (Ask Both current and with respect to JJM)

Item	Yes-1, No-2	If yes, is it pre-PMAY -1; post-PMAY-2
Car		
Motor bike		
Cycle		
TV		
Cooler/fan		
AC		
Refrigerator		
Washing Machine		

1.4. In the last two years, has the household borrowed from any sources?

Source	Yes-1, No-2	Purpose	Amount	Amount pending
Bank/govt prog				
Micro finance, community group/NGO/SHGs				
Money lender				
Employer				
Relatives/friends				
Other Source				

Code- Purpose: Buy/build house – 1, Buy Land/field – 2, Marriage expenses – 3, Agri/related equipment – 4, Start business – 5, Household consumption – 6, Buy car/vehicle- 7, Education – 8, Medical expenses – 9, Sump or any related investment post PMAY -10, Others – 11

1.5. Do you own any livestock such as cows, buffalo or chicken?

Yes – 1
No – 0

1.6. If yes, the total number of livestock and any income earned from selling milk, eggs, meat in the last year? If yes, what have you used it for?

Animal	Nos	Income earned from selling milk, eggs		Income earned from selling animals/meat		What have you used it for?
Buffalo/cows		Pre	Post	Pre	Post	
Sheep/						
Chicken						

Code: Nos: none- 1, 1 to 5 – 2, 5 to 10 – 3, more than 10 – 3; Income earned: none – 1, <10000 – 2, 10000 to 25000 – 3, 25000 to 50000 – 4, 50000 to 1 lakh – 5, 1 lakh to 3 lakh – 6, more than 3 lakh – 7; What have you used it for: Buying land – 1, Buying new livestock – 2, Saved in bank – 3, Bought household items – 4, Bought vehicle- 5, Education – 6, Marriage – 7, Others - 8

1.7. Who in the household helped take care of the animals and how often did you take care of animals?

Family member	Relationship to HH	How often/how much time on a daily basis	
		Pre PMAY	Post PMAY

Code: How often: Never – 1, rarely – 2, Regularly – 3; If the answer is in terms of time (Code)- Time- 0 to 1 hour- 1, 1 to 3 hours- 2, 3 to 5 hours- 4, more than 5 hours- 6.

1.8. Details of family members:

Srl No.	Name of the member	Sex	Relationship to Hoh	Age	Marital Status	Highest Level of Education	Principal Activity in last 12 months		Subsidiary Activity in last 12 months		Income earned/ Wages in last 12 months	Total hours worked in last 12 months
							Pre PMAY	Post PMAY	Pre PMAY	Post PMAY		

Relationship to HoH: Head-1, Wife/Husband-2, Son-3, Daughter-4, Mother-5, Father 6, Brother-7, Sister-8, Son-in-law-9, Daughter in law-9, Grandson-10, Granddaughter-11;

Sex: Male – 1, Female – 2; Marital status: Married – 1, Unmarried – 2, Others – 3.

Level of education: Illiterate- 0, Below primary –1, Secondary (5th-10th)—2, Higher secondary (12th)—3, Graduate—4, Postgraduate—5.

2. Education

2.1. Education Details of Children:

Srl. No.	Name	sex	age	Standard	Type of School	Medium of Instruction	How many days was absent in last 30 days	Reason for absent	Not enrolled, specify the reason

CODE: - Type of school- Government-1, Govt Aided-2, Private-3, Other/Open school-4. Medium of instruction: Local language (State) – 1, English – 2. Not enrolled: Lack of finance – 1, Distance to school – 2, Child not interested – 3, Lack of facilities at school – 4, others – 5.

2.2. Spending on education:

Srl No.	Sex	Amount spent on fees	Amount spent on books, uniform, and other materials	Amount spent on transport	Tuition fees	Total amount	Received any scholarship Yes-1/No-0

2.3. Facilities at School:

Sex	Availability of toilet - Yes-1 No-0	Is the toilet functional Yes-1, No-0	Availability of water tap Yes-1, No-0	Mid-day meal available Yes- 1, No- 0

2.4. Educational Performance

	Pre	Post
How many hours did/ do the children study at home		
Did/do your child have a proper space to study at home?		
What is your child's average academic performance? (Based on school reports or observation)		

3. Financial Independence and Decision-Making of Women

3.1. How often do the household members engage in recreation activities?

Member of HH	Relationship to HH	Time spent on TV, radio, newspaper etc.,		Playing		Engaging with other members of the community		Care for elderly/children	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post

Code: Time- 0 to 1 hour- 1, 1 to 3 hours- 2, 3 to 5 hours- 4, more than 5 hours- 6.

3.2. Who in the household makes decisions related to day-to-day expenses or activities?

Husband – 1
Wife – 2
Father-in-law – 3
Mother-in-law – 4

3.3. Do you and your family members have an account in a bank or in any other financial institution that you use?

Member	Account Yes – 1, No - 0		ATM card Yes – 1, No - 0		How often do you withdraw money	Type of deposit/loan
	Pre PMAY	Post PMAY	Pre PMAY	Post PMAY		

Code: Type of loan: Loan for women related schemes – 1, Agricultural loan – 2, agricultural relief – 3, Marriage purpose – 4, House purpose – 5, others – 6.

3.4. Are you usually allowed to go to the following places

Places	Alone- 1, Someone else only- 2, Not at all- 3	Pre PMAY	Post PMAY
To the market			
Hospital/health centre			
To places outside the village			
Marriages/functions			

3.5. How frequently the women are harassed in your village?

Rarely – 1
Sometimes – 2
Often – 3

3.6. How many children did your husband want?

Children number .....
Until a son – 1
Until a daughter – 2
Up to God – 3

3.7. How many cases were lodged in the last one year (related to harassment and violence)?

Total number of cases.....

3.8. Does your household have access to an LPG connection?

Yes – 1
No – 0

3.8. If No in 3.8, what is the main source of energy for cooking?

Firewood – 1
Dung – 2
Gobar gas – 3
Electric – 4
Charcoal – 5

3.8. If firewood, who collects the firewood and how much time is spent on this activity?

HH Member	Who collects	How much time is spent in a week to collect the wood	If buying the wood? How much money is spent on buying the wood

Code: Time- 0 to 1 hour- 1, 1 to 3 hours- 2, 3 to 5 hours- 4, more than 5 hours- 6; Money spent:

4. Health and Nutrition

4.1. Dietary and Nutrition Indicators

4.1.1. Weight and Height

HH member	Weight	Height

Weight in kg, Height in feet

4.1.2. Number of Meals and Quality

		Pre PMAY	Post PMAY
How many times a day do you or your household members eat?	Once -1 Twice -2 Thrice -3 More -4		
How would you rate the quality of your meals?	Excellent -1 Good -2 Fair -3 Poor -4		
How often do you include fruits in your family's diet?	Daily -1 2–3 times a week -2 Once a week -3 Rarely -4		

4.1.3. What prevents you from including more nutritious food in your meals?

High cost of fruits and vegetables -1
Lack of availability in the village -2
Don't know about nutritious foods -3
Family doesn't prefer these foods -4

4.1.4. What do you think are the primary reasons for malnutrition among women in rural areas?

Inadequate dietary intake -1
Early marriages and pregnancies -2
Poor healthcare access -3
All of the above – 4

4.1.5. Does anyone have these problems in your family (children and women)?

Stunting and wasting -1
Hypertension -2
Obesity -3
Arthritis -4

4.2. Food Security

Please answer the following questions regarding food security and coping mechanisms

		Pre PMAY	Post PMAY
Did your household, have to reduce spending on essential items like hygiene products, water, baby items or healthcare to afford food?	Almost Every day -1 At least once a week -2 Less than once a week -3 Not at all -4		
How many days did the women in your household consume less food so children could eat?	Never-1 Rarely (1-5 days)-2 Sometimes (6-15 days)-3 Often (16-25 days)-4 Always (26-30 days)-5		
Do you ever have to choose between buying food and paying bills?	A lot Sometimes - 1 Rarely -2 Never -3		
How often do you eat leftover food the next day?	Always -1 Sometimes -2 Rarely -3 Never -4		

4.3. Hygiene and Sanitation

Please answer the following questions regarding hygiene and sanitation facilities

		Pre	Post
How often do you wash your hands?	Yes-1 No-2		
Do you have a dedicated space for hand washing?	Yes-1 No-2		
Does your household have mosquito bed nets for sleeping?	Yes-1 No-2		
Where do you and your household members (excluding children under 5) usually go for defecation?	Own Toilet-1 Community Toilet-2 Open Field-3		
Are adequate and accessible sanitation facilities in your house for women and girls to manage menstrual hygiene safely and privately?	Yes-1 No-2 Partially-3 Don't Know-4		

4.4. Hospital Visits and Diseases

4.4.1. Does your family have a history of chronic illnesses (e.g., diabetes, hypertension)

Yes, multiple members have chronic illnesses -1
Yes, one member has a chronic illness -2
No history of chronic illnesses -3

4.4.2. Who primarily cares for a family member when they fall sick, especially among the elderly?

	Pre	Post
Spouse-1 Son- 2 Daughter3 Hired care giver-4 No one- 5		

4.4.2. Can you please tell me about your health history?

HH member	Relation to HH	No: visits to the Hospital		No of times fallen ill		Has anyone experienced the following diseases?		What is the average amount spent on healthcare in your household per month?	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post

Code: Diseases: Diarrhoea-1, Cholera-2, Typhoid-3, Hepatitis A and E-4, Malaria-5, Dengue-6, Chikungunya-7, Yellow Fever-8, Asthma-9, Bronchitis-10, Pneumonia-11, Tuberculosis (TB)-12, Cancer-13, Others (Vomiting, Nausea,etc.,)-14

4.4.4. Where do women in your household primarily seek health-related information?

Government healthcare workers (e.g., ASHA, Anganwadi) -1
Family and friends -2
Social Media / TV -3
Don't actively seek information -4

4.4.5. Which type of healthcare facility does your family prefer for treatment?

Government hospital or primary health centre -1
Private clinic or hospital -2
Traditional or home remedies -3
Pharmacy or over-the-counter medicine -4

4.4.6. How far is the nearest healthcare facility from your home?

Less than 1 km -1
1–3 km -2
3–5 km -3
More than 5 km -4

4.4.7. Did you or any family member benefit from Anganwadi schemes or services?

Yes-1
No-2

4.4.8. If yes, specify the benefits received:

Nutritional support for children -1
Nutritional support for pregnant/lactating mothers -2
Pre-school education for children -3
Health checkups and immunization -4
Menstrual Awareness Classes -5

5. About the Programme

5.1. Beneficiary of JJM Scheme?

Yes – 1
No - 0

5.2. If yes, how did you get to know about JJM scheme?

a)Newspaper/ Radio/TV-1
b)Neighbours -2
c)Gram Sabha-3
d)PR officials-4
e)Others (please specify)-5 .....

5.3. How did you get to know that you were selected?

a)Neighbours-1
b)Gram Sabha-2
c)PR officials-3
d)List displayed on walls -4
e)Others (please specify)-5 .....

5.4. Do you think local authorities influenced the selection of beneficiary

Yes = 1
No = 0
Can't say = 2

5.5. For what purposes the JJM connection water is used for?

Drinking only – 1
Cooking – 2
Washing and cleaning – 3
Drinking water for animals – 4
Bathing – 5

5.6. Before the JJM, where did you get the water from?

Item	Primary source	Other source
Drinking only		
Cooking		
Washing and cleaning		
Drinking water for animals		
Bathing		
How much time is spent on collecting water		

5.7. For the non-beneficiaries what is the main source?

Item	Primary source	Other source
Take from people own JJM connection		
Piped (public supply)		
Tube well		
Hand pump		
Well		
River/canal/stream		
Pond		
Tanker		
How much time is spent on collecting water		
Others		

5.8. Location of piped or hand pump water source:

Inside-1
Outside-2

5.9. If piped water, how many hours per day the water is supplied?

<1hour-1
1-3 hours-2
>3 hours-3
Unlimited supply-

5.10. If inside, is the water supplied adequate?

lYes -1
N0 - 0

5.11. How many trips do you make to the water source in a day?

One – 1
Two – 2
Three – 3

5.12. Currently how much total time is spent on daily in fetching and collecting water, including waiting in line

Code	Adult Women		Adult Men		Girls under 15 (Elder)		Girls under 15 (Young)		Boys under 15 (Elder)		Boys under 15 (Young)		Total time spent by HH fetching water	
<30 min- 1	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
>30 min to 1 hr- 2														
1 hr to 2 hrs- 3														
3 hrs to 5 hrs – 4														
Time spent by each individual														

5.12.a. With the connection of JJM water source, are you involved in any income-generating activity with the time saved?

HH Member	Relation with HH Head	Activity	Activity	Income

How are you using the time? If it is income generating how much are you getting?

5.13. Who usually takes care of the elderly or children?

Spouse – 1
Daughter – 2
Son – 3

5.14. During a normal week, do you ever treat or purify your drinking water by boiling the water or by filtering the water?

Never -1
Rarely -2
Usually-3
Always- 4

5.15. How many days do you store the water?

Consumes same day-1
Two to three days- 2
Three to 5 days- 3
More than 5 days- 4

5.16. Do you spend any amount for buying water from private sources?

Yes-1
No-2

5.17. If yes How much do you spend on weekly basis?

(Amount in rupees) .....

5.18. How does access to piped water benefit you (specifically women in the household)?

Reduces physical strain from fetching water -1
Allows more time for childcare and self-care -2
Decreases risk of waterborne diseases -3
All of the above -4

5.19. Has anyone in your household experienced physical injuries while carrying/fetching water?

HH Member	Relation to HH Head		Neck and spine problems		Headaches and migraines		Shoulder, knee and joint pain	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post

5.20. Has anybody in your household experienced caste discrimination while fetching water?

Yes-1
No-2

5.21. If yes, who faces the most?

HH Member	Relation to HH head	Pre	Post
Adult male – 1			
Adult female – 2			
Girls/daughters – 3			
Boys/Sons – 4			
Both adult female and girls/daughters – 5			
None – 6			

5.21. How many such instances happened in our village?

Number of cases or instances	Pre	Post

5.15. Which community faced the most discrimination?

Within the community (fight for water) – 1
From other caste groups (not allowing other communities) – 2
SC – 1
ST – 2
OBC – 3
Others – 4
None – 5

5.18. If the instances have come down in the post -JM, what do you think is the major reason for reducing the number of violence cases?

In-house water connection – 1
Less demand for the open-source water – 2
Strict punishment given for the past cases/instances – 3
Others Specify .....

karmannya

CII CENTRE FOR
WOMEN
LEADERSHIP

ALLIANCE FOR
GLOBAL GOOD
GENDER EQUITY
AND EQUALITY

WOMEN'S
COLLECTIVE FORUM