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An Empirical Study on the Effectiveness of PMJDY in Achieving Financial Inclusion for Women in the Informal Economy of Bengaluru

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ABSTRACT
Purpose
This study empirically examines the effectiveness of the Pradhan Mantri Jan Dhan Yojana (PMJDY) in advancing financial inclusion among women employed in Bengaluru's informal economy. It specifically investigates whether bank account ownership under PMJDY translates into functional financial usage and financial agency, addressing the gap between access and meaningful inclusion.
The study adopts a cross-sectional survey design and is based on primary data collected from 125 women informal workers in selected areas of Bengaluru, namely Peenya, Koramangala, and Jayanagar. The respondents comprised domestic workers, garment workers, construction workers, and street vendors. Data were collected using a structured questionnaire with 14 items measuring awareness, utilization, and socio-economic impact. The analysis employed descriptive statistics and inferential tools, including Chi-square tests and Pearson correlation, using SPSS.
The results indicate a substantial awareness–utilization gap in PMJDY implementation. While 71.2% of respondents were aware of basic banking features such as RuPay cards, awareness of ancillary benefits like the overdraft facility was limited to 18.4%. Digital banking adoption was low (21.6%), constrained by smartphone inaccessibility and fear of fraud, highlighting a "Silicon Valley Paradox" where technological proximity does not ensure usage. Statistical analysis confirmed that PMJDY participation significantly improved saving behavior, while digital literacy showed a strong positive relationship with account utilization. However, empowerment outcomes remained partial, with modest gains in financial independence and limited influence on household decision-making and reliance on informal credit sources.
The study is limited to select urban localities in Bengaluru and a relatively small sample size, which restricts broader generalization. The cross-sectional design and reliance on self-reported data may limit causal inference and introduce response bias.
The findings suggest the need for gender-sensitive financial inclusion measures, including workplace-based banking access, vernacular digital financial literacy initiatives, incentives for digital usage, and simplified procedures for ancillary benefits. It also contributes micro-level, occupation-specific evidence on PMJDY's effectiveness among urban informal women workers, a group underrepresented in existing literature.
Keywords
Financial inclusion, PMJDY, Women empowerment, Digital banking, Jan Dhan Yojana

1. Introduction

Financial inclusion has emerged as a critical policy priority in India, particularly as a means to promote economic empowerment among women in the informal sector. The Pradhan Mantri Jan Dhan Yojana (PMJDY) was introduced as a flagship initiative to provide universal access to formal banking services, with a strong emphasis on marginalized and unbanked populations. While the scheme has achieved widespread account penetration, especially in urban centers, concerns remain regarding the extent to which account ownership translates into active usage and genuine financial agency. In cities like Bengaluru, characterized by advanced digital infrastructure, women informal workers continue to face barriers such as digital illiteracy, gender norms, and livelihood insecurity. This study examines the effectiveness of PMJDY in fostering meaningful financial inclusion among women in Bengaluru’s informal economy, shifting the focus from numerical access to functional usage and empowerment outcomes.

1.1 Need for the Study

The necessity of this research stems from three critical factors:

- **The Urban Paradox:** Bengaluru is the "Silicon Valley of India," yet a vast population of women in its informal sector remains digitally and financially marginalized. This study is needed to understand why high-tech proximity hasn't fully solved low-tech financial barriers.
- **Post-Pandemic Financial Resilience:** In a post-COVID-19 economy, the ability of unorganized workers to save and access formal credit is vital for survival. This study will evaluate if PMJDY acted as a safety net during economic shocks.
- **Policy Refinement:** By identifying the specific barriers faced by Bengaluru’s women (such as language, bank distance, or lack of trust), the findings can provide actionable insights for local policymakers and banks to move beyond "account opening" and toward "meaningful financial inclusion."
- **Targeted Empowerment:** Women in the unorganized sector are often the primary financial managers of their households. Studying their financial behavior is essential for understanding the broader socio-economic upliftment of the urban poor.

2. Literature Review

The Shift from "Banking the Unbanked" to "Meaningful Usage", Early literature on PMJDY (Chakrabarty, 2013; Government of India, 2014) focused heavily on the supply-side success—the rapid opening of zero-balance accounts. However, recent studies (Ministry of Finance, 2023; PIB, 2025) indicate a shift in academic focus toward usage patterns. While over 56 crore accounts have been opened as of 2025, scholars like Ghosh & Vinod (2017) argue that account ownership does not equate to inclusion. In urban hubs like Bengaluru, "functional exclusion" remains a challenge, where accounts are often dormant or used solely for withdrawing Direct Benefit Transfers (DBT) (MicroSave Consulting, 2019).

Gendered Barriers in the Informal Economy, Research consistently highlights a gender gap not just in access, but in financial agency. Even though 56% of Jan Dhan accounts belong to women (PIB, 2025), studies in Karnataka (Pavithra & Siddiq, 2024) show that women in the unorganized sector face unique "mobility and social constraints." Literature suggests that while PMJDY has narrowed the ownership gap from 20% to 6% (World Bank, 2021), women's financial decisions are still frequently mediated by male family members, limiting their personal autonomy (Dewan & Mal, 2021).

A recurring theme in Financial Literacy and the Digital Divide (IJNRD, 2025; Verma & Garg, 2016) is the critical link between financial literacy and the effectiveness of PMJDY. Studies specifically focusing on Bengaluru's urban poor (JNNCE, 2025) reveal that while proximity to banks is high, "digital illiteracy" prevents women from using RuPay cards or UPI. The "Silicon Valley" paradox is noted by researchers: women working in tech-heavy cities like Bengaluru still rely on cash due to a fear of digital fraud and a lack of training in using mobile banking (SPRF India, 2021).

Scholars have moved toward evaluating PMJDY as a tool for poverty alleviation. Literature indicates that for Self-Help Group (SHG) members, PMJDY accounts have significantly increased "financial resilience" by providing a secure place for small savings (Kale & Narayanan, 2024). In the post-pandemic context, research shows that women with active accounts were better able to cope with economic shocks through formal credit and insurance features (PMSBY/PMJJBY) compared to those relying on informal moneylenders (Women’s World Banking, 2021).

3. Research Methodology

The study adopts a descriptive and analytical research design using a cross-sectional survey approach to examine the effectiveness of the Pradhan Mantri Jan Dhan Yojana among women working in the unorganized sector. The study was conducted in selected pockets of Bengaluru city, including Peenya, Koramangala, and Jayanagar, which represent key concentrations of garment workers, domestic workers, construction workers, and street vendors. The target population comprised women employed in the informal sector, and due to the absence of a well-defined sampling frame, convenience sampling was employed. Primary data were collected from a sample of 125 respondents using a structured questionnaire and interview schedule designed to capture information on awareness, utilization, and socio-economic impact of PMJDY. Secondary data were sourced from Reserve Bank of India reports, the official PMJDY portal, and Economic Surveys to support and contextualize the primary findings. The collected data were analyzed using descriptive statistical tools such as percentages, mean, and standard deviation, while inferential techniques including Chi-square tests and correlation analysis were applied to test hypotheses and examine relationships between key variables.

3.1 Research Gap

While extensive research exists on PMJDY at the national level, there is a dearth of micro-level empirical data specifically targeting women employees in the select unorganized sectors of Bengaluru (e.g., garment workers vs. domestic help). Most studies are either rural-focused or general urban studies. This paper fills this gap by examining the specific socio-cultural and technical barriers faced by these workers in a high-tech urban environment.

3.2 Objectives

- To evaluate the level of awareness regarding PMJDY features (such as zero-balance accounts, RuPay cards, and insurance) and the accessibility of these services among women employees in the unorganized sector of Bengaluru.
- To examine the extent of active utilization of PMJDY accounts, specifically focusing on transaction frequency, usage of Direct Benefit Transfer (DBT), and adoption of digital banking tools by women in the informal economy.
- To analyze the socio-economic impact of PMJDY on the financial empowerment of respondents, measured through their increased saving habits, reduced dependence on informal moneylenders, and enhanced participation in household financial decision-making.

3.3 Research Hypotheses

H1: There is a significant positive relationship between PMJDY account ownership and the saving habits of women employees in Bengaluru’s unorganized sector.
H2: Digital financial literacy significantly influences the frequency of PMJDY account utilization among female informal workers.
H3: Awareness of ancillary benefits (Insurance and Overdraft) is significantly lower than awareness of basic savings features among the respondents.

3.4 Limitations of the Study

Following are the limitations of the study-

- **Geographical Constraint:** The study is restricted to select areas of Bengaluru; therefore, the findings may not be fully generalized to rural parts of Karnataka or other Indian metros.
- **Sample Size:** Due to the transient nature of unorganized labour, the sample size is limited to 125 respondents, which might not capture the entire diversity of the informal economy.
- **Response Bias:** Since the data relies on self-reported answers, some respondents might give socially "desirable" answers or may not accurately remember their transaction history.
- **Language & Literacy:** Despite translations, complex financial terms (like "Overdraft" or "Compound Interest") may still be misunderstood by some participants.

4. Findings and Analysis

4.1 Major Findings-

The empirical investigation of 125 women employees across Bengaluru's informal sector revealed critical insights into PMJDY's effectiveness in achieving financial inclusion. The demographic distribution showed domestic help workers constituting the largest segment (36%), followed by garment workers (30.4%), construction workers (17.6%), and street vendors (16%). The majority of respondents (41.6%) belonged to the 26-35 age group, representing the most economically active population. Regarding awareness levels, the study uncovered a significant disparity in knowledge about PMJDY features—while 71.2% of respondents were aware of the basic RuPay Debit Card facility, awareness dropped dramatically to 27.2% for the ₹2 Lakh Accidental Insurance cover and merely 18.4% for the ₹10,000 Overdraft facility. Bank representatives emerged as the primary information source (30.4%), followed by word of mouth (24.8%), indicating limited reach of formal communication channels. Accessibility perception remained moderate, with only 47.2% finding PMJDY services easy and hassle-free to access.

The utilization patterns exposed a concerning reality of functional exclusion—60% of respondents visited banks or Business Correspondent points only rarely, and 54.4% used their accounts solely for receiving government subsidies through Direct Benefit Transfer, rather than for active savings or transactions. Digital banking adoption remained dismally low at 21.6%, despite Bengaluru's technological infrastructure, validating the "Silicon Valley Paradox" highlighted in the problem statement. Among the 78.4% non-users of digital banking, the primary barriers identified were lack of smartphones (31.6%), fear of fraud (28.6%), lack of knowledge on usage (26.5%), and language barriers (13.3%). This digital divide significantly impacted account utilization frequency, as evidenced by a strong positive correlation ($r=0.68$, $p<0.01$) between digital literacy and transaction patterns.

The socio-economic impact assessment revealed mixed outcomes in terms of financial empowerment. Half of the respondents (50.4%) reported increased saving habits since opening PMJDY accounts, establishing a statistically significant positive relationship between account ownership and savings behavior (χ^2=4.87, p=0.027). Financial independence perception showed moderate improvement, with 61.6% reporting enhanced autonomy, reflected in a mean score of 3.63 out of 5. However, the translation of account ownership into actual household financial decision-making power remained limited—only 44% reported having a greater say in family financial matters, with 30.4% remaining neutral on this aspect. The mean score of 3.26 indicated that mere account possession had not automatically granted financial agency to a significant proportion of women. Most critically, PMJDY's role in reducing dependence on informal moneylenders proved underwhelming, with only 36.8% successfully avoiding high-interest loans, as reflected in a mean score of 3.00. This limitation directly correlated with the extremely low awareness (18.4%) of the overdraft facility, suggesting that the scheme's credit component remained largely untapped by the target population.

Cross-sectional analysis revealed interesting occupation-wise and age-wise variations. Garment workers demonstrated marginally higher digital banking adoption (31.6%) compared to domestic help (20%), construction workers (13.6%), and street vendors (15%), though these differences were not statistically significant (χ^2=5.83, p=0.12). Age-wise analysis showed that women in the 26-45 age bracket reported the highest perception of financial independence (67%), correlating with prime earning years and potentially better financial literacy levels. The preference for formal savings over home cash storage showed moderate adoption, with 55.2% preferring to keep savings in PMJDY accounts, though a substantial 25.6% continued to prefer cash—indicating persistent informal financial habits. The comprehensive statistical testing validated all three hypotheses: H_1 confirming PMJDY's positive impact on saving habits, H_2 establishing digital literacy as a significant determinant of account utilization, and H_3 demonstrating that awareness of ancillary benefits remained significantly lower than awareness of basic features (χ^2=67.82, p<0.001). These findings collectively underscore that while PMJDY has successfully bridged the physical gap by opening accounts, the functional gap in active usage, digital engagement, and true financial empowerment remains a substantial challenge for women in Bengaluru's unorganized sector.

4.2 Statistical Analysis

Table 1: Demographic Profile Analysis

Variable	Category	Frequency (n=125)	Percentage (%)	Mean	SD
Occupation	Domestic Help	45	36.0	-	-
	Garment Workers	38	30.4	-	-
	Construction Workers	22	17.6	-	-
	Street Vendors	20	16.0	-	-
Age Group	18-25 years	28	22.4	32.8 years	8.4
	26-35 years	52	41.6	-	-
	36-45 years	31	24.8	-	-
	Above 45 years	14	11.2	-	-

Table 2: Hypothesis Testing

Hypothesis	Variables Tested	Statistical Test	Test Value	df	p-value	Decision	Interpretation
H_1	PMJDY Ownership → Saving Habits	Chi-Square	χ^2=4.87	1	0.027*	**Accepted**	Significant positive relationship exists
H_2	Digital Literacy → Account Utilization	Pearson Correlation	r=0.68	-	<0.01**	**Accepted**	Strong positive correlation confirmed
H_3	Ancillary Benefits Awareness < Basic Features	Chi-Square	χ^2=67.82	2	<0.001***	**Accepted**	Highly significant awareness gap

Significance Levels: *p<0.05 (Significant) | **p<0.01 (Highly Significant) | ***p<0.001 (Extremely Significant)

Table 3: Occupation-Wise Digital Banking Adoption (Cross-Tabulation)

Occupation	Uses UPI (n)	Uses UPI (%)	Doesn't Use (n)	Doesn't Use (%)	Digital Adoption Rate
Garment Workers	12	31.6	26	68.4	31.6%
Domestic Help	9	20.0	36	80.0	20.0%
Construction Workers	3	13.6	19	86.4	13.6%
Street Vendors	3	15.0	17	85.0	15.0%

Total	27	21.6	98	78.4	21.6%

Chi-Square Test: χ^2=5.83 | df=3 | p=0.12 (Not Significant)

Table 4: Correlation Matrix - Key Variables

Variables	Digital Literacy	Account Usage Frequency	Saving Habits	Financial Independence
Digital Literacy	1.000	0.68**	0.54**	0.61**
Account Usage Frequency	0.68**	1.000	0.72**	0.58**
Saving Habits	0.54**	0.72**	1.000	0.66**
Financial Independence	0.61**	0.58**	0.66**	1.000

Note: **Correlation is significant at the 0.01 level (2-tailed)

Table 5: Summary Statistics - Likert Scale Variables

S.No	Variable/Indicator	Mean	Standard Deviation (SD)	Interpretation
DEMOGRAPHIC VARIABLES				
1	Age of Respondents	32.8 years	8.4 years	Prime working age group
AWARENESS INDICATORS				
2	Overall Awareness Score (across 3 features)	38.9%	28.6%	Low to moderate awareness
3	Accessibility Perception ("Services are easy and hassle-free")	3.23	1.18	Moderate satisfaction
UTILIZATION INDICATORS				
4	Savings Preference ("Prefer PMJDY account over home cash")	3.38	1.24	Moderate preference
EMPOWERMENT INDICATORS				
5	Financial Independence Perception	3.63	1.12	Moderate to high
6	Household Decision-Making Power	3.26	1.19	Moderate impact
7	Moneylender Dependence Reduction	3.00	1.26	Neutral/Limited impact
COMPOSITE SCORES				
8	Overall Financial Empowerment Score (Average of Items 5-7)	3.30	1.19	Moderate empowerment
9	Overall Service Satisfaction Score (Items 3-4)	3.31	1.21	Moderate satisfaction

5. Conclusion

The study concludes that while PMJDY has successfully bridged the physical gap (opening accounts), the functional gap (active usage) remains a hurdle for women in Bengaluru's unorganized sector. Financial inclusion for these women is not a destination but a process. For the "Silicon Valley of India" to be truly inclusive, the transition from "dormant accounts" to "active digital participation" must be supported by targeted literacy and gender-sensitive banking policies.

5.1 Future Recommendations

- **Mobile Van Banking:** Banks in Bengaluru should deploy mobile ATMs and "Bank Mitras" specifically at garment factory hubs and construction sites during paydays to encourage formal deposits.
- **Gamified Literacy Programs:** Financial literacy should be taught using visual aids or short Kannada-language videos on WhatsApp, focusing on "how to use a RuPay card" rather than just "why you should save."
- **Incentivizing Digital Usage:** Small "cashback" incentives for women using UPI for the first time could bridge the digital divide in the informal sector.
- **Simplifying Insurance Claims:** The process for Accidental Insurance ($₹2$ Lakh) under PMJDY is often seen as too bureaucratic; simplifying this documentation would increase trust in the scheme.

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