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Constraints to Effective Financial Inclusion among MSMEs in Uttar Pradesh: Credit Access, Digital Participation and Enterprise Support under PMMY

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Abstract

Financial inclusion has expanded rapidly in India, but a formal account or an approved loan does not automatically ensure that a micro enterprise can use finance effectively. This paper examines the constraints that continue to shape effective financial inclusion among micro and small enterprises in Uttar Pradesh under the Pradhan Mantri Mudra Yojana (PMMY). Evidence comes from a field survey of 400 MSME entrepreneurs in selected districts of the state using a structured questionnaire supported by interviews and field observation. The sample was predominantly rural and semi-urban, and 91.5% of surveyed units were micro enterprises. PMMY penetration was substantial, with 70.5% of respondents reporting beneficiary status, although 43.3% of the full sample remained concentrated in the Shishu category. Digital participation was uneven: 39.3% used digital payments regularly, 16.0% reported high use, and 67.5% had adopted UPI/QR payments. Lack of finance was the most frequently reported business challenge (26.3%), followed by market competition, raw-material costs, delayed payments, infrastructure problems, digital-literacy gaps, marketing/branding difficulties and skilled-labour shortages. The findings show that effective inclusion is constrained by a combination of credit, capability and market-side barriers. A credit-plus model that combines timely finance with digital capability, business counselling, market linkage and post-loan support is therefore required to convert formal access into durable enterprise participation.

Keywords: Financial Inclusion, MSMEs, PMMY, Mudra Loans, Digital Payments, Financing Constraints, Uttar Pradesh.

Introduction

Micro, small and medium enterprises are central to India's employment structure, local production networks and entrepreneurial economy. Their importance is particularly visible in Uttar Pradesh, where micro businesses, household enterprises, traditional clusters, retail trade, handicrafts and small service units provide livelihood opportunities across rural, semi-urban and urban settings. Yet the smallest firms often operate with thin working capital, incomplete records and limited bargaining power. These characteristics make access to affordable and timely finance a persistent development concern.

The policy idea of financial inclusion emerged to address such exclusion from formal finance. Rangarajan (2008) defined inclusion around timely and adequate access to financial services at an affordable cost, while later frameworks have emphasized that access must be accompanied by active use, quality and consumer capability. The Global Findex work similarly distinguishes between mere ownership of financial accounts and meaningful use of payments, savings and credit (Demirgüç-Kunt et al., 2018). For micro enterprises, the distinction is important because an entrepreneur can be formally included yet remain constrained by inadequate loan size, procedural delays, irregular digital use, weak market access or insufficient business support.

India's financial inclusion architecture has gradually moved from branch expansion and priority-sector lending toward a broader ecosystem involving Jan Dhan accounts, Aadhaar-enabled services, business correspondents, digital payments and targeted enterprise finance. The Reserve Bank of India's National Strategy for Financial Inclusion 2019–2024 treats access, usage, quality, financial literacy and livelihood support as interconnected dimensions rather than isolated policy goals (Reserve Bank of India [RBI], 2020). This framework is highly relevant to MSMEs because the productive value of finance depends on whether it can be used to stabilize working capital, purchase inputs, make transactions, build records and reach customers.

Pradhan Mantri Mudra Yojana, launched in 2015, became a major instrument for extending collateral-free institutional credit to non-corporate, non-farm micro enterprises. Its Shishu, Kishore and Tarun categories correspond to different financing requirements and stages of enterprise development (MUDRA, 2024). The scheme is especially significant for first-generation, rural and women entrepreneurs who may lack conventional collateral or established credit histories. However, large loan volumes alone do not establish that financial inclusion is effective. Implementation quality depends on whether entrepreneurs can move beyond entry-level credit, use formal financial tools regularly and overcome market, infrastructure and capability constraints.

Existing research generally supports a positive relationship between financial inclusion and enterprise development, while also warning that credit is not sufficient by itself. Ghosh (2022) notes that the usefulness of PMMY depends on productive loan utilization and enterprise conditions. Jain and Ghosh (2023) connect digital financial inclusion with narrowing the rural MSME credit divide, whereas Solanki and Chhikara (2024) identify institutional and implementation constraints that can weaken the effectiveness of PMMY. The broader MSME finance literature also points to documentation gaps, limited credit histories and informal accounting as barriers to institutional lending (Small Industries Development Bank of India [SIDBI], 2023).

Against this background, the present paper shifts attention from beneficiary growth comparisons to a different question: what limits the conversion of formal financial access into effective and sustained inclusion? The analysis focuses on the structure of the surveyed enterprise population, the depth of PMMY participation, the pattern of digital-payment adoption and the main constraints reported by respondents. This focus provides a policy-relevant picture of the last-mile problems that remain after access has expanded.

Objectives of the Study

The paper has five objectives: (1) to describe the rural, enterprise-size and gender profile of surveyed MSMEs; (2) to examine the depth of PMMY participation through beneficiary status and Mudra loan category; (3) to assess digital-payment usage and UPI/QR adoption as indicators of active financial participation; (4) to identify and rank the principal business constraints faced by MSMEs; and (5) to derive policy measures for strengthening effective financial inclusion through a credit-plus support model.

Literature Review and Analytical Perspective

Financial inclusion is a multidimensional concept. The World Bank (2022) emphasizes access to useful and affordable financial products delivered responsibly, while the RBI (2020) adds the dimensions of usage, quality, financial literacy and consumer protection. For MSMEs, this means that formal inclusion should be evaluated through the practical capacity to obtain finance, conduct transactions, manage repayment, maintain records and use financial services for productive activity.

The logic of financial intermediation explains why micro enterprises may remain credit constrained even where demand is strong. Banks assess risk using collateral, documentation, transaction history and repayment capacity. Smaller and informal firms often have weak records, irregular cash flows and limited assets, which increase information asymmetry and perceived lending risk. Policy-backed schemes can widen access, but they do not automatically eliminate the underlying information and capability gaps. SIDBI (2023) therefore treats formalization, credit information and enterprise capacity as important parts of the MSME finance ecosystem.

PMMY addresses the collateral barrier by providing institutional credit through a graded framework. Shishu serves early-stage and very small units, Kishore addresses growing enterprises and Tarun supports larger expansion requirements (MUDRA, 2024). A high concentration in Shishu can be interpreted in two ways. It demonstrates reach among grassroots entrepreneurs, but it may also signal that many borrowers remain at an entry stage rather than graduating toward expansion finance. NITI Aayog (2024) has emphasized the importance of assessing PMMY beyond aggregate disbursement by considering enterprise-level outcomes and implementation conditions.

Digital financial inclusion adds another layer to this discussion. Digital transactions can reduce the cost and time of small payments, create financial trails, improve bookkeeping and strengthen the visibility of cash flows. National Payments Corporation of India (2024) documents the rapid expansion of UPI as a low-cost payment infrastructure. For MSMEs, QR-based acceptance can be especially relevant because it requires relatively low investment. Yet adoption is not equivalent to active use. Occasional use may produce limited benefits when entrepreneurs continue to transact mainly in cash, lack digital confidence or face connectivity problems. RBI (2020) consequently places digital financial literacy and customer protection alongside access.

Implementation research also shows that non-financial constraints can reduce the productivity of credit. Solanki and Chhikara (2024) identify institutional barriers in PMMY implementation, including delivery and awareness issues. Market access, input costs, delayed receivables and infrastructure can absorb working capital even after a loan is obtained. In this context, the appropriate unit of policy is not the loan alone but the enterprise ecosystem around the borrower. A credit-plus approach integrates finance with business guidance, digital capability, market access and post-loan handholding.

Women's participation is another important dimension. PMMY has often been discussed as a platform for improving women's access to formal credit. Rathee and Aggarwal (2025) associate microcredit with entrepreneurship and women's empowerment, but the economic value of credit depends on business capability, mobility, market access and control over financial decisions. The present study does not estimate

a separate gender effect; instead, the relatively high female representation in the sample is treated as evidence that gender-sensitive delivery remains important.

Methodology

The investigation followed a quantitative, descriptive-analytical and cross-sectional design. The final dataset comprised 400 MSME entrepreneurs selected from districts of Uttar Pradesh and covered rural, semi-urban and urban enterprises. Information was obtained through a structured questionnaire, supplemented by personal interaction, interviews and field observation. Stratified random sampling was applied so that location, enterprise type, business activity, gender and Mudra category were represented in the survey.

The instrument covered entrepreneur and enterprise characteristics, PMMY participation, institutional finance, digital banking, financial literacy, business conditions and constraints. Before the main survey, the questionnaire was tried with 40 entrepreneurs; these pilot respondents were not retained in the final analytical sample. The overall Cronbach's alpha was .892, indicating high internal consistency. The analysis in this paper is deliberately restricted to variables relevant to access quality and implementation constraints: area type, enterprise category, gender, PMMY beneficiary status, Mudra category, digital-payment frequency, UPI/QR adoption and the respondent's principal business challenge. Frequencies and percentages are used because the purpose is to diagnose the structure and incidence of constraints rather than repeat the growth-outcome tests used elsewhere in the broader study.

Results and Discussion

Profile of the Enterprises

The sample was strongly oriented toward the segments for which financial inclusion is most consequential. Rural respondents accounted for 49.0% and semi-urban respondents for 34.0%, leaving only 17.0% from urban areas. Thus, 83.0% of the sample came from rural and semi-urban settings. Micro enterprises represented 91.5% of all surveyed units, compared with 8.5% small enterprises. Women constituted 52.8% of respondents.

Table 1. Selected Profile of Surveyed MSMEs

Indicator	Category	Frequency	Percentage
Area	Rural	196	49.0%
Area	Semi-urban	136	34.0%
Area	Urban	68	17.0%
Enterprise size	Micro	366	91.5%
Enterprise size	Small	34	8.5%
Gender	Female	211	52.8%
Gender	Male	189	47.2%

Note. Percentages are based on the full sample (N = 400).

This profile matters for interpretation. Rural and semi-urban micro firms typically operate with smaller asset bases, less formal documentation and thinner access to specialized financial and business services. The high share of micro enterprises therefore indicates that the analysis captures the segment most exposed to small-ticket credit constraints. At the same time, the representation of women suggests that improvements in PMMY delivery and digital access can have implications for gender-inclusive entrepreneurship, even though the present analysis does not claim a separate causal empowerment effect.

Depth of PMMY Participation

PMMY had reached a large proportion of the surveyed enterprises: 282 respondents, or 70.5%, were beneficiaries, while 118 respondents, or 29.5%, had not availed a Mudra loan. However, the loan-category distribution shows that reach and depth are not identical. Shishu borrowers accounted for 43.3% of the full sample, Kishore 19.5% and Tarun only 7.8%; 29.5% had not availed PMMY.

Table 2. PMMY Participation and Digital Inclusion Indicators

Indicator	Category	Frequency	Percentage
PMMY status	Beneficiary	282	70.5%
PMMY status	Non-beneficiary	118	29.5%
Mudra category	Shishu	173	43.3%
Mudra category	Kishore	78	19.5%
Mudra category	Tarun	31	7.8%
Mudra category	Not availed	118	29.5%
Digital payment use	Regular	157	39.3%
Digital payment use	High	64	16.0%
Digital payment use	Occasional	114	28.5%
Digital payment use	Never	65	16.3%
UPI/QR adoption	Yes	270	67.5%
UPI/QR adoption	No	130	32.5%

Note. Percentages are based on the full sample (N = 400).

The concentration in Shishu is consistent with the grassroots design of PMMY, but it also raises the issue of credit graduation. If viable enterprises remain confined to initial small-ticket credit, they may be unable to finance machinery, larger inventories, formal premises or wider market expansion. Effective inclusion therefore requires a progression mechanism in which good repayment history and business performance can support timely movement from Shishu to higher categories. This interpretation is consistent with the graded design of PMMY itself (MUDRA, 2024).

Digital Adoption as a Marker of Active Inclusion

Digital participation was substantial but uneven. Regular digital-payment use was reported by 39.3% of respondents and high use by 16.0%. A further 28.5% used digital payments only occasionally, while 16.3% never used them. When a simpler adoption indicator was considered, 67.5% reported UPI/QR adoption and 32.5% did not.

These figures demonstrate why account ownership or availability of payment infrastructure should not be equated with effective digital inclusion. More than half of respondents were regular or high users, which indicates a meaningful shift toward formal transaction channels. Yet 44.8% were either occasional users or non-users. Occasional adoption may not create a sufficiently consistent transaction trail to improve bookkeeping or strengthen the borrower's financial visibility. The one-third non-adoption rate for UPI/QR is also important because these are among the most accessible digital payment tools for small firms.

The finding supports an active-use perspective. Digital tools generate value when they become routine parts of sales collection, supplier payment, repayment and record keeping. Training should therefore move beyond

basic awareness or app installation toward practical use cases, fraud prevention, reconciliation of digital receipts, invoice records and digital bookkeeping. Such capability-building is particularly relevant in rural and semi-urban settings where connectivity, device access and digital confidence can vary.

Nature of the Constraints

The ranking of challenges provides the clearest evidence that effective financial inclusion is multidimensional. Lack of finance was the single most frequently reported challenge, identified by 26.3% of respondents. Market competition ranked second at 13.5%, followed by raw-material cost at 12.5%. Delayed payments and infrastructure problems were each reported by 11.0%. Digital-literacy gaps accounted for 10.3%, marketing and branding challenges for 9.3%, and skilled-labour shortages for 6.3%.

Table 3. Major Challenges Reported by MSMEs

Major challenge	Frequency	Percentage
Lack of finance	105	26.3%
Market competition	54	13.5%
Raw-material cost	50	12.5%
Delayed payments	44	11.0%
Infrastructure problems	44	11.0%
Digital-literacy gap	41	10.3%
Marketing/branding challenge	37	9.3%
Skilled-labour shortage	25	6.3%

Note. Percentages are based on the full sample (N = 400).

The dominance of lack of finance confirms that the credit problem has not disappeared despite substantial PMMY penetration. This may reflect insufficient amount, unmet demand, timing problems or the continuing needs of non-beneficiaries and expanding enterprises. At the same time, almost three-quarters of respondents identified a principal constraint other than finance. This is a critical policy finding. An enterprise can receive formal credit and still experience weak performance if cash is locked in delayed receivables, raw-material prices rise, infrastructure is unreliable or the firm cannot reach customers.

Delayed payments are particularly important for micro firms because they convert a market transaction into a working-capital problem. A small business may have sales on paper but still lack liquidity to restock or meet repayment obligations. Likewise, market competition and marketing/branding difficulties indicate that access to finance must be complemented by demand-side support. Digital-literacy gaps can affect both payment adoption and the ability to use online marketplaces, digital bookkeeping and formal financial products. The constraint structure therefore supports a broader enterprise-development approach rather than a narrow loan-disbursement approach.

Policy Implications

The findings suggest five practical priorities. First, credit delivery should increasingly include a graduation pathway. Successful Shishu borrowers with satisfactory repayment records need simplified access to larger credit where business conditions justify it. This would align the financing structure with enterprise development rather than treating every loan as an isolated transaction.

Second, digital capability should be integrated into loan support. Banks, district industries centres and MSME facilitation agencies can provide short, practical modules on UPI/QR use, transaction safety, digital

bookkeeping and maintenance of records that may later support credit assessment. Digital literacy should be treated as a business skill rather than as a general awareness campaign.

Third, post-loan handholding should address market and cash-flow constraints. Borrowers may require support for branding, e-commerce onboarding, local procurement opportunities, invoice management and business planning. The high incidence of market competition, input-cost pressure and delayed payments shows that credit productivity depends on what happens after disbursement.

Fourth, policy delivery should remain sensitive to place and gender. The high rural and semi-urban representation means that block- and district-level facilitation is essential. Women's strong representation also supports the use of women-focused counselling, peer networks and assistance with documentation, digital transactions and market linkage.

Fifth, evaluation of PMMY should balance scale indicators with quality indicators. Disbursement counts are important, but they should be supplemented by measures such as repeat use of formal finance, progression across loan categories, digital transaction regularity, repayment quality, business formalization and access to non-credit support. Such indicators are closer to the idea of effective financial inclusion advanced by the RBI (2020) and the World Bank (2022).

Conclusion

The evidence from 400 MSME entrepreneurs in Uttar Pradesh shows that formal financial access has expanded meaningfully, but effective inclusion remains incomplete. PMMY reached 70.5% of respondents, yet participation was concentrated in the entry-level Shishu category. Digital adoption was substantial, but a sizeable group remained occasional users or non-users. Most importantly, lack of finance remained the leading reported challenge, while market competition, input costs, delayed payments, infrastructure, digital literacy and marketing constraints together formed a wider ecosystem of barriers.

The central implication is that financial inclusion for MSMEs should be judged by the ability of enterprises to use finance productively and repeatedly, not only by the existence of an account or a sanctioned loan. PMMY can remain a strong gateway to formal finance, but its developmental effect is likely to be greater when credit is accompanied by progression opportunities, digital capability, business counselling, market linkage and post-loan support. For Uttar Pradesh, where micro, rural and women-led enterprises form an important part of the entrepreneurial base, a credit-plus strategy offers a more complete route from financial access to sustained economic participation.

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