LEAD LEVERAGING EVIDENCE FOR ACCESS AND DEVELOPMENT
KREA UNIVERSITY

CREDIT AS A CATALYST:
UNLOCKING GROWTH AND RESILIENCE FOR INDIA'S NANO ENTERPRISES

INSIGHTS FROM A **LONGITUDINAL STUDY**

REPORT • JULY 2025

Acknowledgements

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About LEAD at Krea University

LEAD LEVERAGING EVIDENCE FOR ACCESS AND DEVELOPMENT
KREA UNIVERSITY

LEAD is an action-oriented research centre that leverages the power of research, innovation and co-creation to solve complex and pressing challenges in development. Since 2005, LEAD has been at the forefront of generating actionable insights and testing innovations to enable financial access and unlock growth for Micro, Small and Medium Enterprises in India. LEAD is housed at the Institute for Financial Management and Research (IFMR), a not-for-profit society, which is also the Sponsoring Body of Krea University.

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List of Acronyms and Abbreviations

Capex	-	Capital Expenditure
CGTMSE	-	Credit Guarantee Fund Trust for Micro and Small Enterprises
CIBIL	-	Credit Information Bureau (India) Limited
CMIE	-	Centre for Monitoring Indian Economy
CRISIL	-	Credit Rating Information Services of India Limited
ECLGS	-	Emergency Credit Line Guarantee Scheme
DTI	-	Debt-to-Income Ratio
GST	-	Goods and Services Tax
GVA	-	Gross Value-Added
ILO	-	International Labour Organization
JLG	-	Joint Liability Group
MFI	-	Microfinance Institution
MFIN	-	Microfinance Institutions Network
MoMSME	-	Ministry of Micro, Small and Medium Enterprises
MSME	-	Micro, Small, and Medium Enterprises
NBFC	-	Non-Banking Financial Company
NTC	-	New-to-Credit
Opex	-	Operational Expenditure
PAN	-	Permanent Account Number
RBI	-	Reserve Bank of India
SIDBI	-	Small Industries Development Bank of India
UNCTAD	-	United Nations Conference on Trade and Development
UPI	-	Unified Payments Interface

Glossary of Terms

Livelihood Enterprises: defined as enterprises with Annual Turnover under ₹3 lakhs at the time of baseline evaluation.

Transitioning Enterprises: defined as enterprises with an Annual Turnover of ₹3-10 lakhs at the time of baseline evaluation.

Nano Enterprises: defined as enterprises with Annual Turnover over ₹10 lakhs at the time of baseline evaluation.

Graduating Enterprises: enterprises whose annual turnover increase propelled them to graduate to a higher turnover segment between baseline and endline. For example, an enterprise may be in the Livelihood Enterprises bucket at baseline (below ₹3 lakh annual turnover), but by the endline survey would have graduated to the Transitioning enterprise bucket with ₹3-10 lakh annual turnover. Thus, an enterprise may have increased its turnover between baseline and endline to such an extent that they jump from a lower to a higher bucket.

Non-graduating Enterprises: enterprises that remained in the same turnover segment between baseline and endline.

Turnover: total amount of sales that the business makes over a period before deducting expenses.

Profit: business revenue left or income gained after a company has accounted for all expenses.

Low-income Segment: enterprises whose owner's household income is below the overall median household income i.e, below ₹40,000 a month.

New-to-Credit (NTC) Borrowers: borrowers who do not have a past record of financial lending or credit history from a formal institution.

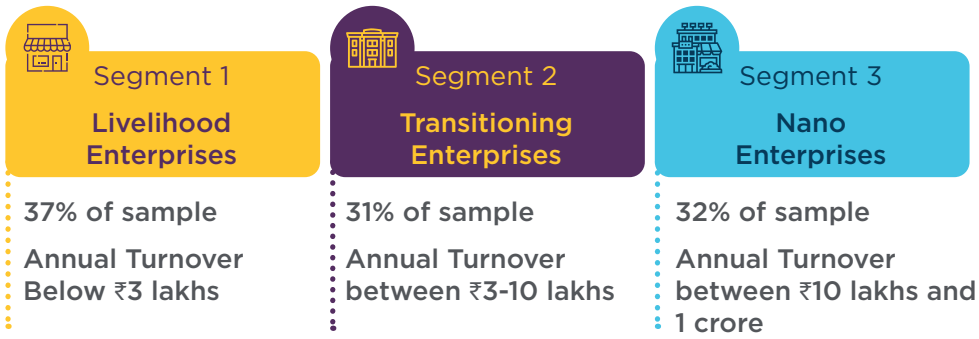
Non-NTC Borrowers: borrowers who have a record of credit history and access from a formal financial institution.

Recurring Expenses: expenses which the enterprise pays regularly as part of its day-to-day business operations. These can be salaries, wages, cost of raw material, utilities, transport, etc.

Opex Ratio: ratio of monthly recurring expenses to monthly turnover: indicator of business efficiency.

Debt-to-Income (DTI) Ratio: this is a ratio of debt serviced (i.e. total monthly EMIs across all loans) to monthly household income.

Executive Summary



Micro, Small, and Medium Enterprises (MSMEs) are vital to India's economy, driving output, growth, exports, and employment. Notably, the sector is dominated by a long tail of micro enterprises comprising over 98% of MSMEs. A sub-segment of these micro enterprises are nano-enterprises, which are often family-run businesses with an annual turnover between ₹10 lakh to ₹1 crore, where the finances of business and household are inseparable. Their success therefore drives household well-being and better socio-economic outcomes, not just for the entrepreneurs but also for millions employed by such enterprises. However, these enterprises largely operate informally and face numerous growth barriers, particularly limited access to credit. Yet, some enterprises evolve into high-potential entities by formalizing and growing, underscoring the enormous untapped potential of these businesses. **While many studies have examined the complex challenges faced by these enterprises, there is limited research on the dynamic role of credit in enabling enterprise growth over time.** In addition, there is a dearth of knowledge on the dual role of enterprise creation in driving comprehensive growth, and as a mechanism for poverty alleviation and enhancing household well-being.

This study uniquely explores this dynamic perspective and the potential spillover effects on household well-being. Through a three-year longitudinal study, conducted by LEAD at Krea University and commissioned by the Michael & Susan Dell Foundation, we surveyed 1,800 enterprise borrowers across seven states throughout their loan lifecycle. Enterprises were categorized by annual turnover into three segments:

The following key insights emerged from the study:

- **Business growth is real and measurable:** Across the spectrum, enterprises grew their monthly turnover by 25% and profits by 27%. Growth was strongest in trade and manufacturing, and businesses improved in areas like digital payment adoption, formalization, and operational efficiency. As businesses scaled, they invested more in permanent infrastructure and saw shifts in lending sources from microfinance institutions to larger NBFCs but with lower loan-to-turnover ratios.
- **Credit works—but only when used well:** Enterprises that grew the most had a few things in common: larger loans, smart investments in equipment and operations, better record-keeping, and higher digital adoption. Simply put, how the credit is used matters as much as having access to it. Graduating firms (those moving to a higher turnover segment between the baseline and endline survey) achieved growth owing to additional factors such as higher average loan sizes, greater investments in capital expenditure and enhanced product and process improvements.
- **The benefits go beyond business:** Households saw an 11% jump in income, more stability, and higher spending on children's education, housing, and insurance. Women-led businesses, even with smaller loans and tougher constraints, showed meaningful gains in income and savings proving that targeted support can unlock powerful results.

- **Underserved groups can thrive:** The study looked closely at how credit access played out for three underserved groups: women, low-income households, and first-time (New-to-Credit) borrowers. At baseline, there were clear differences between low- and high-income households. Low-income borrowers, most of them women, had lower levels of education, fewer business assets, and weaker financial buffers. Women-led enterprises also had to navigate a tough trade-off between growing their businesses and maintaining household financial stability. But by endline, the picture had changed. Despite the challenges, women-led and low-income enterprises showed steady growth, demonstrating that credit can drive meaningful outcomes even in the most financially vulnerable segments. The study also found that New-to-Credit enterprises performed on par with experienced borrowers, from baseline to endline. This challenges conventional lending norms and highlights the need for more innovative credit assessment methods that recognize potential, not just credit history.
- **Formalization is improving—but slowly:** The study also tracked how small businesses moved toward formalization by examining changes across regulatory, operational, and employment practices. Using a five-level framework (from completely informal to fully formalized), it became clear that progress was happening, but not evenly. At baseline, only 37.6% of enterprises had any form of official registration. By endline, that number had grown to 52.8%, with Udyam registration being a common entry point. Digital payments told a similar story: usage jumped from 50% to 67%, especially in customer-facing activities. This shift reflects both the pull of government-led digitization efforts and the push from enterprises aiming to become more efficient and visible in the market. So, while many businesses are starting the journey toward formalization, there's still a long road ahead especially when it comes to deeper integration into formal systems.

In summary, **while credit access emerges as a key catalyst for small enterprise growth, its impact is multifaceted—shaped by enterprise size, sector, loan utilization, owner profiles, and household dynamics.**

Addressing these nuances is essential to fully harness the power of credit to not only boost business performance but also foster long-term household resilience and economic stability. Therefore, the study recommends the following:

- Expand access to larger, structured loans (₹2–4 lakh range) for high-potential enterprises by using stepped loan structures with embedded scale triggers, differentiated interest rates, and complementary capacity-building and advisory services.
- Develop tailored financial products for underserved segments (e.g., low-income and new-to-credit borrowers) with features such as income-linked repayment schedules, integrated financial literacy programs, and sector-specific cash flow adaptations.
- Redefine credit scoring models to better identify high-potential enterprises by incorporating innovation, operational efficiency, digital payment adoption, and inventory expansion, moving beyond reliance solely on historical turnover.
- Integrate formalization incentives into credit delivery by offering interest rate rebates, expedited loan disbursements, platforms linked to Udyam and GST, and measures to lower compliance costs.
- Establish long-term impact monitoring systems to track business performance and household well-being over multiple years, enabling adaptive credit strategies and evidence-based policy updates.

When credit is accessible and used well, it not only grows small businesses—it transforms lives. With the right support, India's micro and nano enterprises can drive not only economic growth by creating millions more jobs but also improve household prosperity.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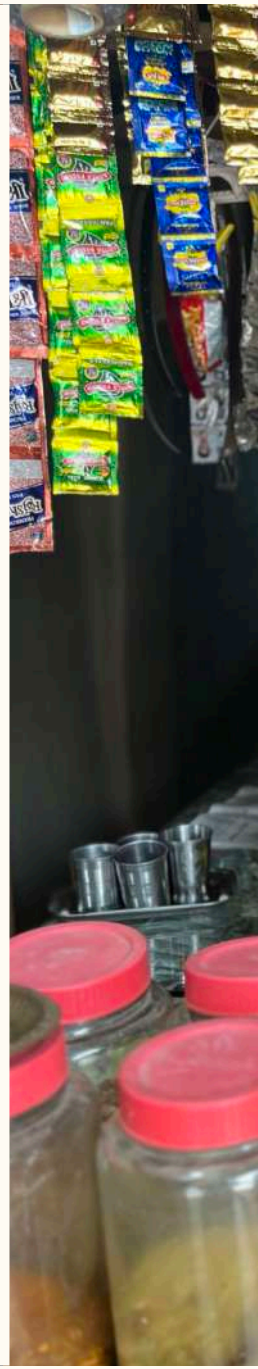


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1 Background

In aggregate, Micro, Small and Medium-sized enterprises (MSMEs) play a pivotal role in India's economy, contributing significantly to output, exports, and employment. MSMEs account for about 30% of Gross Value Added (GVA) in all India GDP, and 45% of the country's exports, respectively mapping to 115 million jobs (Press Information Bureau, 2023-24).

The total number of MSMES in India, as last reported, stood at around 63 million. However, this was based on the pre-Budget classification of MSMES, which was subsequently revised in the Union Budget of 2025. The updated figure according to this new classification and according to the latest ASUSE survey (2023-24) is estimated to be between 65 to 74 million, going by the most conservative estimation. However, the true figure may be even higher. Notably, over 99% of MSMEs in India belong to the 'micro' category, defined on the basis of a composite criteria, with an upper bound threshold of investment in plant, machinery, and equipment of ₹2.5 crore and annual turnover of ₹10 crores.[1] **Further, a majority of microenterprises operate much below this turnover threshold, are unincorporated, function within the informal sector, and generate low revenues.** Over 60% are sole proprietorships that do not employ any hired workers, while another 35% have only 1-5 employees (Muralidharan et al., 2021). As of February 2025, at least 58 million microenterprises were registered (98% of total registered enterprises) on the Udyam portal. Industry studies also suggest that 96% of all MSMEs generate annual revenue below ₹1 crore and 80% below ₹10 lakhs (Omidyar et al., 2018).

This dominance of micro and informal enterprises within the MSME landscape underscores the structural vulnerabilities of the sector, particularly the smallest businesses. Often referred to as the 'nano' segment, these enterprises face persistent barriers to growth, the most critical being limited access to formal credit. (Buteau et al, 2022). Challenges in accessing formal credit include various factors such as lack of collateral, inadequate financial records, and perceived high risk.

In addition, traditional financial institutions are not well-equipped to effectively reach remote and marginalized communities. Their processes are often cumbersome and not suited to serve the requirements of enterprises operating below a certain turnover threshold. Consequently, enterprises often resort to informal sources of financing, which entail higher interest rates and restrictive repayment terms.

State of Credit Access in the MSME Sector

Credit penetration in the Indian MSME sector is 14%, significantly lower than China (30%) and the US (50%) (Mittal, 2024). Given numerous targeted programs, ranging from Pradhan Mantri Mudra Yojana (PMMY) to Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) and Emergency Credit Line Guarantee Scheme (ECLGS) schemes to digitization initiatives via India Stack, MSME lending has seen recent growth. However, notable gaps persist.

1 Based on the revision in classification criteria of MSMEs in Union Budget 2025-26; last accessed on 21-02-2025. (https://www.indiabudget.gov.in/doc/budget_speech.pdf)

State of Credit Access in the MSME Sector

As of August 2022, the MSME credit gap was **Rs. 20-25 trillion**, with **47%** of demand unmet (Ministry of Finance, 2022).

Recent reports note an increased credit gap of over **Rs. 40 trillion**, compared to a current supply of **Rs. 25 trillion**, with one-fifth of this gap in the small-ticket loan segment **(Avendus, 2023)**.

There has been an increase in lending to micro and small enterprises, particularly in rural and semi-urban areas.

Women constitute **98%** of microfinance clientele, and marginalized communities account for **23%** (MFIN, 2024).

MSME loan portfolios reached **INR 64 trillion** (March 2024).

Self-employed individuals' loans: Increased by **30%** YoY to **Rs. 35.7 trillion.**

Microfinance loan portfolio: Grew **29%** in FY24, reaching **Rs. 4.4 trillion.**

MSME entity loans: Grew by **6.6%**, reaching **Rs. 28.5 trillion**.

Average loan disbursed per account (Q1 FY25): Increased by **9.3%**, reaching **Rs. 46,132.**

High-risk MSMEs **(Credit Risk Rating of 7-10):** Declined from 15% in the previous year to **13%** in **Q2 FY24**, indicating improved creditworthiness.

Trade (36%) and **Manufacturing (25%)** sectors dominated NTC loan disbursements.

Despite no official recognition yet, enterprises in this segment exhibit distinct characteristics. The majority of these enterprises are home-based and rely on the support of family members for their operations. Given the prevailing informal ways of operating, nano enterprises lack business registration and other official documentation. Typically, they lack both the capacity and the incentives to undergo formalization. The high costs of registration, concerns about increased tax burdens and labor law compliance, and the seasonal and temporary nature of many small businesses in India are the most commonly cited reasons for not registering themselves (Buteau et al., 2022; Unni, 2018; ILO, 2015). In contrast, preventing eviction has been identified as a primary motivation for nano businesses to formalize. Additionally, the same study identified opportunity-driven, male entrepreneurs aged 35 and older as more likely to register their businesses compared to 'necessity-driven' entrepreneurs (Kumar et al., 2024).

While India's MSME sector is a vital pillar of economic output and employment, it is overwhelmingly dominated by micro and nano enterprises most of which remain informal, undercapitalized, and structurally vulnerable. Addressing their persistent challenges, particularly those related to credit access, is critical for enabling inclusive and sustained growth within the sector.

1.1 Role of Credit for Small Enterprises

Access to credit is a critical driver of growth for nano and micro enterprises, helping address key barriers to their development (Bakhtiari, 2020). However, its impact is complex, shaped by factors often underexplored in existing literature. While credit is linked to business growth, research lacks depth on how credit utilization strategies influence outcomes. For instance, distinctions between short-term investments like inventory and long-term ones like equipment remain insufficiently examined, as does the multiplier effect of reinvesting profits (CGAP, 2014).

The concept of formalization is similarly oversimplified—often reduced to registration and regulatory compliance—overlooking the diverse ways nano enterprises establish legitimacy (Ndofor et al., 2024; Buteau et al., 2022). A broader understanding is needed to capture transitional phases and alternative forms of formalization. Likewise, the link between credit access and job creation remains under-researched, particularly in terms of sectoral nuances and capital investment patterns (Brixiová et al., 2020).

The entrepreneur's role in mediating credit impact is also underappreciated. While the "striver" archetype dominates, more attention must be paid to how traits such as risk-taking, motivation, experience, and social mobility affect outcomes (Lumpkin et al., 1996; Kiyabo et al., 2020). Although most nano enterprises do not grow, those that do often formalize and create jobs, driven by both internal characteristics and external enablers (Buteau et al., 2022; Kiyabo et al., 2020).

Research also tends to focus on tangible outcomes like asset ownership, neglecting intangible impacts such as investments in health, education, and overall household well-being (Dhanaraj et al., 2018; Khosla et al., 2019). Moreover, unequal access to credit disproportionately affects women, low-income, and new-to-credit entrepreneurs. More targeted studies are needed to understand intra-household and ecosystem-level constraints.

Finally, due to challenges in longitudinal data collection, little is known about the long-term and indirect effects of credit. Future research must explore diverse enterprise profiles, motivations, and the role of emerging lenders like NBFCs in serving the "missing middle." Bridging these gaps is essential for designing inclusive and effective credit interventions.

1.2 Evaluation Objectives and Methodology

Given the above context, LEAD at Krea University, in collaboration with the Dell Foundation, conducted a three-year longitudinal study to evaluate the impact of credit on a spectrum of enterprises with annual turnover up to ₹1 crore. Using a mixed-methods approach, the evaluation seeks to uncover the long-term impact of credit on nano enterprises and contribute to literature on how credit influences business financial performance, job creation, formalization, and household welfare.

The evaluation seeks to answer the following questions:

1. How does access to formal credit shape the growth trajectories of enterprises in different segments, particularly with respect to revenue generation, expenditure allocation, profitability, and spillover effects on household well-being and living standards?
2. What factors drive accelerated enterprise growth across diverse segments and sectors, and how do patterns of credit access and utilization differ among underserved segments?
3. How can a robust theoretical framework be developed to understand the process of business formalization, and what are the key enabling and constraining factors influencing formalization decisions?

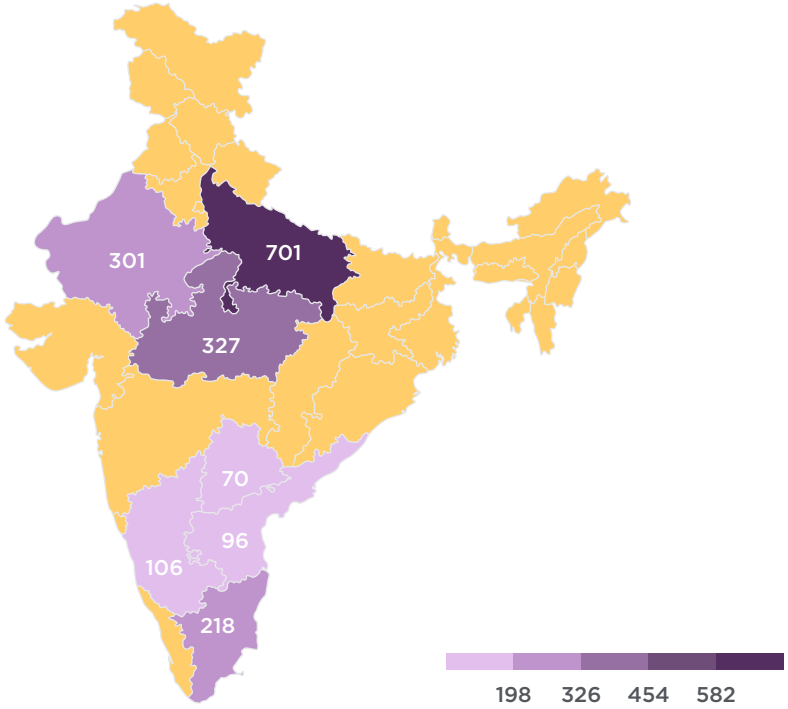
To address the lack of longitudinal evidence on credit utilization, formalization pathways, and intra-household spillovers, the study adopted a multi-tiered mixed-methods approach enabling both macro-level patterns and micro-level narratives to emerge.

Study Design

A rolling sample of 1,800 enterprise borrowers across seven states was selected for a longitudinal study aligned with the lifecycle of their loan. These entrepreneurs had a vintage of 7-8 years and had availed loans ranging from ₹40,000 to ₹4 lakh from six Non-Banking Financial Companies (NBFCs) that received investments from Dell Foundation.[2] The data was collected through structured questionnaires administered at the business venue at three different time points in the 12–24-month loan lifecycle, including at the beginning, middle and end of the loan tenure, which were. The survey covered topics including enterprise profile, business and household financials, entrepreneur traits, degree of formalization, employment, and household well-being.

To gain deeper insights, 80 in-depth interviews were conducted with borrowers across five states at their places of business.[3] A purposive sampling approach was applied for a more nuanced understanding of the typical cases and those with maximum variance. The typical case focused on understanding the common, expected outcomes of credit access, such as increased business turnover, job creation, and formalization, while the maximum variance aimed to uncover a broader range of outcomes, including unexpected or divergent results. This data was collected at two key touchpoints of the loan lifecycle: at the loan inception, and at the end of the loan tenure.

Figure 1: Geographic Distribution of Sample



2 The NBFCs included Arth Digital, Avanti Finance, Indifi Finance, Kaleidofin, Kinara Capital, and Moneyboxx. A description of these financial institutions is contained in Annexure 1.
3 Qualitative interviews were conducted in local languages at the business location. Interviews lasted for 45-50 minutes. The interviews were transcribed into English for further analysis. Interviews were spread across five states of Uttar Pradesh, Madhya Pradesh, Rajasthan, Tamil Nadu, Telangana.

Sampling Strategy

To account for diverse borrower profiles, a representative sampling strategy was employed to select participants for the study. Investee NBFCs were categorized into two distinct types:

- **NBFC I:** These NBFCs had an existing microfinance portfolio and were upselling their joint liability group (JLG) clients with individual loans. Our portfolio includes three such NBFCs with a combined sample size of 926 (51%) borrowers.
- **NBFC II:** These NBFCs do not have a microfinance portfolio or history, but provide individual loans to a higher-income borrower segment. Our portfolio features three such NBFCs, encompassing a sample size of 902 (49%) borrowers.

The sample sizes were determined based on a statistically significant proportion of the overall loan portfolio of the investee NBFCs. A rolling sample of borrowers who had recently been sanctioned loans was selected over a three-month period, from tier 2/3 cities specifically targeting borrowers with net monthly household income lesser than ₹25,000. This amount was calculated under the assumption that the enterprise in question would be the sole source of the household income. However, a large proportion of the sampled households were found to have multiple sources of income in addition to the enterprise, resulting in reported incomes exceeding the ₹25,000 threshold. Furthermore, the income analysis is based on gross monthly income, which is typically higher than net income.

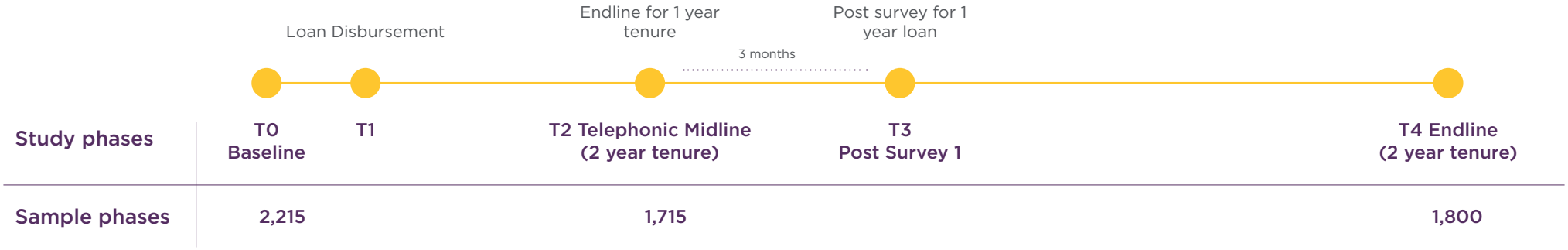
The survey duration was aligned with the lifecycle of a two-year loan. The sample size for the baseline survey was 2,215 enterprises, whereas 1,800 enterprises participated in the two-year loan endline survey,[4] resulting in an 18% attrition rate.[5] Table 1 describes the sample size across the three points of data collection.

● ***Table 1:*** Sample Size and Distribution

	Baseline	Midline	Endline
Allocated Sample	2,251	2,003	2,220
Loan Duration (12 Months)	217	-	188
Loan Duration (24 Months)	2,003	1,715	1,640
Attrition	*31 (Sub-K dropped)*	*288*	*392 [i.e., 29 with 12-months loans and 363 with 24-months loans]*
Final sample for Analysis	**2,220**	**1,715**	**1,800***

• 28 respondents did not want to disclose their baseline turnover, hence we did not include them in our final sample

● ***Figure 2:*** Timeline of Study



4 31 respondents which borrowed from an NBFC loan partner were disqualified from the study as they were all Joint Liability Group Loans and not individual loans.
5 Among the 392 nonrespondents, 197 enterprises experienced business closure at some point between baseline and endline, 102 enterprises refused to participate in the endline survey, and 93 enterprises could not be contacted despite multiple attempts.

A non-response analysis was conducted to assess the impact of closures and attrition, confirming that these did not skew the sample or alter the characteristics of the sampling frame. Post-endline data will continue to inform periodic monitoring. Between baseline and endline, 197 businesses closed. Most closures occurred among entrepreneurs aged 30–40 years (47.1%). Notably, 94.7% of these had prior credit histories, and 59.4% had loans between ₹30,000–₹99,999. While there was no definite pattern to closures across states, they were more prominent in the manufacturing (12.2%) and livestock (11.1%) sectors. Of the closed businesses, 63% had female borrowers and 32% were female-owned—representing 6.9% and 3.5% closure rates respectively—compared to 4.1% and 7.4% for male borrowers and owners.

1.3 Lending Portfolio Characteristics: Enterprises, Borrowers and Households

Enterprise Segmentation and Characteristics

Despite a project eligibility threshold of ₹1 crore, the median enterprise turnover observed was only ₹5 lakh. This is not uncommon, given that 90% of enterprises fall below the ₹1 crore mark, with 80% operating below ₹10 lakh (Omidyar Network et al., 2018; Buteau et al., 2022).

To account for this distribution, we employed tertile classes to segment the baseline sample into three categories: 1) Livelihood Enterprises; 2) Transitioning Enterprises; 3) Nano Enterprises, as follows:

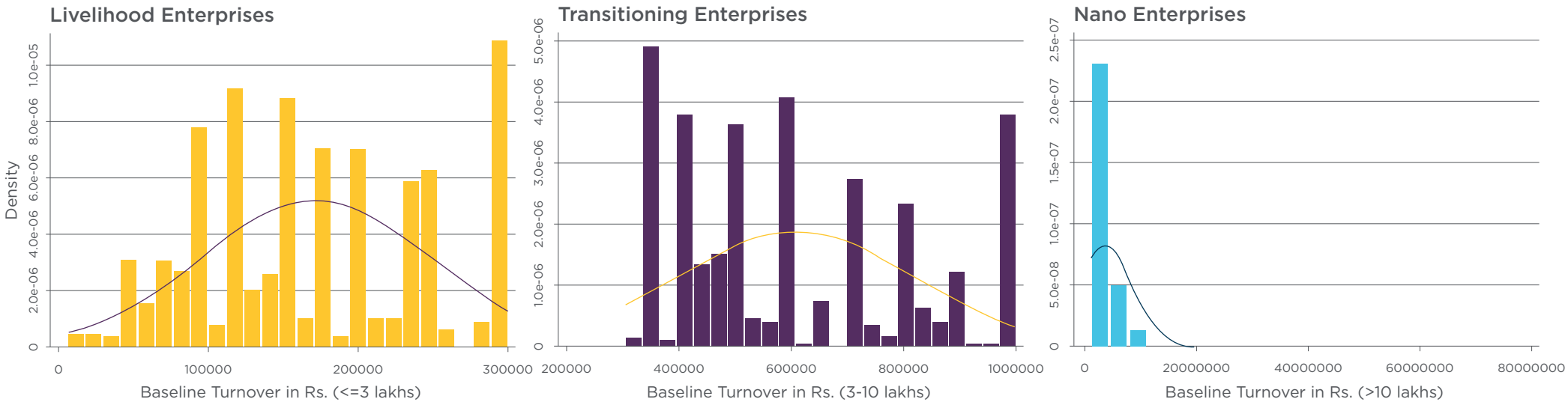
Segment 1
Livelihood Enterprises
- 37% of sample
- Annual Turnover Less than ₹3 lakhs
- N=665

Segment 2
Transitioning Enterprises
- 31% of sample
- Annual Turnover Between ₹3-10 lakhs
- N=566

Segment 3
Nano Enterprises
- 32% of sample
- Annual Turnover between ₹10 lakhs and 1 crore
- N=569

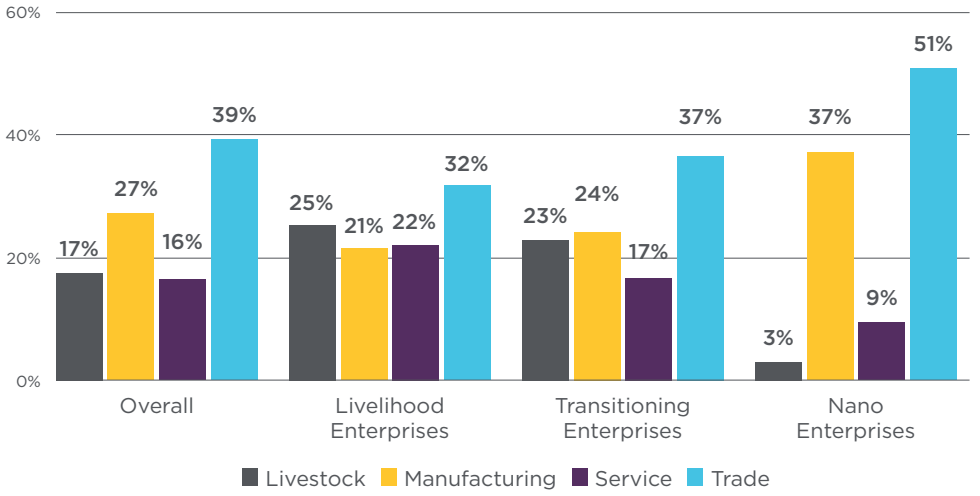
In the context of this study, at baseline, we define 'Nano Enterprises' as a distinct segment within Micro, Small and Medium Enterprises (MSMEs), as firms with an annual turnover between ₹10 lakhs to 1 crore, characterized by their hyperlocal roots and focus.

● ***Figure 3:*** Annual Turnover across Enterprise Segments



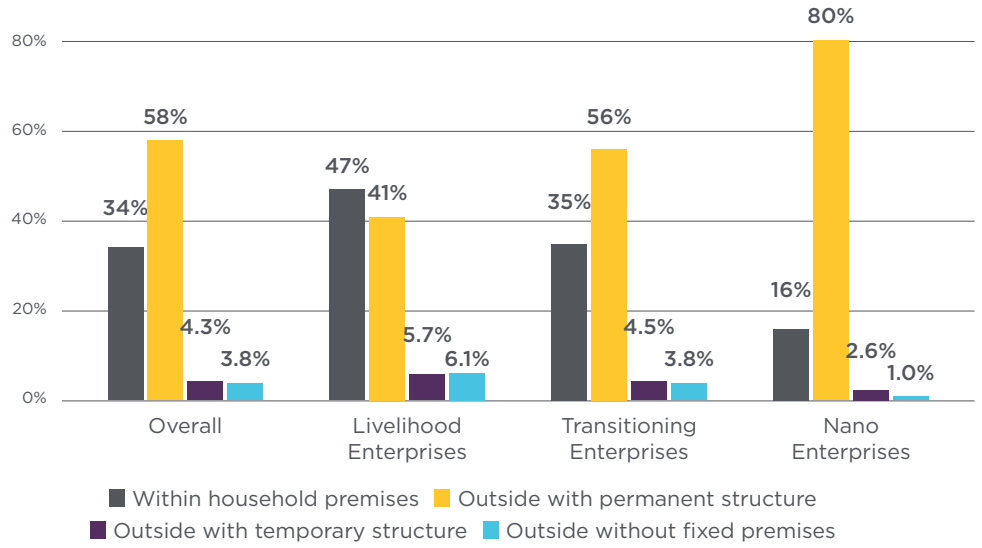
The first two turnover segments constitute enterprises distributed normally across the range, whereas the highest turnover bucket reflects a left-skewed density distribution, i.e., enterprises in this segment are clustered closer to the ₹10 lakh threshold. We also see some interesting differences in sector and business model across these enterprise segments. The larger Nano Enterprise segment shows highest shares of manufacturing and trade concerns, whereas the representation of livestock and services are highest in the smaller Livelihood Enterprise segment. Interestingly, larger enterprises have a greater representation of more diversified business models that combine direct-to-customer and business-to-business strategies.

● ***Figure 4:*** Enterprise Segments by Sector



Enterprises vary widely by turnover, reflecting differences in scale, operations, and markets. Livelihood Enterprises are typically smaller, locally focused, and resource-constrained, while Nano Enterprises operate at a larger scale, often reaching wider markets with value-added products and investments in technology and infrastructure. The median enterprise vintage was 7–8 years across all segments. While 56% of borrowers were women, only 37% of businesses were women-owned—49% in the Livelihood segment and merely 17% in the Nano segment. This aligns with the observation that nearly half of Livelihood enterprises operate from household premises. Enterprises in the higher turnover segments also had a larger share of permanent employees, relative to temporary employees.

● ***Figure 5:*** Enterprise Format across Segments



● ***Table 2:*** Business Operation Characteristics across Enterprise segments

Business Operation Characteristics	Overall	Livelihood Enterprises	Transitioning Enterprises	Nano Enterprises
Monthly Turnover (median, ₹)	50,000	15,000	50,000	2,00,000
Monthly Profit (median, ₹)	20,000	10,000	20,000	45,000
Monthly Profit Margin	40%	66.7%	40%	22.5%
Monthly Opex Ratio	38	21	37.5	64.4
Enterprise with workers (%)	33.6%	12.5%	33%	59%
Permanent workers	84.2%	60.3%	82.8%	88.5%
Temporary workers	15.9%	39.7%	17.2%	11.5%
Sample	1,800	665	566	569

Family influence emerged as the primary motivation for starting a business among enterprise owners in the portfolio. 36% of respondents stated they were driven to start their business based on a family member's suggestion, whereas 29% reported inheriting an existing family business. Economic imperatives such as supplementing family income (19.3%), a lack of alternative employment opportunities (13.6%), and achieving economic independence (13.2%) were also reported. Strategic business factors like market demand were reported as a trigger by 18.1%, whereas an intrinsic need to achieve was cited as a motivating factor by 9.9% of the respondents.

In terms of primary funding sources for the business, personal savings were reported by 69% of enterprises, followed by 36% who relied on an inheritance from friends/family, across all enterprise categories. Notably, less than 10% of enterprises raised start-up capital from MFIs/NBFCs. This heavy reliance on internal funding underlines the limited availability of external credit at the inception stage.

Borrower Characteristics

The median age of borrowers in the sample was 36 years, and most had attended some form of schooling. Only 10% of respondents had never received formal education, while 22.4% held graduate degrees or diplomas. Most of the degree holders were concentrated in the Nano Enterprise segment (34.3%), while the Livelihood Enterprise segment had the lowest proportion of graduates.

Women constituted more than half of the borrowers (55.6%) in the overall sample. In the Livelihoods segment, four-fifths of borrowers were women, compared to only one-fifth in the Nano segment. Across the three segments, the share of women borrowers significantly exceeded that of women-led entrepreneurs, indicating that these borrowers were loan applicants for businesses led by male family members.

Nine out of ten borrowers had a borrowing history, though patterns varied significantly between NBFC types. Among MFI-based NBFCs, only 1% of borrowers were New-to-Credit, compared to 21% in non-MFI NBFCs. Previous loan histories of borrowers were also sparse - 33.4% of respondents had not taken a loan in the five years prior to baseline, whereas another 39% had taken one loan, and 20% of the sample had taken two loans.[6]

Household Characteristics

The households included in the portfolio primarily belong to the lower middle-income segment, with a median monthly household income of ₹40,000 and a mean monthly household income of ₹73,205. Overall, the sample is representative of CMIE, Pew, and BCG's definition of the middle-income class, with some spillover to the higher bounds of the lower middle class and the lower bound of the upper middle-income class.[7]

The median household income increases 3x between the lowest turnover bucket to the highest. However, the skewed income distribution does not reflect household consumption patterns. This is not in itself anomalous, as spending on durable goods such as household appliances and two-wheelers does not increase dramatically with income, but rather remains stable, according to data from the Household Consumption and Expenditure Survey, 2023-24.

About three-quarters of the borrowers lived in a self-owned dwelling, and another 14% lived in houses jointly owned with family members or ancestral property. However, the Nano segment (with turnover greater than ₹10 lakhs) differs slightly from other segments in housing arrangements, with a higher incidence of rental housing (23%) compared to the overall sample (11%). This can be explained by the fact that Nano segment entrepreneurs in our sample were mostly concentrated in urban areas. According to the data from the Census of India and the NSS (housing condition rounds (2011-2012), the share of households

6 Out of 1,800 enterprises in our final sample, we received the credit score for 1185 enterprises. The credit score rating came from three credit score rating companies CIBIL, CRIFHIGHMARK and EQUIFAX. In our lender sample portfolio, most lenders used the same credit rating company score. This difference between the bureaus is attributed to their proprietary models for calculating the score, which may weigh different factors differently or may have differing data.

7 This segment is said to be the fastest growing segment of India's population representing 31% of the overall population. Across the Indian landscape, this segment is particularly impactful in almost all major segments of the economy, for example: *Target Segment for affordable housing in India. Up to 20% of income spent on housing; 15-20% income spent on tangible assets, another 30% income spend on food and FMCG; Key driver behind deposits in the banking sector, up to 50% of overall savings in 2020*

living in rented houses was substantially more in urban sectors (27.5%), especially in developed and urbanized states. In the overall Indian landscape, however, among the recorded 246.7 million households, 86.6% lived in owned houses while 11.1% lived in rented houses, which is representative of the current sample of households (Kumar, 2016).

The reliance on other sources of income in addition to the enterprise earnings was generally high across the borrowers' households. More than half of the households (58%) had supplementary income sources (apart from the enterprise for which credit was availed). This proportion was highest among Livelihood segment households (66%) and lowest for the Nano segment (46%).

The penetration of insurance was quite high—46% of households reported holding life insurance. Insurance coverage was more evident in the Nano Enterprise segment, with at least 54% holding life insurance. However, only 28% of the sample had health insurance, with coverage much lower in the Livelihood segment at 19%).

Table 3: Household Financial Characteristics across Enterprise Segments

Household Finance	Overall	Livelihood Enterprises	Transitioning Enterprises	Nano Enterprises
Median Monthly Household Income (₹)	40,000	25,000	40,000	80,000
Contribution of business income to household	60%	50%	67%	71%
% of Households with Other source of income	58%	66.7%	59.5%	46.2%
Has Life insurance	45.5%	35.8%	48.6%	53.8%
Has Health insurance	28.1%	19%	26.2%	40.6%
Sample Size	1,800	665	566	569

Household Assets

Asset ownership increases steadily with enterprise size. Households in the Nano segment reported the highest ownership across nearly all assets—e.g., 97% owned two-wheelers, 96% owned color TVs, and 98% owned smartphones. In contrast, Livelihood Enterprises owned fewer assets, especially of higher-value items such as air conditioners (3.5%), computers (9.3%), and washing machines (20.5%). Smartphone and LPG stove ownership were high across all segments.

Table 4: Household Asset Ownership across Enterprise Segments

Household Assets (%)	Overall	Livelihood Enterprises	Transitioning Enterprises	Nano Enterprises
Refrigerator	75.11%	59.7%	76.9%	91.4%
Air conditioner	10.94%	3.5%	7.2%	23.4%
Color TV	87.39%	78.2%	89.4%	96.1%
Two wheeler	90.44%	83.9%	91.3%	97.1%
Washing machine	36.4%	20.5%	31.6%	59.8%
Personal Computer/Laptop	17.8%	9.3%	15.4%	30.2%
Smartphone	92%	88.6%	89.6%	98.4%
LPG Stove	91.4%	91.6%	90.1%	92.4%

Loan and Lender Characteristics

Loan Ticket size:

The median disbursed amount is approximately ₹98,620. Over half (54%) of the sample received the lowest loan ticket size (₹30k-1 lakh), largely comprising Livelihood Enterprises, 84.5% of which fall in this category. As loan size and enterprise turnover increase, frequency declines. Only 16.2% accessed loans in the highest bracket, though this rises from 1.2% among Livelihood Enterprises to 39% for Nano Enterprises. The loan-to-turnover ratio, however, dropped significantly, from 41% for Livelihood Enterprises to just 5.6% for Nano Enterprises. For over two-thirds of the enterprises, the primary purpose of seeking loans was to finance raw material purchases. Overall, 10% of the loans were given for the shorter 12-month duration, while the remaining 89-90% were for the longer duration of 18-24 months. This trend was consistent across all the enterprise segments.

Two lending partners offered loans at 18–24% interest, two other partners offered loans in the 30–36% range, and the remaining two had mixed portfolios. Only two partners lent to enterprises in the livestock sector, while others focused on manufacturing, services, and trade. The NBFCs used credit bureau reports (e.g., TransUnion CIBIL), proprietary risk models, and financial indicators like banking behavior, tax compliance, and demographics to assess creditworthiness. Despite differences in turnover, many enterprises—especially in the trade sector—were offered similarly high interest rates. These rates are determined through a holistic risk assessment that synthesizes standardized credit data with lender-specific analytical frameworks.

Table 5: Loan Characteristics across Enterprise Segments

Loan Characteristics	Overall	Livelihood Enterprises	Transitioning Enterprises	Nano Enterprises
Distribution of NBFC I	49.9%	84.4%	45.9%	13.7%
Distribution of NBFC II	50.1%	15.6%	54.1%	86.3%
Loan Size (₹)				
30k - 1 lakh	54.1%	84.5%	53%	19.7%
1 lakh - 2 lakh	29.7%	14.3%	36%	41.3%
2 lakh - 4 lakh	16.2%	1.2%	11%	39%
Median Loan Size (₹)	98,620	52,220	98,635	1,50,000
Median Loan to Turnover Ratio	17.1%	41.1%	15.4%	5.6%
Median Interest Rate	26%	22%	27%	30%

SAMPLE CHARACTERISTICS - SNAPSHOT

Enterprise Characteristics

- The median age of enterprises was 8 years, indicating a relatively mature sample.
- The sectoral distribution of enterprises varied across segments, with Livelihood Enterprises predominantly engaged in livestock and services, while Nano Enterprises were more concentrated in manufacturing and trade.
- Women owned 37% of all enterprises, with the highest concentration in the Livelihood segment, where 49% of the businesses were female-owned.
- Half of Livelihood enterprises operated from within the household, compared to only 16% in the Nano category.
- Nano enterprises were more likely to employ permanent staff and invest in physical infrastructure and premises.

Borrower Characteristics

- Borrowers had a median age of 36 years, and the majority had completed at least primary education.
- Women accounted for 56% of all borrowers. However, their representation as enterprise owners was significantly lower, especially in the Nano segment, where only 17% of businesses were owned by women.
- Most borrowers (90%) had some borrowing history. Among the rest, the share of New-to-Credit (NTC) borrowers was just 1% for microfinance-based NBFCs, compared to 21% for non-MFI NBFCs

Household Characteristics

- Median monthly household income for the sample was ₹40,000 per month, and this figure increased nearly threefold across enterprise segments, from Livelihood to Nano.
- Around 75% of borrowers lived in self-owned houses, while the Nano segment showed a higher tendency to live in rented premises (23%).
- Multiple income sources are common across segments. About 58% of all households had additional earnings beyond the enterprise, with the highest incidence in the Livelihood segment (67%) and the lowest in the Nano segment (46%).
- Life insurance coverage was relatively high at 46%, especially among Nano households (54%). In contrast, only 28% of households had health insurance, with the lowest rate (19%) among Livelihood enterprise households.

Loan and Lender Characteristics

- The most common reason for seeking credit was to finance raw materials and inventory, reported by over two-thirds of enterprises.
- Interest rates on loans ranged from 18% to 36%, and median loan size was ₹98,620. Over half of all loans (54%) were in the ₹30,000 to ₹1 lakh range, largely availed by Livelihood enterprises.
- Larger enterprises, particularly those in the Nano category, tended to receive higher-ticket loans. 39% of Nano enterprises received loans in the ₹2–4 lakh bracket.

2 Key Findings

This section examines how access to formal credit shapes overall enterprise growth and enables movement to higher turnover segments. It also highlights how credit access impacts financial and business outcomes for underserved groups, including women, low-income households, and New-to-Credit borrowers.

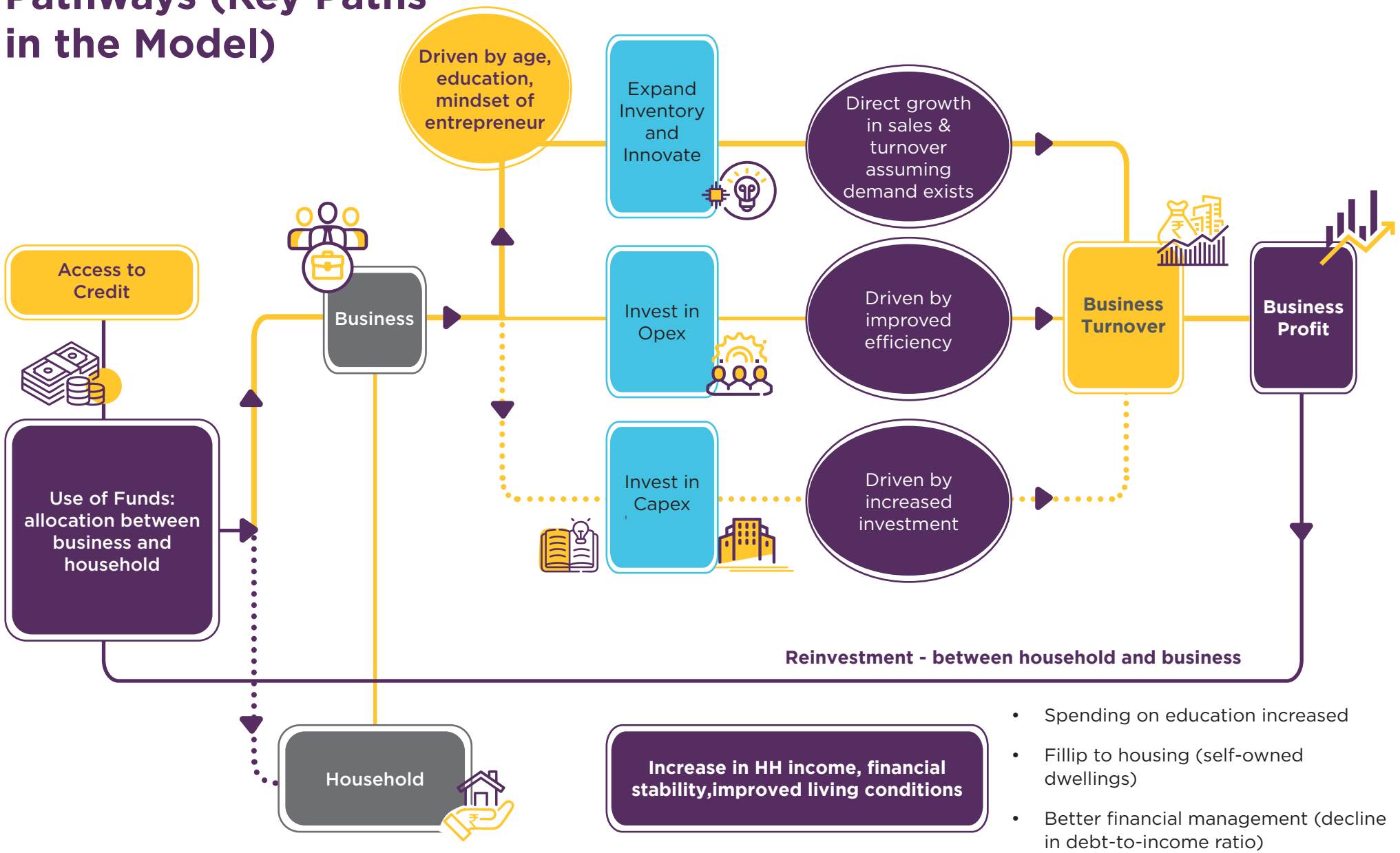
2.1 Overall Impact

This section presents key results from the study, examining how enterprises utilized credit, the overall impact on business outcomes such as turnover and profit, and how factors such as loan size, financial decision-making, business strategies, and borrower characteristics shaped enterprise outcomes. Beyond business growth, it also explores the broader ripple effects of credit infusion on household well-being.

In the this figure, we map the flow of credit pathways from receipt of funds to reinvestment. For the vast majority of enterprises:

- Access to credit enables entrepreneurs to allocate funds between their businesses and households, a decision shaped by factors like age, education, and mindset. Most businesses used credit to expand inventory, enhance efficiency, and occasionally invest in capital, driving sales and turnover growth.
- Profits were often reinvested, creating a cycle of expansion, while household income rises, improving financial stability, education spending, housing, and debt management. These business and household outcomes are shaped by the extent of credit disbursed in interaction with loan terms (such as interest rates and loan duration) and baseline turnover to shape business outcomes, affecting overall stability. This dynamic system highlights how credit decisions power enterprise growth and strengthen household well-being.

Firm-level Credit Pathways (Key Paths in the Model)



Insights from our longitudinal study suggest that access to formal credit has been an important driver of enterprise growth and household well-being, fostering increased income, business expansion, and employment generation over a two-year period.

Enterprises that received higher amounts of credit demonstrated higher turnover, improved profitability, and better financial management.

- Overall, enterprises reported a 25% increase in monthly turnover and a 27% increase in profit. These impacts varied by **enterprise size, sector, and loan characteristics,** among other factors. For instance, those in the **Livelihood and Nano segments** reported notable turnover growth, though profitability remained a challenge due to rising operational costs.
- Access to credit also gave a fillip to employment–with enterprises reporting a 16% increase in employment; 9% of enterprises hired employees after receiving the credit tranche.
- **Strategic operational investments and business innovation** along with higher credit infusion **(size of the disbursed amount) played a crucial role in influencing turnover.**
- The **trade sector saw the greatest efficiency gains,** reducing its Opex ratio to **56%.** A drop in the Opex ratios despite increasing operational costs suggests enterprises, particularly in the Nano segment, benefited from efficiency gains, possibly due to better resource management and scale economies.

Access to credit also contributed to greater financial stability at the household level, as indicated by an increase in household income, improved living conditions and higher investments in children's education and assets. These impacts varied by enterprise size at baseline, and other enterprise characteristics.

- Median household income rose by 11% over the two-year period. This increase was primarily driven by enterprises in the Livelihood and Transitioning segments.
- Investments in housing got a fillip—the proportion of entrepreneurs living in self-owned dwellings increased over the two-year period (from nearly 75% to 81%).
- Spending on children's education increased by 35% on average, suggesting a positive link with enterprise earnings.
- Household Debt-to-income (DTI) ratios declined from 18% to 16%, indicating better financial management and reduced debt burden.
- Additionally, DTI, which is an indicator of debt burden and stress on household income, had a crucial role to play in the extent of income increase. Households with DTI above 40% witnessed a 25% growth in income. On the other hand, households with less than 40% DTI were able to manage their risk better and showcased a 40% growth in household income.
- We also observe that households have multiple sources of income besides this enterprise. This means that a household's income can grow more than the enterprise's contribution to household income, which we believe to be a function of increased efficiency. For example, hiring a new employee would free up time to focus on other income-generating activities, or automating or digitizing certain parts of the business would also free up some time. Additionally, the enterprise might scale to a point where it is self-sustaining, due to which income diversions from other sources of income to the business would reduce, thereby increasing the household income.

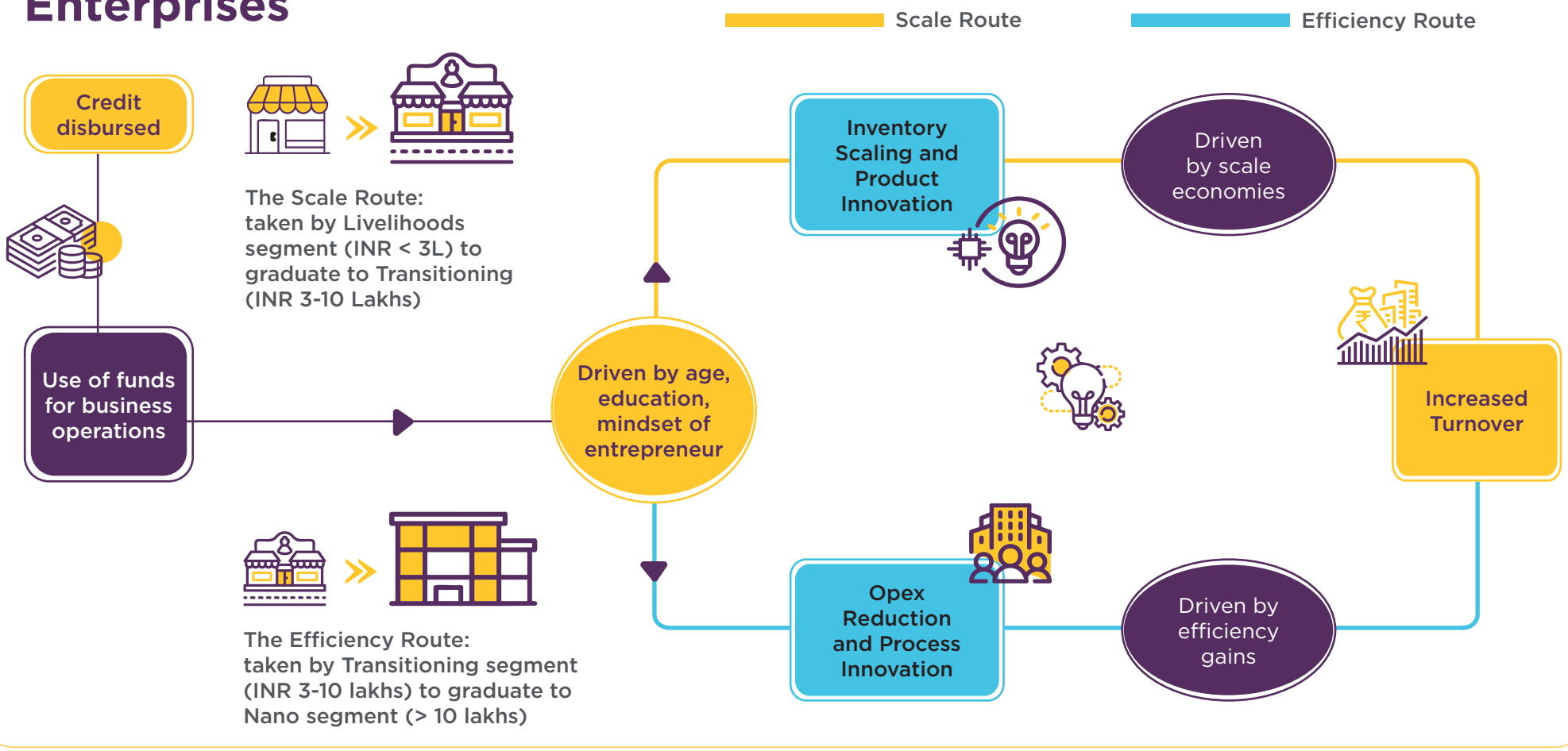
These impacts on business outcomes were validated with a regression model and the credit pathways through structural equation modelling, both of which reinforce the finding that credit access is the primary driver of business growth. Larger loans (₹2L-4L) and longer tenures (18-24M) significantly boost expansion, easing financial pressure and enabling reinvestment. However, high interest rates (30-36%) restrict growth, particularly for low-income enterprises, limiting their ability to scale.

Sector and location also play a role, with manufacturing and trade benefitting most from credit. Ultimately, however, well-structured credit is the key enabler to scale businesses faster.

2.2 Dynamics of Graduation

While a majority of the enterprises demonstrated positive impacts from credit access, a subset of enterprises grew notably faster and showed a disproportionately high impact. These enterprises graduated to the next higher turnover segment between baseline and endline. This section explores the growth dynamics of these 'gazelle' enterprises to better understand the magnitude and mechanisms by which they achieved this growth. We look at financial performance, including expense dynamics, but also at potential business and individual entrepreneur-level drivers. Finally, we examine differences in business and household-level impact between firms with different growth paces.

Graduation Pathways of Enterprises



Enterprises followed two key graduation pathways based on how they utilize credit and grow their business. Both pathways were influenced by the entrepreneur's ability to innovate and optimize, ultimately leading to higher turnover and sustained business growth.

- The **Scale Route** starts with a **Livelihoods Enterprise (< ₹3L turnover)** receiving credit and investing in operations. Entrepreneurial characteristics—such as **age, education, and mindset**—play a role in enabling growth through **inventory expansion and product innovation,** allowing the business to graduate into a **Transitioning Enterprise** (₹3–10 lakh turnover).
- The **Efficiency Route** begins at the **Transitioning stage (₹3-10L),** where businesses focus on reducing **operational costs and process improvements** rather than pure expansion. These efficiency gains help drive profitability, enabling the business to graduate to the **Nano segment (> ₹10L turnover).**

Enhanced access to credit thus facilitated growth, particularly for the Livelihood segment, enabling these enterprises to ascend to the Transitioning and Nano segments.

As Table 6 shows, 24–37% of enterprises moved up to higher turnover segments over two years, while 5–6% moved down. Among Livelihood Enterprises, 32% graduated to the Transitioning segment and 5% advanced to the Nano segment. From the Transitioning group, nearly 24% graduated to the Nano segment. Trade sector enterprises in the Livelihood segment had high graduation to Transitioning (36.7%), while both manufacturing and trade sector firms led graduation from Transitioning to Nano. In contrast, livestock enterprises showed the lowest graduation rates across segments.

We also looked more closely at the topline financial performance of graduating enterprises relative to those that remained in the same segment. Graduating Livelihood Enterprises reported doubling their turnover revenue and reaping 67% more profits over the baseline. Comparatively, enterprises that stayed within the Livelihoods segment reported a turnover increase of 33% and a median 25% profit increase. Similar graduation trends were also witnessed in the Transitioning Segment. Enterprises that graduated from the Transitioning to Nano segment reported an average revenue increase of 63%, compared to 22% for those that remained in the same segment. Reported profit growth for these groups was 33.3% for Graduated enterprises and 25% for Non-Graduated enterprises.

Table 6: Graduation of Enterprises across Turnover Segments

Baseline Turnover Group	Endline Turnover Group			
	Livelihood	Transitioning	Nano	Total
Livelihood	62.7%	32.4%	5%	100%
Transitioning	5.3%	70.7%	23.9%	100%
Nano	0.5%	5.6%	93.8%	100%
Total	25%	36%	39%	100%

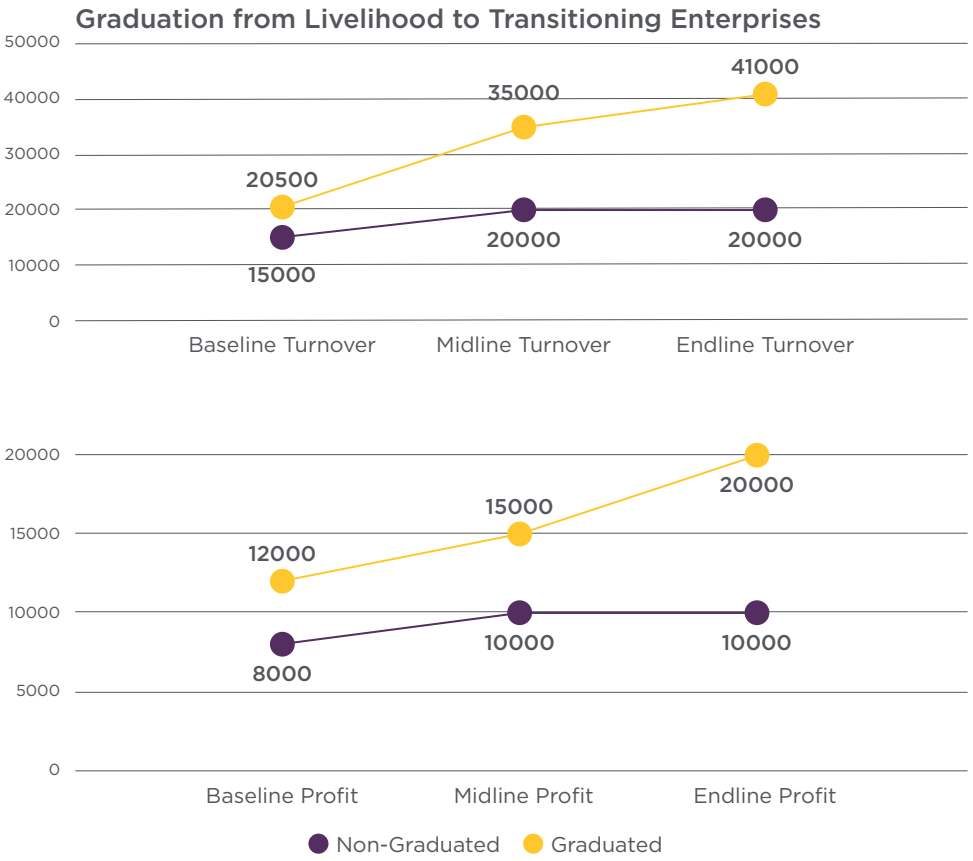
Table 7: Median Business Performance across Graduated and Non-Graduated Enterprises

Business Performance	Livelihood > Transitioning		Transitioning > Nano	
	Graduated	Non-Graduated	Graduated	Non-Graduated
Monthly Turnover Change (%)	100%***	33.3%***	62.5%***	22.2%***
Monthly Profit Change (%)	66.7%***	25%***	33.3%***	25%***

The figures below further highlight the different growth trajectories of enterprises that graduated and those that remained within the same segment across baseline, midline and endline periods.

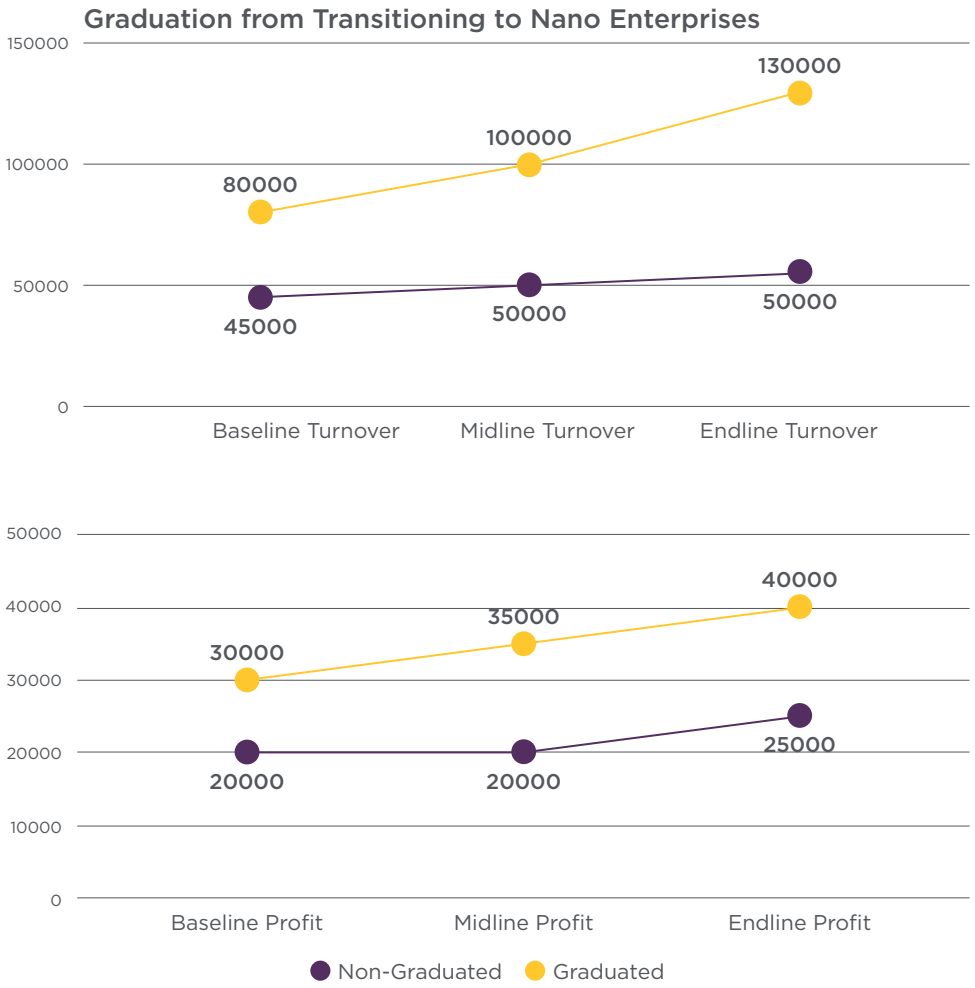
In the Livelihood segment, baseline turnover was similar for those enterprises that graduated to the Transitioning segment and those that did not; however, over the period of the study, graduating firms reported sustained growth as compared to non- graduating firms, wherein growth plateaued. A similar trend was seen in reported profit growth.

- ***Figure 6:*** Turnover and Profit Trends across Graduated vs Non-Graduated Enterprises (Livelihood Segment)



In the Transitioning Enterprise segment, we observe a more prominent difference in baseline turnover and profits of graduating firms versus those that stay in the segment. This is followed by the sharper growth of graduating firms, particularly in reported revenues between midline and endline periods.

- ***Figure 7:*** Turnover and Profit Trends across Graduated vs Non-Graduated Enterprises (Transitioning Segment)



Factors Driving Enhanced Growth

Loan Formats

We analyzed loan parameters such as ticket size and duration to understand whether certain loan formats are more compatible with growth. The tendency for firm graduation increases with larger loan sizes, and loans greater than ₹1 lakh had more representation among graduating firms. On the other hand, loan duration did not appear to have a notable impact on a firm's ability to graduate.

- ***Table 8:*** Loan characteristics across Graduated Vs Non-Graduated Enterprises

Loan Characteristics	Livelihood > Transitioning		Transitioning > Nano	
	Graduated	Non-Graduated	Graduated	Non-Graduated
Loan Size				
Rs 30,000 - Rs 99,999	30.1%	69.9%	19.1%	80.9%
Rs 1,00,000 - Rs 1,99,999	56.5%	43.5%	28.1%	71.9%
Greater than Rs 2,00,000	71.4%	28.6%	44.3%	55.7%
Loan to Turnover Ratio	25.9 %	39.6 %	14.7 %	15 %

Loan Usage And Business Innovation

Further, we analyzed loan utilization and business innovation patterns to explain the drivers of the growth trends seen above. An overwhelming majority of entrepreneurs (84.7%) used their loans to purchase raw materials and inventory, whereas a relative minority (9%) used them for longer-horizon capital investments such as durable assets or machinery.

Introduction of new business processes and improvement of existing products were key differentiators for Livelihood segment firms that graduated to the next segment.

- ***Table 9:*** Innovation implemented across Graduated vs Non-Graduated Enterprises

Innovation	Livelihood > Transitioning		Transitioning > Nano	
	Graduated	Non-Graduated	Graduated	Non-Graduated
Introduced new business processes	22.3%***	12.5%***	28.9%	23.8%
Improved an existing product	60.4%***	43.9%***	55.5%	62.1%

Enterprise Expense Structures

Few enterprises reported capital expenditure (capex) investments, although the amounts were significantly higher among graduating Livelihood Enterprises. Most firms increased their operational expenditures, with graduating Livelihood Enterprises showing a higher increase as compared to those that did not graduate (221% vs 132%), though the difference was not statistically significant. In the Transitioning segment, growth in operational spend was similar across firms. However, graduating businesses spent more overall.

An analysis of the opex ratios revealed that the Livelihood segment focused more on expanding inventory and innovation from a low base, with less emphasis on spend efficiency—a pattern consistent with early-stage business growth. In contrast, enterprises in the Transitioning segment that graduated improved spend efficiency, despite a 54% rise in opex, while non-graduating ones saw a 14% rise in opex ratios alongside a 50% increase in spend. This pattern suggests that successful graduation was linked to efficiency-focused investments.

- *Table 10:* Expenditures across Graduated Vs Non-Graduated Enterprises

Expenditures	Livelihood > Transitioning		Transitioning > Nano	
	Graduated	Non-Graduated	Graduated	Non-Graduated
Capex				
Firms Invested in capex (yes, %)	15.3%	10.1%	14.1%	14.8%
Amount calculated Annually (median, ₹)	96,000***	39,250***	1,25,000	1,00,000
Monthly Recurring Expenses				
Baseline Amount (median, ₹)	5,300***	2,158***	50,300***	15,000***
Endline Amount (median, ₹)	17,000***	5,000***	77,400***	22,500***
Increase in Recurring Expenses (%)	220.8%	131.7%	53.9%	50%
Opex Ratio				
Baseline Opex Ratio (median)	40	50	66.9**	48.2**
Endline Opex Ratio (median)	46.6**	57.4**	63.3***	54.8***
Increase in Opex Ratio (%)	16.5%	14.8%	-5.3%	13.6%

Interactions with Entrepreneurs further uncover the dynamics between business opex, turnover and profit. The increase in opex does not translate into an equally proportionate increase in turnover, which in turn may not translate linearly into enterprise profit. Many businesses across sectors reported that investments in their businesses, such as upgrading salon equipment or purchasing livestock, did not yield immediate financial returns. In the services sector, for instance, entrepreneurs may need to invest in new equipment to enhance their offerings, but the revenue impact and profitability of these investments often become apparent over time as customer footfall increases.

EXPANDING INVENTORY, EXPANDING REACH: MAHESH'S JOURNEY IN THE OPTICAL BUSINESS

Mahesh's Performance Metrics

Business Metrics

% change in Turnover
25%

% change in Profit
83%

Household Metrics

% change in Household Income
100%

% increase in Savings
14%

Contribution to Household Income
96%

Mahesh* runs a bustling optical store in Chennai, Tamil Nadu. To meet the growing demand from customers, he secured a loan and invested ₹2.25 lakhs in inventory. The investment translated in higher sales, but the growth came with the need for more staff. From employing one part-time worker, he expanded his team to three employees, enabling longer store hours and offering home eye exams, but also incurred substantial salary expenses. The growth also fueled personal milestones—he could host his mother's retirement party and upgrade home appliances.

Even though his shop generates more than ₹10 lakhs in turnover annually, much of the income is reinvested in maintaining high-quality stock and paying his employees. Now, Mahesh plans to expand the business by opening two more shops, an ambitious move that will require at least six additional employees, and further increase his business expenses. His business success rests on continuous investment in raw materials and building a reliable, service-oriented team.

(*Name changed)

Mahesh used his loan to rapidly expand inventory, which allowed him to substantially increase his profit. Even though most of the money is invested back into the business, he still managed to double his household income between baseline and endline.

Ragini* and her husband's journey from running a humble highway canteen to a thriving city restaurant exemplifies the challenges and rewards of microenterprise growth. While their business has experienced significant expansion, it also highlights the delicate balance between rising turnover and expenses.

As Ragini's business scaled up, it became necessary to invest in larger utensils, furniture, and eventually a new restaurant space. These investments, facilitated by loans from the NBFC, contributed to increased turnover but also had implications for operating expenses.

The move to a city restaurant brought with it new operational challenges, such as finding reliable employees. Ragini's decision to hire her sister-in-law as a full-time employee provided a stable and trustworthy solution, at the cost of increased labor expenses.

As a result, the business's profit growth did not keep pace with the increase in turnover, illustrating the complex interplay between business expansion and profitability.

(*Name changed)

THE BALANCING ACT OF GROWTH AND PROFIT IN MICROENTERPRISES

Ragini's Performance Metrics

Business Metrics

% change in Turnover
361%

% change in Profit
100%

Graduated
From Livelihood to Transitioning

Household Metrics

% change in Household Income
60%

% increase in Savings
16%

Contribution to Household Income
60%

Ragini's move from a highway canteen to a city restaurant resulted in a substantial 361% increase in business turnover. However, the costs associated with scaling and the investment required for that in the short term ate into her profits. Even so, she managed to double her profits and increase her household income by 60%.

These qualitative insights show that credit acts as a vital lifeline across enterprise stages. For the Livelihood segment, it offers seed capital to move out of low-wage work. Transitioning Enterprises use credit to expand and diversify, while Nano Enterprises leverage it to scale and build credit history. Across the board, credit enables growth, adaptation, and long-term sustainability.

Entrepreneur Level Factors

Owners of graduating firms were predominantly male and significantly better educated. The table below shows that graduating firms had younger owners (35 years) as compared to non-graduating enterprises (37 years). Graduating firms also had more educated owners (diploma and above: 16.2% vs 12%; 28.9% vs 18.3%) but fewer women (42.3% vs 53.6%; 24.4% vs 49.4%).

Table 11: Demographics of Business Entrepreneurs

Demographics	Livelihood > Transitioning		Transitioning > Nano	
	Graduated	Non-Graduated	Graduated	Non-Graduated
Age (median, years)	35	37	35	35
Female owner (%)	42.3%	53.6%	24.4%	49.4%
Education (%)				
Never attended school	11.6%	18.8%	4.4%	12.8%
Diploma, Graduate and above	16.2%	12%	28.9%	18.3%

Furthermore, we observe greater individual agency over decisions (versus decisions made by spouses, parents or jointly) on household spending or business income usage among owners of graduating firms. Interestingly, these owners also reported higher parental influence on their decisions compared to owners of non-graduating firms.

Table 12: Decision-making Agency across Graduated vs Non-Graduated Enterprises

Decision-making agency	Livelihood > Transitioning		Transitioning > Nano	
	Graduated	Non-Graduated	Graduated	Non-Graduated
Decision-making on spending in household				
Self	47%***	30.1%***	64.4%***	44.1%***
My spouse	13%	15.1%	11.9%	15.5%
My spouse and I decide together	29.8%***	50.5%***	17%***	34.6%***
Parents	9.3%*	4.3%*	6.7%*	5.8%*
Decision-making on spending income contributions from the enterprise				
Self	49.3%***	32 %***	70.4%***	48.9%***
My spouse	11.6%	13.7%	7.4%	13.8%
My spouse and I decide together	30.2%***	51%***	17%***	32.6%***
Parents	7.9%**	3.4%**	5.2%*	4.8%*

Entrepreneurial anxiety varies notably across business transition paths and is based on how the business was started. Overall, entrepreneurs moving from the Transitioning to Nano segments report lower anxiety levels than those transitioning from the Livelihood to Transitioning segment, suggesting that greater financial stability at higher business levels can reduce stress. When examining the origin of the business, entrepreneurs who inherited family businesses tend to experience higher anxiety, especially as they scale up, possibly due to the pressure of sustaining legacy enterprises. In contrast, individuals who started businesses due to encouragement from family or friends report lower anxiety in earlier stages, though this advantage diminishes with growth,

as new challenges emerge. These patterns highlight how both business maturity and personal motivations shape the emotional landscape of entrepreneurship.

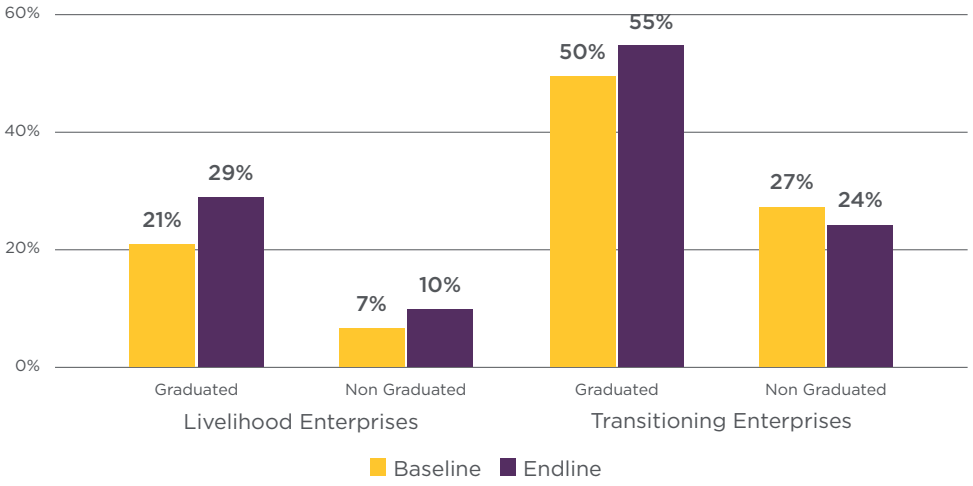
Other Enterprise-level Factors and Indirect Impacts

The baseline characteristics of enterprises, such as employment, digital technology, registration, inventory/financial management and format of the enterprise, can contribute to growth. However, these factors can also be positively (or negatively) impacted by the business growth itself.

Employment:

Graduating firms were significantly more likely to have employees, across the Livelihood and Transitioning segments. Growth in employer enterprises was especially pronounced in the Livelihood segment. Despite high growth, non-graduating Livelihood Enterprises had only a third of the share of employer firms compared to graduates by endline. A higher number of employees was linked to higher productivity, which in turn contributed to higher turnover.

● ***Figure 8:*** Employment across Graduated vs Non-Graduated Enterprises *(all figures are statistically significant)*



Digital Technology:

There has been a significant ecosystem-wide push to drive digital payments in the country, and digital payment penetration has increased widely across businesses and consumers. In the study sample, digital payment penetration grew by 55-86% across all segments. Graduating enterprises had significantly higher digital payment adoption at baseline, with a 15-24 percentage point lead over non-graduates, which was maintained at endline. However, digitization varied by use case: adoption was faster for customer payments, but growth was slower in the case of supplier payments, employee wages, and utility bills.

- ***Table 13:*** Digital Payments across Graduated vs Non-Graduated Enterprises

Digital Payments	Graduated from Livelihood Enterprise to Transitioning Enterprises		Graduated from Transitioning Enterprise to Nano Enterprise	
	Graduated	Non-Graduated	Graduated	Non-Graduated
Frequency of use of digital payments				
Baseline				
I make digital payments on a daily basis	28.8%***	13.5%***	49.6%***	25.8%***
Never used it	56.3%***	75%***	24.4%***	50.9%***
Endline				
I make digital payments on a daily basis	52.5%***	25%***	77%***	48.1%***
Never used it	38.1%***	64.1%***	17%***	35.5%***
%Change				
I make digital payments on a daily basis	82%	86%	55%	86%
Never used it	-32%	-15%	-30%	-30%
Digital payments for enterprise-related activities				
Baseline				
Mobile recharge (prepaid/postpaid) for communication	35.1%*	31.7%*	47%**	39.8%**
Paying utility bills payments	37.2%**	30.7%**	52.9%**	51.5%**
Money transfer to supplier(s) [including raw material, goods and services, etc.]	36.1%**	25.9%**	48%***	33.6%***
Money Transfer to employees (paying salary)	6.3%	6.7%	20.5%	13.2%
Receiving money from customers (retail and institutional buyers)	84%**	78.8%**	74.5%*	72.4%*
Payment of required taxes (GST etc.)	4.2%***	0.9%***	6.8%***	1%***
Endline				
Mobile recharge (prepaid/postpaid) for communication	40.6%	42.9%	57.1%	45.1%
Paying utility bills payments	51.8%	45.6%	55.3%	54.4%
Money transfer to supplier(s) [including raw material, goods and services, etc.]	39.8%	36.2%	63.3%	52.1%
Money Transfer to employees (paying salary)	3.7%	6.7%	10.7%	8.9%
Receiving money from customers (retail and institutional buyers)	66.9%	59.7%	75.8%	70.4%
Payment of required taxes (GST etc.)	0.7%	-	12.5%	3.5%

Registration and Graduation:

Enterprise registration is strongly associated with the probability of graduation. Firms that graduated had significantly higher registration rates at baseline—double in the Livelihood segment (20.4% vs. 9.8%) and more than twice as high in the Transitioning segment (60% vs. 27.3%). While Non-Graduated enterprises saw faster growth in registration over time, they remained well behind by endline. This underscores a clear pattern: early registration is a distinguishing feature of firms that successfully graduate, suggesting that formalization is not just an outcome of growth, but a critical enabler of it.

Table 14: Presence of any Type of Registration (Graduated vs Non-Graduated Enterprises)

Registration	Livelihood > Transitioning		Transitioning > Nano	
	Graduated	Non-Graduated	Graduated	Non-Graduated
Baseline	20.4%***	9.8%***	60%***	27.3%***
Endline	41.8%***	25.2%***	74.1%***	41.1%***
% change	110%	150%	23.3%	51.9%

Bookkeeping:

The practice of keeping records of enterprise accounts appears to be correlated with business size and growth. Graduating firms showed 12-15 percentage point leads over non-graduating counterparts in maintaining efficient bookkeeping practices. They also saw a higher rate of increase in this practice during the course of the study.

Table 15: Bookkeeping Practices across Graduated vs Non-Graduated Enterprises

Bookkeeping	Livelihood > Transitioning		Transitioning > Nano	
	Graduated	Non-Graduated	Graduated	Non-Graduated
Baseline	58.1%	43.5%	76.3%	64.2%
Endline	67.4%	43%	82.2%	67.7%
% Change	16%*	-1%*	8%*	5%*

TEA STALL OWNER BHARAT PROCURES A LICENSE AND TAPS IN TO DIGITAL PAYMENTS

Bharat*, a roadside tea stall owner, has successfully leveraged credit to get a more stable tin stall and counter front built in order to formalize his business. He has also obtained a food license from the municipal body to ensure compliance with regulatory norms. This license, coupled with his strategic location on the highway, has not only enhanced his credibility but also protected his business from potential disruptions like demolition and evictions.

Bharat has also installed a UPI QR code to accept payments. This move has streamlined transactions, improved efficiency, and allowed for better financial record-keeping. By formalizing his business and adopting digital payment methods, Bharat has not only secured his livelihood but also positioned himself for future growth and expansion.

(*Name changed)

Bharat's Performance Metrics

Business Metrics

% change in Turnover
38%

% change in Profit
0%

Household Metrics

% change in Household income
0%

% increase in Savings
5 %

Contribution to Household income
66%

Bharat's shop faced demolition once, and the credit was used to rebuild and formalize the shop, so no problems arose again. He is now back on his feet and has also procured an FSSAI license.

When Rani* started offering tuition classes from her home in Rajasthan, she never imagined the growth it would bring. As more students enrolled, she realized that her small space was no longer sufficient. With the support of a loan, she was able to first build a dedicated learning space by getting some plastic chairs, and painting and plastering a corner within her household. Over the next 1.5 years, her ambition and increasing revenue from the business fueled her journey to secure a larger rented premises outside her home. This marked a turning point in her business journey. It allowed her to accommodate more students and scale up, by enrolling students in multiple batches.

(*Name changed)

By using her credit to build dedicated spaces and expand her tuition classes into a larger operation, Rani managed to graduate from the Livelihood segment to the Transitioning segment. Even though her savings did not increase, she managed to double her turnover and increase her profits and household income by 50%.

FROM KITCHEN TABLE TO COMMERCIAL SPACE: TRANSFORMING ENTERPRISE PREMISES

Rani's Performance Metrics

Business Metrics

% change in Turnover
100%

% change in Profit
50%

Graduated
From Livelihood to Transitioning

Household Metrics

% change in Household income
50%

% increase in Savings
0%

Contribution to Household income
50%

Format Of The Enterprise:

Business growth can empower enterprises to upgrade their physical infrastructure, transitioning from dedicated home spaces to independent storefronts and commercial spaces in some cases. We observe that a premises upgrade is more likely among graduating firms. The share of businesses operating 'within household' premises was much higher for non-graduating firms.

In-depth interviews with borrowers reveal that credit helped businesses upgrade from household corners to dedicated workspaces, storefronts, and eventually commercial spaces. For instance, enterprises in the Livelihood segment used credit to carve out or build spaces within homes, improving professionalism and separating the business from their personal life. As the businesses grew, some transitioned to kiosks or rented shops, gaining access to wider markets. Others enhanced or expanded existing spaces—renovating, relocating to prime areas, or scaling up to accommodate growing operations. These physical upgrades have helped boost visibility, customer engagement, and build the business's identity.

Table 16: Format across Graduated Vs Non-Graduated Enterprises

	Graduated from Livelihood Enterprise to Transitioning Enterprise		Graduated from Transitioning Enterprise to Nano Enterprise	
Format of the Entreprise (%)	**Graduated**	**Non- Graduated**	**Graduated**	**Non-Graduated**
Baseline				
Within household premises	40.9 %	54.3 %	25.2 %	39.1 %
Outside household with fixed premises and with permanent structure	47.9 %	31.7 %	64.4 %	50.4 %
Outside household with fixed premises and with temporary structure/kiosk/stall or without fixed premises	11.2 %	13.9 %	10.4 %	10.5 %
Endline				
Within household premises	36.7 %	52.6 %	21.5 %	38.1 %
Outside household with fixed premises and with permanent structure	52.1 %	34.9 %	72.6 %	52.9 %
Outside household with fixed premises and with temporary structure/kiosk/stall or without fixed premises	11.2 %	12.5 %	5.9 %	9.0 %

2.3 Household Well-being

Graduating enterprises began with higher household incomes and saw 8–9 percentage points more income growth than non-graduating firms, though the difference was not statistically significant. Overall, household incomes grew and Debt-to-Income ratios fell more sharply (1.5-2 percentage points) for graduating businesses (from 18% to 13%). Moreover, graduating enterprises relied more on business income, while non-graduating ones had diversified sources. This may indicate that firms fully invested in their business are more likely to grow. Graduating firms also showed a slightly higher uptake of health and life insurance.

Residential patterns of entrepreneurs remained uniform irrespective of their growth. Over three-fourths reported living in self-owned houses. Overall, we saw a 5-6% increase in the number of entrepreneurs who reported living in their own properties between baseline and endline.

Table 17: Household Characteristics across Graduated Vs Non-Graduated Enterprises

Household metrics	Livelihood > Transitioning		Transitioning > Nano	
	Graduated	Non-Graduated	Graduated	Non-Graduated
Household monthly income (median, ₹)				
Baseline	30,000*	22,000*	60,000***	40,000***
Endline	43,500***	30,000***	80,000***	50,000***
% change	45%	36.4%	33.3%	25%
Debt To Income Ratio (DTI)				
Median DTI at baseline	17.9	18.7	18	18.7
Median DTI at endline	13.5*	16.3*	13.7	15.9
Contribution of business income to household at baseline	54%**	43%**	71%*	63%*
Have Life insurance at Baseline	37.7%	35.6%	51.9%	47.4%
Have Health insurance at Baseline	20.9%	18.5%	31.1%	24.6%

KUCCHA TO PUCCA: A LOAN HELPS RAM SETUP A WORKSHOP AND PROVIDES A PUCCA ROOF

Ram*, a truck mechanic from a small village on the periphery of Dewas, Madhya Pradesh used to live in a leaky kutcha house, always worried about rain and pests. “My work was backbreaking, and I could barely make ends meet.” He also shared about his work conditions where he worked along the highway, without any workshop or equipment, making it difficult to attract customers and earn a decent living.

With the loan from an NBFC, Ram was able to invest in building a small workshop. He also purchased new tools and a machine that considerably reduced manual labor. “Now, I can finish more work in less time, and my earnings have doubled”.

Ram also used part of the loan to build a pucca rooftop on his house. "It is like a new home, no more leaks, no more fear of the monsoon." With the business picking up, Ram can now also send more money back home to his parents, giving him a feeling of immense satisfaction.

(*Name changed)

Ram’s Performance Metrics

Business Metrics

% change in Turnover
191%

% change in Profit
20%

Graduated
From Livelihood to Transitioning

Household Metrics

% change in Household income
33%

% increase in Savings
15 %

Contribution to Household income
100%

Ram managed to graduate into a higher turnover segment on the back of his investment in building a workshop and buying new machinery. This substantial investment led to a 200% increase in turnover. But the heavy investment, along with the repairs on his house roof meant reduced profits in the short term. Nevertheless, his household income and savings witnessed a decent increase, resulting in more financial support for his family back home.

CREDIT LINE TO STOCK UP AND SCALE UP: A BANGLE SELLER'S JOURNEY

Shabana*, a veteran bangle seller from Prayagraj, Uttar Pradesh, had been operating her home-based business for over a decade. Despite her expertise and loyal customers, limited space and a lack of a professional storefront hindered her growth.

A repeat customer of the NBFC, Shabana initially used a loan to construct a storefront, invest in display fixtures, and expand her product range. Her latest loan enabled her to stock up on bangles in bulk from Firozabad, ensuring a year-round supply.

Facing competition from larger fancy stores, the loan-fueled transformation proved crucial. The improved storefront and expanded product range attracted a wider customer base, boosting her earnings.

When her husband's accident left him unable to work, the store became her family's sole income. Her expertise and expanded offerings allowed her to meet increased demand and provide for her family.

(*Name changed)

Shabana's Performance Metrics

Business Metrics

% change in Turnover
25%

% change in Profit
88%

Household Metrics

% change in Household income
133%

% increase in Savings
7%

Contribution to Household income
53%

(*Name changed)

Shabana's investment in bulk purchasing and her idea of improving her storefront allowed her to grow her profits substantially even though her turnover growth was modest. Since the store was the sole source of income, her profits went towards her household income, which more than doubled between baseline and endline.

DYNAMICS OF GROWTH - SNAPSHOT

Graduation Patterns and Business Performance

- 32% of Livelihood Enterprises graduated to the Transitioning segment; 5% to Nano
- 24% of Transitioning Enterprises acquired Nano status.
- Sectors like trade and manufacturing saw higher graduation rates; livestock had the lowest.

Loan Size and Utilization

- Larger loans (≥ ₹1 lakh) were common among enterprises which graduated to the next segment.
- Most loans were used for working capital; capex investments were fewer but higher in value among graduating firms.

Business Innovation and Efficiency

- Graduating enterprises were more likely to introduce new processes and improve products, compared to non-graduating enterprises.
- 60% of Livelihood graduates improved an existing product (vs. 44% of non-graduates).
- Firms Graduating from Livelihood to Transitioning were more likely to invest in scaling rapidly.
- Firms graduating from Transitioning to Nano were more likely to focus on reducing their opex and becoming more efficient.

What Factors Influence Graduation?

Entrepreneur-Level Factors

- Graduating entrepreneurs were younger (median age 35), more educated (diploma or above: 16–29% vs. 12–18%), and more likely to be men.
- Graduating entrepreneurs had greater individual control over business and household spending decisions. They also reported more parental influence, suggesting support systems may aid confidence in decision-making.

Formalization & Bookkeeping

- Graduating firms had a head start in registration (Livelihood: 20% vs. 10%; Transitioning: 60% vs. 27%) and continued to lead at the endline.
- Bookkeeping practices were 12–15 percentage points higher in graduating firms.
- Digital Payments adoption grew by 55–86% across segments. Use remained highest for customer payments; supplier and employee payments lagged.
- Graduating firms were more likely to employ others. In Livelihood Enterprises, employment share rose from 21% to 29% among graduates vs. 7% to 10% among non-graduates.

Household Wellbeing Outcomes

Graduating enterprises started with higher household incomes and saw 8–9 percentage points more growth compared to non-graduates. They also:

- Reduced Debt-to-Income ratios by a larger margin (from 18% to 13%)
- Relied more on business income (54–71% vs. 43–63%)
- Increased life and health insurance uptake modestly

2.4 Impact on Underserved Segments

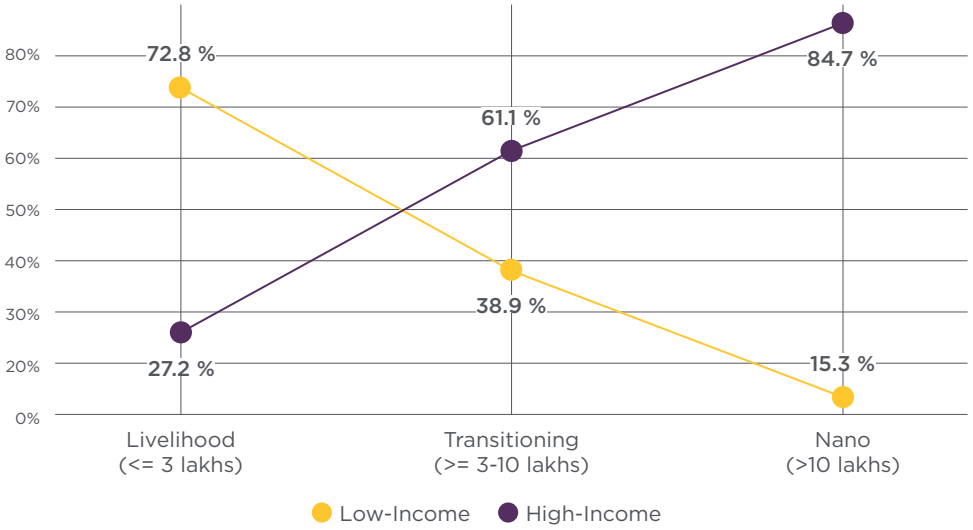
In this section, we explore the impact of credit on underserved segments—including women business owners, low-income households, and New-to-Credit (NTC) borrowers. These groups are often excluded from formal financial systems due to limited credit histories, lack of collateral, or inadequate documentation. Yet, addressing their credit needs is vital for advancing inclusive growth. By highlighting their baseline characteristics and comparing outcomes with traditional borrower segments, we aim to surface both the unique challenges and the untapped potential of these underserved entrepreneurs.

Low-Income Segments

Defining Low-Income Segments

Households belonging to the Low-Income segment are identified as those with gross monthly household income below the median of ₹40,000. They account for 43.9% of our sample (i.e., 791 enterprises). They dominate the Livelihood segment, making up 72.8% of households, but their share declines sharply in higher turnover segments, dropping to 15.3% in the Nano segment.

Figure 9: Income Percentage Distribution across Turnover segments



Enterprise Profile of Low-income Segments

Enterprises run by low-income households are primarily unregistered (~80%), single-owner enterprises run from their homes, with no notable sectoral differences. Compared to higher-income peers, they differ mainly in individual characteristics, saving capacity, enterprise size, and credit access. Most households borrowed from MFI-NBFCs targeting lower-income groups—83% received loans between ₹30,000–99,000, reflecting limited borrowing capacity and high perceived risk. Only 14% accessed ₹1–2 lakh loans, and just 3% received loans of ticket sizes more than ₹2 lakhs. About 70% borrowed at high interest rates (18–24%).

Business Growth Trends by Income Segment

Enterprises run by low-income households, though smaller at the outset due to limited capital, grew faster and achieved higher profit growth than their high-income peers. In the Livelihood segment, they reported greater profit gains and slightly higher turnover growth, driven by leaner operations and higher spend efficiency. While they maintained a scale disadvantage, profitability caught up as margins for high-income enterprises fell from 68% to 51%. These enterprises also invested 25% less in capex but expanded inventory, reflecting efficient resource use towards business expansion.

Table 18: Profit Ratios for High and Low-income Segments

Segment	Profit Ratio			
	High-Income		Low-Income	
	Baseline	Endline	Baseline	Endline
Livelihood	68.1%	51.0%	53.3%	48.0%
Transitioning	43.5%	40.0%	37.5%	40.0%
Nano	20.0%	20.0%	13.3%	18.8%

Figure 10: Turnover and Profit Trends for Enterprises run by Low-income Households (across Segments)

Within the Low-Income segment, we see a considerable difference in the growth trajectories of Livelihood, Transitioning and Nano enterprises. Livelihood Enterprises seem to grow well, but cannot achieve the incremental rate of growth required to catch up to the high-income counterparts and to Transitioning enterprises. This limits their ability to achieve economies of scale and thus further hinders future growth. We believe that a targeted focus on Livelihood Enterprises in this segment would achieve greater impact.

Table 19: Business Financials across Low vs High-Income Segments for Livelihood Enterprises

Segments	High-Income		Low-Income	
	Baseline	% Change	Baseline	% Change
Livelihood Enterprise				
Monthly Turnover (median, ₹)	22,000***	59.1%***	15,000***	66.7%***
Monthly Profit (median, ₹)	15,000***	20%***	8,000***	50%***
Monthly Recurring Expenses (median, ₹)	6,000***	111.7%	2,723***	153.4%
Monthly Opex (median, ₹)	29	46.3%	20	66.7%
Annual Capex (median, ₹)	65,000		48,000	
Has Employee (s) %	17.6%	19.3%	10.5%	51.4%
Sample	181 (17.9%)		484 (61.2%)	

Figure 11: Turnover and Profit Trends for Low-Income vs High-Income Households in the Livelihood Segment

Individual Characteristics

Education and gender disparities sharply divide income segments. Over 13.7% of low-income enterprise owners never attended school (vs. 7.4% in the high-income segment). Only 15.2% of them held diplomas or higher degrees (vs. 28.3% in the high-income segment). Women own 77% of low-income enterprises. Despite starting with only 40% of the household income of high-income peers, low-income livelihood Enterprises outpaced them in income growth. However, their financial strategies reflect constraints: savings dropped by four points (vs. a 7-point increase for the high-income segment), and loan burdens were heavier (34% vs. 28%) between baseline and endline. Despite the constraints, these enterprises reduced debt at nearly the same rate (33% vs. 29%) and prioritized education, revealing long-term aspirations.

These enterprises also rely more heavily on business income for household needs, limiting reinvestment potential. This ties to greater dependence on a single income stream—42% of female-led low-income businesses had no other income source (vs. 22% in the High-Income segment). Though debt burdens declined, their DTI remained significantly higher at 18% compared to 10.8% in the high-income segment.

Table 20: Household Financials within Low and High-Income segments across Baseline and Endline

Segments	High-Income		Low-Income	
	Baseline	% Change	Baseline	% Change
Livelihood Enterprise				
Household Income (median, ₹)	50,000***	20%***	20,000***	50%***
% Monthly Savings	8%	87.5%	19%	-21.1%
Monthly DTI	11***	-1.7%***	24.8***	-27.5%***
Annual Children fees (median, ₹)	20,000	0%**	12,500***	60%**

Table 21: Insurance and Registration among Low and High-income Segments across Baseline and Endline

Segments	High-Income		Low-Income	
	Baseline	% Change	Baseline	% Change
Livelihood Enterprises				
Life Insurance	38.1	-1.6%	34.9	-1.7%
Health Insurance	23.2	40.5%	17.3	42.2%
Registration	22.1***	110%	11.3**	138.9%

Enterprises run by low-income households demonstrate growth rates comparable to high-income ones, despite capital constraints and a heavier reliance on enterprise income (50% vs. 37.5%). This creates a tradeoff between household well-being and business investment, where diverting funds away from the business limits its growth, reducing future household income (thereby ensuring more diversions) and reinforcing a cycle of constrained financial progress. Greater capital infusion—through larger, affordable loans or direct investment—could unlock their full potential without compromising household stability.

Women-led Enterprises

Female-owned enterprises are primarily in the Livelihood segment, with a median household income of ₹35,000, below the ₹40,000 low-income threshold. Over half of these enterprises (52%) fall into the low-income category and share many traits with that segment. Over two-thirds (69%) received loans under ₹1 lakh, and only 4% accessed loans above ₹2 lakh, compared to 23.25% of male-owned enterprises. Women in our sample predominantly operate in livestock and trade (62%), while men are concentrated in manufacturing and trade (73.6%). Just 18% of women-owned enterprises were registered at baseline. Most of these enterprises are financed by NBFC 1 without much sector-wise variation, while those with NBFC 2 are mostly in livestock.

Balancing Household Stability and Business Growth: Themes, Implications, and the Female Enterprise Cycle

Business Impact and Challenges in Scaling as Businesses Grow

As businesses transition to higher turnover categories, balancing household priorities with business demands becomes increasingly complex. Female-owned enterprises are less profitable than their male counterparts, in lower turnover segments, as competing resource demands limit reinvestment. Since the metrics are self-reported, we will see a difference in the calculated vs reported figures.

Table 22: Business Financials within Female and Male-led Enterprises

Segments	Female		Male	
	Baseline	% Change	Baseline	% Change
Livelihood Enterprises				
Monthly Turnover (median, ₹)	15,000***	66.7%	18,000***	66.7%
Monthly Profit (median, ₹)	10,000	20%**	10,000	50%**
Monthly Recurring Expenses (median, ₹)	3,783	110.8%	3,083	161.7%
Monthly Opex (median ratio)	25	52%	16.9	99.3%
Sample	328 (18.2%)		337 (18.7%)	
Transitioning Enterprises				
Monthly Turnover (median, ₹)	45,000*	15.6%*	57,500*	39.1%*
Monthly Profit (median, ₹)	18,000	22.2%*	20,000	50%*
Monthly Recurring Expenses (median, ₹)	15,000	38.3%	24,500	55.7%
Monthly Opex(median ratio)	33.6	26%	40.8	27.4%
Sample	244(13.5%)		322(17.8%)	
Nano Enterprises				
Monthly Turnover (median, ₹)	150,000**	16.7%	240,000**	25%
Monthly Profit (median, ₹)	30,000***	16.7%	50,000***	10%
Monthly Recurring Expenses (median, ₹)	91,000	-4.2%	1,33,133	20.5%
Monthly Opex(median ratio)	70.1	-11.9%	63.7	7.4%
Sample	97 (5.5%)		472 (26.2%)	

Female-owned businesses are an ancillary source of income for households, primarily focused on providing stability to household finances, by supplementing household income or by increasing savings. These roles are more salient in the Livelihood and Transitioning segments. The reason may well be that the Nano segment entrepreneurs are in a better financial situation, such that the tradeoffs between the business and household are not as stark, or not required.

Table 23: Household well-being metrics within Female and Male-led Enterprises across Baseline and Endline

Enterprise Categories	Female		Male	
	Baseline	% Change	Baseline	% Change
Livelihood Enterprises				
% Monthly Savings	11%	36.4%	20%	-25%
Monthly DTI	19.8	-21.8%	19.9	-21.8%
Annual Children fees (median, ₹)	16,000***	25%	13,000**	53.8%
Household Income (median, ₹)	25,500	37.3%	25,000	20%
Other source of income	69.2%		64.3%	
Transitioning Enterprises				
% Monthly Savings	10%	75%	13%	15.4%
Monthly DTI	16.3	-16.6%	18.4	-13.9%
Annual Children fees (median, ₹)	20,000	20%	20,000	25%
Household Income (median, ₹)	40,000	25%	45,000	11.1%
Other source of income	68%		53.1%	
Nano Enterprises				
% Monthly Savings	9%	122.2%	13%	53.8%
Monthly DTI	13.6	-13.7%	19.5	-6.4%
Annual Children fees (median, ₹)	30,000	-16.7%*	30,000	33.3%*
Household Income (median, ₹)	70,000	14.3%	80,000	1.9%
Other source of income	58.7%		43.6%	

Balancing Stability and Growth: The Gendered Tradeoff in Enterprise Expansion

Women-owned enterprises serve as both financial stabilizers for households and sustaining business operations. This dual role is particularly evident in Livelihood and Transitioning Enterprises, where female entrepreneurs prioritize household resilience by directing earnings into savings and debt reduction. While this promotes long-term financial security, it limits reinvestment in business growth.

Female entrepreneurs exhibit disciplined financial management, reflected in a 50% overall increase in savings and stable DTI ratios, safeguarding their households against economic shocks. Among Livelihood Enterprises, women's savings grew by 36.4%, whereas men's declined by 25%—highlighting distinct financial strategies. However, this household-first approach slows business scalability, resulting in lower profit growth despite steady turnover increases.

Livelihood & Transitioning Enterprises: A Stability-First Strategy

In Livelihood enterprises, women's household income grew by 37.3%, outpacing men's 20%, yet profit growth lagged (20% vs. 50% for men). Transitioning enterprises followed a similar pattern—higher household well-being gains but slower reinvestment in business. Their capex investments declined, reinforcing the tradeoff: while men allocate more toward business expansion, women ensure household financial security first.

Nano Enterprises: Efficiency Amid Reduced Constraints

At the Nano level, where financial pressures are less stark, women demonstrated higher efficiency, with savings surging 122.2% (vs. 53.8% for men) and DTI improving by 13.7%, signaling better financial discipline. Profit growth among women-led Nano Enterprises was higher than men's (16.7% vs. 10%), highlighting that while they manage resources prudently, their businesses can still scale at a higher pace.

A Systemic Tradeoff: Growth vs. Household Resilience

Women-led businesses prioritize stability over rapid growth, focusing on household security at the cost of business scalability. While men reinvest profits into business expansion—seen in higher recurring expenses—women channel resources into savings and debt reduction, reinforcing resilience but limiting immediate gains. This reflects a structural tradeoff: without interventions that ease household burdens and enable reinvestment, women entrepreneurs remain caught in a cycle where financial discipline ensures survival but constrains long-term growth.

Breaking the Cycle: Beyond Financial Access

Women entrepreneurs are not less capable or efficient—if anything, they are more financially disciplined. However, their growth is constrained by structural expectations that tie their businesses to household welfare. Financial access and literacy alone are not sufficient—unlocking their full potential requires targeted policy interventions that support both household security and business reinvestment, allowing women-led enterprises to move beyond survival toward sustainable and scalable growth.

Sunaina*, a skilled tailor in a small suburban village on the outskirts of Indore, has seen her business flourish thanks to credit. In the past, her children attended public schools due to financial limitations. However, with the increased income from her tailoring business, Sunaina has been able to enrol them in private tuition classes to enhance their education. During slower periods, Sunaina often sent her children to tuition classes only a month before exams. As her business grew and her income increased, she could enroll for continuous tuition throughout the academic year.

Sunaina faced a particularly challenging time when her daughter required major heart surgery. During this difficult period, the Non-banking Financial Company (NBFC) that had provided her with a loan paused her instalments, offering much-needed relief.

(*Name changed)

Despite a major medical expense and private tuition expenses, Sunaina still managed to nearly double her turnover and graduate to the transitioning enterprises segment, showcasing resilience.

SEWING A BRIGHTER FUTURE: HOW CREDIT AND FLEXIBLE REPAYMENTS HELPED SUNAINA INVEST IN HER CHILDREN'S EDUCATION

Rani's Performance Metrics

Business Metrics

% change in Turnover
90%

% change in Profit
20%

Graduated
From Livelihood to Transitioning

Household Metrics

% change in Household income
63%

% increase in Savings
17%

Contribution to Household income
5%

Unpacking the Journey of New-to-Credit Enterprises

At baseline, New-to-Credit (NTC) enterprises faced challenges in savings, managing Debt-to-Income ratios, and asset accumulation compared to Non-NTC peers. Despite these constraints, the similar profit margins and turnover growth of the two segments suggest that the perceived lending risks may be overstated. NTCs were more likely to start as family businesses (45.9% vs. 24.4%) and emerged due to familial and societal factors. Though fewer NTC enterprises were registered initially (28.1% vs. 39%), they showed strong progress, reaching 43.4% registration by endline, indicating the impact of financial access. NTCs remained largely solopreneur-led (over 70%), with limited workforce growth, but maintained stable operations, with most using self-owned premises, reflecting long-term commitment despite financial constraints.

Financial Behavior and Resource Utilization:

New-to-Credit enterprises display slower turnover growth but higher profit growth. This is further augmented by higher expenses in raw materials compared to Non-NTC enterprises, which reduce their spending on raw materials between baseline and endline by 16%. This push in raw material spending signals their strategy of scaling via inventory expansion. In spite of the high opex and higher recurring expenses, NTC enterprises manage to grow their profits at a higher pace compared to their Non-NTC counterparts.

NTC enterprises demonstrated significant improvements in savings, reducing DTI ratios, and managing recurring expenses between baseline and endline.

For instance:

- Savings among NTC enterprises increased by 66.7%, far surpassing the 25% growth of Non-NTC enterprises.
- Debt-to-Income ratios of NTC enterprises decreased by 24.4%, compared to 16% of the Non-NTC enterprises, reflecting improved financial health.

These changes align with their modest increases in turnover and profit, illustrating prudent resource utilization and resilience under financial constraints.

Table 24: Business Financials within NTC and Non-NTC Borrowers

Segments	New-to-Credit		Not New-to-Credit	
	Baseline	% Change	Baseline	% Change
Monthly Turnover (median, ₹)	70,000	14.3%	50,000	40.0%
Monthly Profit (median, ₹)	20,000	50.0%	20,000	25.0%
Monthly Recurring Expenses (median, ₹)	17,583	121.0%	16,600	75.9%
Expenses Raw materials	20,000	50.0%	30,000	-16.7%
Opex	33.4	53.0%	38	28.9%
Sample	196 (10.8%)		1483 (82.4%)	

Growth Potential Across Turnover Groups

Breaking down the data by turnover groups revealed key insights:

- **Livelihood Enterprises (₹<3 lakhs):** NTC enterprises in this group demonstrated strong savings growth and improvements in debt-to-income ratios, showcasing their adaptability.
- **Transitioning Enterprises (₹3-10 lakhs):** NTC enterprises saw marked progress in turnover and recurring expenses, highlighting their potential to scale operations.
- **Nano Enterprises (₹>10 lakhs):** Though smaller in sample size, NTC enterprises here matched or exceeded Non-NTC performance in profit growth, emphasizing their ability to compete at higher scales.

Reframing Perceptions of Risk

The prevailing perception that NTC enterprises pose a higher lending risk is increasingly at odds with reality. Despite starting with disadvantages in savings, debt-to-income ratios, and formalization, NTC enterprises have demonstrated remarkable growth, stability, and financial discipline—mirroring or even surpassing Non-NTC enterprises across multiple indicators. Yet, the weight of this risk narrative remains disproportionately heavy: a staggering 74% of the 196 NTC enterprises are subjected to the highest interest rate category, burdened with rates between 30 to 36%. Compared to this, only 20% of Non-NTC enterprises in the same category. This paradox underscores a critical flaw in financial access—where those proving their resilience and reliability are still penalized by inaccurate assumptions of risk, locking them into cycles of high-cost credit that stifle their potential for expansion.

The success of NTC enterprises underscores the need for continued efforts, targeted support, and capacity-building initiatives. By recognizing and addressing the unique challenges they face, policymakers and financial institutions can unlock the untapped potential of these resilient entrepreneurs, fostering inclusive growth and economic development.

3 Process of Enterprise Formalization

Enterprise formalization for micro and nano businesses is a complex, multi-dimensional process shaped by firm size, regulations, industry norms, financial access, and entrepreneur perceptions. These businesses operate along a spectrum of informality, making binary definitions such as registration status or Factories Act coverage inadequate. For example, while digital payments and record-keeping support formalization, registration alone does not guarantee better outcomes (UNCTAD, 2023), and global evidence remains mixed (McKenzie et al., 2019; Narayan & Sundaramoorthy, 2018). The ILO defines the informal economy as a as a variety of "characteristics, circumstances and needs of workers and economic units" and calls for "tailored approaches" (International Labour Conference, 2017). Its 2015 Recommendation emphasizes that formalization requires a balanced approach using multiple indicators—this is especially relevant in India, where enterprises in the same sector and turnover bracket (e.g., clothing vs. metal fabrication) differ widely in business cycles and scale, underscoring the need for customized financial solutions.

To capture this complexity, we developed a theoretical spectrum of formalization across three dimensions:

1. **Regulatory** – Ranges from no registration to local, state, or national-level registration.
2. **Operational** – Measures use of digital payments and bookkeeping, from fully informal to fully digital.
3. **Employment** – Reflects the presence and formalization of workers, building on existing literature linking employment to formality.

Our theoretical framework moves beyond simplistic definitions, offering a more holistic lens to understand the journey of enterprise formalization across various growth stages. It captures the legal status of enterprises, along with how they operate, grow, and integrate into the formal economy.

Spectrum of Formalization

Enterprise formalization progresses through five stages, from complete informality to full regulatory compliance:

Degree 0 businesses operate entirely outside formal systems, lacking any registration or structured financial management.

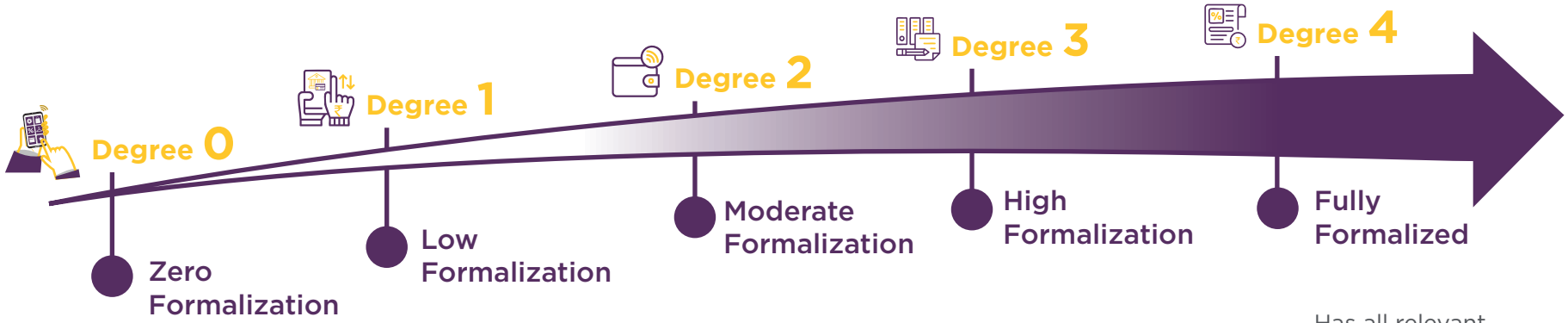
Degree 1 introduces minimal formalization—some digital transactions occur, but financial records remain informal.

Degree 2 businesses obtain basic licenses, start structured record-keeping, and expand digital payments.

Degree 3 marks a shift toward structured operations, with tax registrations, proper bookkeeping, and employment expansion, though full compliance remains inconsistent.

Degree 4 businesses are fully formalized, maintaining digital financial records, a separate bank account, and a legally compliant workforce.

Figure 12: Spectrum of Formalization



	Zero Formalization	Low Formalization	Moderate Formalization	High Formalization	Fully Formalized
Regulatory	No form of registration document	No form of registration document	Possesses administrative licenses or Udyam registration	Possesses at least three registration documents, may have GST	Has all relevant forms of registrations including GST
Operational	No digital payments No records kept or bookkeeping practices followed	Digital payments used only for receiving customer payments No written records, mental calculations done	Digital payments used for customers and for payment of utility bills and suppliers mental calculations done or notebook record maintained	Digital payments used for customer transactions, utility bill payments and payment to suppliers and workers Book records maintained or digital records	Transactions are fully digital for all stakeholders Inventory and financials recorded digitally. Cash transactions also recorded. Separate bank account maintained for the enterprise
Employment	Own Account Enterprise with no employees	No employees or family members, one paid employee labour	1 or 2 permanent employees	has between 2-9 employees, who may or may not have formal contracts	Has more than 10 permanent employees with formal contracts and social benefits prescribed under the Factories Act

The extent of formalization is assessed in degrees, with Degree 0 indicating no formalization in any dimension, and Degree 4 representing a fully formalized enterprise with very high levels of formalization across all three dimensions.

In the sections below, we apply the theoretical framework to the enterprises in the sample data, which allows us to generate new insights about our sample's formalization journeys as well as test the validity of the framework. We explore our data through the lens of the three dimensions of the framework, namely, regulatory, operational and employment.

Dimension 1: Regulatory

At baseline, 16% of sample enterprises held some form of administrative registration with a Municipal Corporation or Gram Panchayat.[8] This typically requires identity proof as per Aadhaar cards. Certain States also require a physical inspection of the property by an authorized representative, whereas others support a completely online process. Additionally, 5.4% of enterprises had Business PAN Cards, which are required for Partnerships and Private Limited Companies.[9] 15.6% of the sample was registered on the Udyam portal, a voluntary PAN card-based online registration to also avail a host of services like incubation and credit benefits.[10] Finally, 17.7% of the sample was registered under the GST regime, a requirement for enterprises with turnover exceeding ₹20 lakhs.[11]

Requirements by registration type are laid out in the table below:

Types of registration	Jurisdiction	Compliance status
Administrative registration	State	Absolutely mandatory
Operating licence	State	Mandatory underspecific conditions: ex food operators require an FSSAI license
Business PAN card number	National	Mandatory only for partnerships, LLc and Pvt Ltd. companies
Udyam Registration Number	National	Voluntary. Mandatory only if MSME status and benefits wanted
GST number	National	Mandatory for businesses with an annual turnover exceeding ₹40 lakh for the supply of goods, ₹20 lakh for the provision of services (in most states), and ₹10 lakh for both goods and services in specified special category states.

Among these registration types, Udyam and administrative registrations are the most widely prevalent among enterprises in our sample, followed by GST. The high rate of voluntary Udyam registrations may be attributed to an organic demand for linked Government benefits. Alternatively, this uptake could be driven by the lending partners given the Government's push to make Udyam registration mandatory for lending partners to avail priority sector lending schemes. The high uptake of GST indicates strong compliance with tax codes and the ability for enterprises to avail input tax credits, which is especially relevant for manufacturing business performance.

Table 25: Shifts in Business Registration Practices Over Time

Types of registration	Baseline	Endline	% Change
No registration	62.4%	47.2%	-24.4%***
Administrative registration	16.4%	25.8%	57.6%**
Business PAN card number	5.4%	10.6%	95.9%***
Udyam Registration Number	15.6%	38.5%	146.6%***
GST number	17.7%	21.7%	22.3%*
Operating licence	14.5%	20.8%	43.7%**
Sample	1,800		

8 The end document produced here is the shop license or a gumasta.
9 In case of sole proprietorship, the owner's PAN card is treated as the entity's pan card since their incomes are linked.
10 This subsumes the older Udyog Aadhar regime.
11 A certificate of registration of the business, PAN cards and proof of identity are mandatory for GST registration.

Building on the above framework, we also classified enterprises under staggered registration type combinations, with each level representing an increase in sophistication. For example, the most basic type is administrative registration, which is mandatory, followed by Udyam and then GST. We see a distinct baseline-to-endline progression in the distribution of enterprises towards more sophisticated and multiple levels of registration.

Table 26: Changes in Business Registration Trends Over Time

Registration	Baseline	Endline	% Change
No registration	62.3%	47.1%	-24.4%
Administrative/ Udyam	11.1%	18.1%	63.3%
Adminstrative + Udyam + Others (might include GST)	8.8%	13.1%	48.5%
GST+Others	17.7%	21.6%	22.3%
Sample	1,800		

Dimension 2: Operational

This dimension includes the usage of digital payments and bookkeeping practices.

Digital Payments

To assess the next level of business formalization, we analyzed the nature and extent of business transactions that were digitized. While the government's sustained push has driven significant adoption of digital payments, the objective was to comprehensively examine how entrepreneurs are leveraging the convenience of digital payments across business operations.

Digital payments play a key role in business development and formalization, with their impact on performance often mediated by a firm's formality level (Shahid et al., 2024). Formal enterprises are better positioned to benefit from the speed, efficiency, and credit visibility that digital payments offer. These transactions also create data trails useful for NBFCs to assess risk and offer better credit terms. We view digital payments as a core component of our formalization spectrum, with varying levels—from receiving customer payments, to paying utility bills, to making supplier payments. The latter reflects deeper integration into a formalized supply chain and stronger financial tracking, boosting long-term business efficiency.

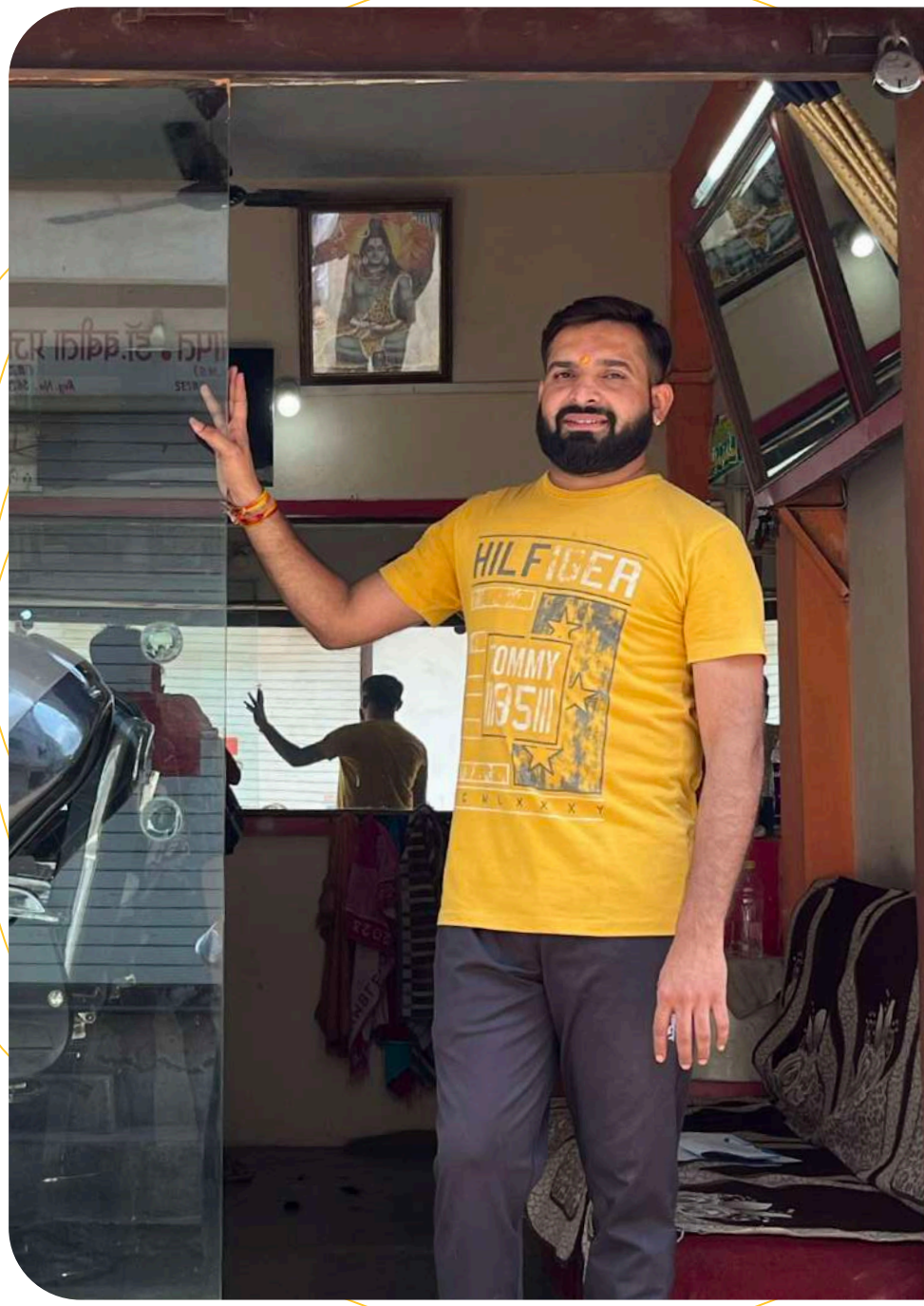
Table 27: Usage of Digital Payments in Enterprise-Related Transactions

Digital payments for enterprise-related activities	Baseline	Endline	% Change
No Payments	43.3%	32.9%	-24%***
Receiving money from customers (retail and institutional buyers)	46.8%	49.2%	5.1%*
Mobile recharge (prepaid/ postpaid) for communication	28.5%	34.7%	21.8%**
Paying utility bills payments	29.9%	37.1%	24.2%**
Money transfer to supplier(s) [including raw material, goods and services, etc.]	26.6%	37.4%	40.5%***
Money transfer to workers (paying salary)	8.6%	8.7%	1.9%
Payment of required taxes (GST etc.)	4.1%	5%	23%**
Sample Size	1,800		

Frequency of use of digital payments: As indicated in the table below, at baseline, 43% of the respondents had never used digital payments. Enterprises that transact digitally mostly make payments on a daily basis, and this has increased considerably from baseline to endline.

- *Table 28:* Changes in the Frequency of Digital Payment Usage Over Time

Frequency of use of digital payments	Baseline	Endline	% Change
I make digital payments on a daily basis	38.2%	55.9%	46.4%***
2-7 days ago	12.4%	9.1%	-27.2%**
More than 7 days ago	6.1%	2.1%	-65.6%**
Never used it	43.3%	32.9%	-24%***
Sample	1,800		



Qualitative interviews with borrowers reveal that while overall adoption patterns vary significantly between suburban and rural areas, digital transactions are increasingly serving as a stepping stone toward adopting formal business practices. However, this transition is not uniform. In rural and suburban areas, businesses with lower turnovers still show a strong preference for cash transactions.

The level of digital adoption can be mapped to three distinct levels:

I. The Necessity Enterprise Dilemma

At the foundation of India's business pyramid lie the Livelihood Enterprises, with an annual turnover below ₹3 lakhs. These businesses—often small retail shops and local service providers operating from homes—exist in a predominantly cash-based ecosystem. Their story is one of cautious survival rather than deliberate informality. They are often located in remote suburban areas and the customers belong to low income groups.

A local grocery store owner in suburban UP notes, "for us, every rupee counts. Maintaining digital records is an extra task when all our customers prefer cash."

This sentiment echoes across similar enterprises, where the lack of formalization stems not from resistance but from unfamiliarity with its advantages.

II. The Pivot Zone

As one moves up to transitioning businesses with turnovers between ₹3-10 lakhs, one encounters enterprises at a crucial crossroads. These family-owned ventures, deeply embedded in local supply chains, are beginning to straddle both worlds—cash and digital. Their journey presents a fascinating glimpse into the transformation of traditional business practices. Many entrepreneurs in this segment have started experimenting with digital payments, yet remain hesitant about complete formalization.

A local grocery store owner in suburban UP notes, "for us, every rupee counts. Maintaining digital records is an extra task when all our customers prefer cash."

III. The Digital Embrace

The narrative shifts significantly among businesses crossing the ₹10 lakh threshold. These enterprises, often part of structured supply chains, demonstrate how formalization becomes almost inevitable with scale. Their stories frequently highlight the transformative power of digital adoption.

An entrepreneur from Rajasthan listed on an e-commerce platform shared: "Government used to offer interest waivers on loans over 10 lakh, but smaller businesses missed out. Now, using digital payments creates a trail of business transactions that has made loans more accessible, even for small-scale businesses like paanwalas who only had manual cash records."

Bookkeeping:

Record keeping is vital for business growth. As highlighted by the OECD (2017), digital financial records can expand access to alternative, often cheaper, funding sources through fintech platforms. Among our sample, record-keeping practices varied considerably. While notebooks and bill ledgers were the most common methods, some entrepreneurs relied solely on 'mental records'—reflecting intent without formal tracking—while others kept no records at all. Only 5.3% used digital tools or softwares for bookkeeping. These practices are key indicators of process maturity and financial readiness within enterprises.

Table 29: Changes in Bookkeeping Practices Over Time

Bookkeeping	Baseline	Endline	% Change
No record	18.2%	13.4%	-26.4%***
Mental record	28%	44.5%	58.9%***
Notebook record	59.5%	63.4%	6.6%*
Digital tools	5.3%	4.9%	-7.5%
Sample	1,800		

Dimension 3: Employment

A little over a third of the enterprises employ workers, and understandably the employment rate is higher in manufacturing enterprises, followed by the trade sector. However, irrespective of the sector and size, most enterprises employ only one to two workers, and most of these workers are reported as full-time permanent employees.

According to the Report of the Task Force on Employment Statistics, a job that offers access to at least one social security benefit is defined as a formal job (Kapoor et al., 2022). However, only one per cent of entrepreneurs in our sample offered formal contracts to their employees. Hence, adjusting the definition, we consider employment size as a major parameter of formalization, while contractual and compliance with social securities are characterized as a higher degree of formalization.

Table 30: Changes in Employment, Sector, and Job Type Over Time

	Baseline	Endline	% Change
Employee	33.1%	35.1%	6%**
Workers			
Solopreneur	66.3%	64.6%	-2.7%
Single worker	14.3%	13.9%	-3.1%
2 workers	9.8%	10.5%	7.4%
More than 2 workers	9.3%	10.8%	16%***
Sample	1,800		
Job Type			
Permanent	84.2%	80.1%	-4.8%**
Temporary	15.9%	19.9%	25.6%***
Full-time	87.8%	90.2%	2.7%
Part-time	12.2%	9.8%	-19.7%**
Sample	1382	1607	

Employment patterns vary significantly across income levels, with larger enterprises displaying greater stability and formalization than smaller ones.

- **Permanent employment** is dominant (84.2% overall), but lower in the Livelihoods segment (turnover <₹3 lakh) (60.2%), where temporary employment (39.7%) is more common.
- **Full-time employment** is high (87.8% overall), but smaller enterprises rely more on part-time workers (36.8%) compared to mid and large enterprises (~9-10%).
- **Family labor** plays a minor role in our sample (13.2% overall), with slightly higher dependence in the lowest-income group (18.4%).

- **Paid employment** is the norm (95.2%), though unpaid work is more frequent in smaller enterprises (9.2%).
- **Formalization is minimal,** with only 1% of the entrepreneurs offering formal contracts, and 2.2% of employees having written contracts, reflecting a largely informal workforce, even in larger enterprises.

This suggests that as enterprise income grows, employment becomes more stable, less reliant on temporary and family labor, and more structured, though formal contracts remain rare across all levels.

Degree of Formalization - Application to our sample:

The formalization continuum or the spectrum is a composition of all the above factors. We use the variables described above to quantify our sample as per the initial theoretical framework described earlier.

Enterprise formalization progresses through five stages, from complete informality to full regulatory compliance:

- **Degree 0:** Businesses operate entirely outside formal systems, lacking any registration or structured financial management.
- **Degree 1:** Businesses operate with minimal formalization, including undertaking some digital transactions, but financial records remain informal.
- **Degree 2:** Businesses obtain basic licenses, start structured record-keeping, and expand digital payments.
- **Degree 3:** Businesses involve structured operations, with tax registrations, proper bookkeeping, and employment expansion, though full compliance remains inconsistent.
- **Degree 4:** Businesses are fully formalized, maintaining digital financial records, a separate bank account, and a legally compliant workforce.

The association between the increasing degree of formalization and the size of the enterprises makes a telling statement on the scope of this exercise and the important details that go otherwise unnoticed, in the more encompassing term of "Informality".

Table 31: Level of Formalization across Baseline Turnover Buckets

Baseline Turnover group	Degrees of Formalization at Baseline					
	0	1	2	3	4	Total
Livelihoods	14.1%	72.5%	13.4%	0	0	100%
Transitioning	6.2%	63.6%	28.8%	1.4%	0	100%
Nano	0.7%	33.7%	57.5%	8.1%	0	100%
Total Sample (by degree)	133 (7.4%)	1034 (57.4%)	579 (32.1%)	54 (3%)	0	1,800
Sample	1,800					

At baseline, the data clearly shows a positive association between enterprise size and degree of formalization. Livelihood Enterprises are largely informal, with 86.6% falling under Degrees 0 and 1 and none reaching the highest formalization level (Degree 3). In contrast, Transitioning Enterprises show a gradual shift—28.8% are in Degree 2 and a small share (1.4%) in Degree 3. Nano Enterprises, the largest in the sample by turnover, demonstrate the highest levels of formalization, with 57.5% in Degree 2 and 8.1% in Degree 3. No enterprises reach degree 4. Only 0.7% of Nano Enterprises remain completely informal. These patterns underscore that as enterprises grow in size and turnover, they are more likely to adopt formal processes, registrations, and systems. This is a bi-directional relationship where the more formalized an enterprise becomes, the better it grows, due to more efficient supply chains, more accurate bookkeeping and the availability of credit and other resources due to its registered status. This trend reinforces the need for policies that support micro and livelihood enterprises in gradually transitioning toward formalization.

Furthermore, we also applied the same formalization spectrum at the endline. The results indicate an upward change in formalization as businesses grew.

Table 32: Changes in Degrees of Formalization Over Time

Degrees of Formalization	Baseline	Endline (%)	% Change
0	7.4%	4.1%	-45.1%
1	57.4%	53.2%	-7.4%
2	32.2%	38.3%	19%
3	3%	4.5%	50%
4	0%	0%	0
Sample	1,800		

The diagnosis of informality in enterprises is characterized by lower incidences in the four indicators namely registration documents, payment types of digital transactions, recordkeeping practices, and presence of informal employment, without written contracts. The enterprises that fall under "Degree 0" fail to check each of the formality indicators boxes and constitute the bottom end of the spectrum. None of the enterprises in our sample reached the highest "Degree 4" of formalization, which reflects the broader characteristic of the microenterprise segment as a whole in India.

In conclusion, viewing formalization as a spectrum offers a more nuanced understanding of how businesses interact with formal structures. Instead of a one-size-fits-all approach, policies and interventions aimed at increasing formalization can be tailored to support smaller businesses with varied business and operational characteristics, and at different stages.

4 Unlocking Credit Access: Emerging Opportunities and Action Areas

This study highlights the dynamic nature of the enterprise ecosystem in India, underscoring the significant disparities in growth trajectories across sub-nano enterprise segments. **As enterprises scale, they typically shift from home-based operations to more permanent structures, accompanied by higher turnover but lower profit margins and higher operational costs. Credit plays a crucial role in driving this growth, particularly for smaller enterprises, by enabling higher revenue, surplus, and formalization. However, the effectiveness of credit is influenced by enterprise size, sector, and owner characteristics.** Access to credit also positively impacts household well-being, increasing income, reducing debt, and fostering investments in education and assets. Notably, a substantial proportion of businesses, especially in trade and manufacturing, outgrew their original segment, with graduating firms accessing higher loan ticket sizes, showing better business processes, greater digital adoption, and improved financial management. These factors contributed to higher growth in turnover, profits, and household income. Together, these findings suggest that while credit is a critical input for accelerating growth, its success depends on the business's capacity to manage and utilize it effectively.

Based on these learnings, the study makes the following recommendations:

Recommendations

1. Expand Access to Larger, Structured Credit for High-Potential Enterprises

Access to larger loan ticket sizes significantly enhances the growth potential of the Nano and Transitioning enterprises, although this needs to be accompanied by a prudent focus on Debt-to-Income ratios as well. The study finds that enterprises receiving loans above ₹1 lakh had greater chances of graduating to higher turnover segments. Specifically, a ₹2–4 lakh loan range was associated with higher turnover and profit growth, better Debt-to-Income ratios, and improved household financial stability. Conversely, the smallest enterprises, especially those led by women and low-income households, are disproportionately restricted to smaller loans (<₹1 lakh), limiting their growth trajectory. A recalibration of loan sizes is necessary, with targeted pathways for upward graduation. NBFCs and MFIs can develop "stepped" loan structures with embedded scale triggers to ensure consistent capital infusion for enterprises that meet growth benchmarks (for example, % change in turnover). This should be paired with differentiated interest rates based on repayment history and turnover improvement. Bundling loans with capacity-building services and business advisory can help improve utilization and maximize Return on Investment (ROI).

2. Build Tailored Financial Products for Underserved Segments, Low-Income Entrepreneurs and NTC borrowers

Findings from the study suggest that New-to-Credit and Low-Income borrowers face systemic disadvantages: they receive smaller loans, operate in low-growth sectors like livestock, and often lack formal enterprise registration. This highlights the urgent need to design tailored credit instruments for these segments. Loan products should align with cash flow cycles in livestock and service sectors, and offer grace periods or income-linked repayment schedules. Simultaneously, financial literacy programs must be customized to address unique business contexts and should include sessions on credit cycles, and reinvestment. Credit should be combined with savings nudges, insurance products, and linkages to public welfare entitlements for low-income households.

Finally, streamlining collateral requirements and leveraging cash flow-based underwriting—particularly for high-performing New-to-Credit borrowers—will enable broader participation in larger-ticket financing.

3. Drive Enterprise Growth by Building Financial Literacy

Financial literacy must be positioned as an integral component of enterprise credit ecosystems rather than a supplementary intervention. Structured financial literacy programs should address four critical areas: (i) enhancing awareness of the benefits of digital adoption and formalization, including improved financial access, eligibility for government schemes, and household risk protection mechanisms; (ii) increasing familiarity with the range of financial products available—particularly credit, savings, and insurance solutions—and their relevance to both enterprise growth and household financial security; (iii) building borrower capacity to understand and evaluate loan terms and conditions, such as interest rates, repayment structures, moratorium provisions, and differentiated loan features; and (iv) equipping borrowers with practical knowledge on fraud prevention, with a focus on safe digital transaction practices and early scam detection. These programs should be customized based on enterprise size, sector, and financial maturity, delivered through interactive, vernacular content, and embedded strategically at multiple points across the credit lifecycle, including disbursement, mid-tenure check-ins, and renewal phases. Demonstrated engagement with financial literacy initiatives should be recognized within the lending process, by potentially considering this engagement in the calculation of credit scores, for example. Embedding comprehensive, context-specific financial literacy initiatives will strengthen enterprise creditworthiness, drive sustainable business growth, and foster long-term improvements in household financial resilience, particularly among underserved segments such as low-income, women-led, and new-to-credit enterprises.

4. Recognize and Redefine ‘Gazelle’ Enterprises Beyond Turnover Thresholds

Graduation patterns suggest that traditional turnover-based classifications may obscure high-potential firms. The report finds that enterprises graduating from the Livelihood to Transitioning (or Transitioning to Nano) segments do so by adopting business innovations, improving operational efficiency, and optimizing expenditure—not necessarily by starting at a higher baseline turnover. These 'gazelles' are often invisible in credit scoring models that emphasize past performance rather than future potential. Lenders and policymakers must expand their identification lens: metrics like innovation adoption, business process improvements, digital payment usage, and inventory expansion should be used to flag high-potential enterprises. Institutions can leverage digital footprints, and AI-enabled predictive analytics to recognize these firms early in their lifecycle. A dynamic credit rating model based on enterprise agility, rather than static income, can unlock financing for businesses poised for scale. Sector-based thresholds must also be adapted—livestock and services may have lower turnover ceilings, but strong employment potential and resilience. Gazelle recognition should inform credit enhancements, mentorship access, and fast-track formalization incentives. Reframing growth potential through behavioral and operational indicators, rather than output alone, can radically improve portfolio outcomes for lenders and developmental impact for the ecosystem.

5. Integrate Business Formalization Incentives into Credit Delivery Models

The study demonstrates a strong link between access to credit and progression along the formalization spectrum—especially in digital payments, regulatory compliance, and operational systems. Enterprises with prior registration and digital readiness are more likely to graduate. Apart from improving enterprise resilience, formalization expands the state’s fiscal visibility and access to data, which improves long-term credit access. Therefore, making formalization an embedded part of credit access is essential to driving comprehensive enterprise growth.

Our study also finds that formalization is incremental and context-specific; most enterprises do not formalize in one step. Therefore, credit delivery models should explicitly incorporate and reward formalization milestones. NBFCs and MFIs can embed nudges like interest rate rebates or faster disbursals for digitally compliant enterprises. Integration with Udyam and GST systems will help automate reporting, reduce compliance costs, and improve creditworthiness visibility. Policymakers must also lower the real and perceived costs of formalization: simplifying compliance, reducing tax fears, and offering opt-in modules for solopreneurs and part-time enterprises. This can be done by introducing

a single window system, where basic registrations necessary for formalizing a business can be done on a single platform (Meghalaya One - for example).[8]

6. Embed Household-Level Metrics into Credit Design and Make Credit Gender-Responsive

Women and low-income borrowers face systemic disadvantages—limited by smaller loans, lower-growth sectors, and lower levels of formalization. Yet, women-led businesses deliver strong household gains, notably in income and savings, despite being concentrated in the livelihood segment. Credit's impact goes beyond business outcomes, improving education, housing, and overall well-being—especially in women-led households.

However, these household-level benefits are not reflected in current credit assessments. Financial institutions should integrate metrics like income growth, savings, and Debt-to-Income ratios into a household-business composite risk framework. Bundled products (e.g., insurance, education savings, emergency credit) with an appropriate level of transparency by financial institutions for the customers and in compliance with existing MFIN directives and RBI regulations and financial planning tools can address the dual demands women face as caregivers and entrepreneurs. A household-integrated approach would better capture repayment capacity, reduce credit stress, and improve long-term outcomes.

7. Institutionalize Longitudinal Impact Monitoring to Drive Adaptive Credit Strategy

The study's value lies in its longitudinal lens—capturing not just short-term shocks but sustained impact across business and household domains. Most current credit evaluation frameworks are short-cycle, missing delayed or compounding benefits, especially from capital expenditures or formalization. Policymakers, lenders, and funders must invest in long-term monitoring systems that track business outcomes (turnover, profit, innovation), financial behaviors (savings, insurance, DTI), and household welfare over a two to three-year window. Such data can inform iterative product design, flag early signs of distress, and support evidence-based policy adjustments. NBFCs and MFIs should adopt "impact dashboards" to monitor borrower journeys beyond repayment. Donors and developmental institutions must co-fund longitudinal research to bridge critical knowledge gaps—especially around female entrepreneurs, informal enterprises, and regional heterogeneity. Regulatory institutions like SIDBI or RBI can create national frameworks for MSME outcome tracking, leveraging Udyam and GST integration. Without institutionalized long-term monitoring, credit policy will remain reactive and suboptimal.

Limitations

This longitudinal study, relying on self-reported data, has several limitations:

1. **Self-Reporting Bias:** Key outcome variables like profit, turnover, and expenses were self-reported, which may introduce bias such as social desirability, where borrowers over-report performance to secure additional loans. While self-reported profit is often accurate (De Mel et al., 2009), reports may still be biased, especially when administered by those perceived to be linked to lenders. Statistical controls were applied to mitigate this bias and ensure model validity.

2. **Recall Bias:** Given the study's longitudinal nature, recall bias is a risk, especially for business financial data. Baseline data was collected post-Covid lockdown (2021-22), while endline data was collected two years later (2024). To address this, surveyors helped respondents recall baseline figures.

3. **Employee Characteristics:** Employment data was collected using an employee roster, but the wording of the questions may lead employers to exclude family members (e.g., spouses, children) who assist in the business but are not paid. These individuals may not be perceived as "employees," which could affect reporting accuracy.

4. **Omitted Variable Bias:** Since the regression models are limited to the variables in our data, it is not possible to include every single covariate in the regression models. Therefore, the risk of omitted variable bias (although miniscule) will always be a standard caveat.

8 Meghalaya One is a digital gateway set up by the Government of Meghalaya to ease service delivery for over 200 government-to-citizen services, through a single window application.

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Annexures

Annexure 1 - About the NBFC Partners

1. **Arth Digital** offers digital credit and related services to solopreneurs, self-employed individuals, and micro-retailers across India, providing onboarding assistance, insurance-linked credit, and data-driven underwriting.
2. **Avanti Finance** serves informal enterprises with credit, savings, and insurance-linked products, operating in states like Madhya Pradesh, Gujarat, and Tamil Nadu.
3. **Indifi Finance** provides loans to small businesses primarily using a digital platform. The products include term loans, line of credit, invoice discounting, and merchant cash advances.
4. **Kaleidofin** is a fintech platform offering end-to-end credit solutions through a modular platform covering credit health assessment, origination, risk management, debt capital markets such as securitization and extending credit facilities, including wholesale loans, focusing on the customers and enterprises in the informal sector.
5. **Kinara Capital** offers affordable, unsecured loans to micro and small enterprises for asset purchase and working capital requirements, leveraging robust tech systems. It operates across 6 states in India.
6. **Moneyboxx** empowers small business owners, particularly women entrepreneurs and underserved communities, with innovative loans and community development programs.

Annexure 2 - Identification of Target Segments

As per the Dell Foundation's mandate, the target urban segment for intervention must have 'net' household income less than ₹25,000. The 'net' household income is calculated by deducting from the total monthly household income the EMIs incurred from the present loan taken from one of Dell Foundations' NBFC partners. Since the household income cannot be directly known before the study itself, a suitable proxy needs to be determined to collect the sample. Ticket size data from the lenders becomes crucial here, as the EMI (at a standard interest rate and tenor) is the best barometer for loan servicing capacity at a given income. This can be done by using the Debt-to-Income ratio.

- DTI = EMI/Total income
- Total income = Disposable income + EMI
- Highest disposable income = 'Net' income limit = ₹25,000
- Minimum disposable income = ₹10,000
- DTI upper limit proposed for the study = 45 per cent
- DTI lower limit proposed for the study = 33 per cent

Ticket size, ₹ (Two-year tenure, interest rate 20%)		
Disposable Income (₹) → DTI (%)	**₹10,000**	**₹25,000**
45%	1,60,000	4,00,000
33%	1,00,000	2,50,000
Ticket size, INR (One-year tenure, interest rate 20%)		
Disposable Income (₹) → DTI (%)	**₹10,000**	**₹25,000**
45%	90,000	2,00,000
33%	50,000	1,35,000

Based on the above, the loan ticket size was taken at the highest possible DTI scenario (45%) as well as the highest possible net income (₹25,000), i.e., ₹4 lakh and ₹2 lakh for a two year and one-year tenor, respectively. The minimum loan ticket size is considered at ₹40,000, as it is the typical microfinance JLG loan and also is similar to the threshold of Shishu loans under the Pradhan Mantri MUDRA Yojana (PMMY). Note that this is less than the calculated minimum ticket size (₹50,000) in Table A1 and hence is logically correct to assume. Secondary literature below provides more context for the selected ticket size range.

This amount was calculated under the assumption that the enterprise in question would be the sole source of the household income. However, a large proportion of the sampled households were found to have multiple sources of income in addition to the enterprise, resulting in reported incomes exceeding the ₹25,000 threshold. Furthermore, the income analysis is based on gross monthly income, which is typically higher than net income.

Secondary literature supporting the calculation

The IFC classifies microenterprises with loan sizes up to ₹8 lakhs, similar to the PMMY's ₹10 lakh limit, representing the 'missing middle' market that banks and large NBFCs do not fully serve (Shankar, 2016; IFC, 2014; 2016). SIDBI and TransUnion CIBIL also define this segment as 'very small enterprises' (SIDBI & TransUnion CIBIL, 2021).

Using household income, the RBI caps microfinance loans for households earning up to ₹3 lakhs annually (RBI, 2022), which fall under the EWS for affordable housing (GoI, 2017). Nano enterprises, slightly above this, belong to the LIG category with incomes of ₹3-6 lakhs. Loans for such households, with a 30-40% debt-service ratio, range from ₹50,000 to ₹5 lakhs, matching the 'Kishore' category in PMMY. For this study, the loan size is set at ₹40,000 to ₹4 lakhs.

Annexure 3 - Regression and Correlation Results

We conducted a multivariate regression analysis to validate the bivariate associations between business performance indicators and loan attributes, adjusting for other covariates. Our key outcomes were the relative percentage changes in annual turnover and monthly profit from baseline to endline. Using linear OLS regression, we assessed the impact of credit access on business performance, adjusting for enterprise, entrepreneur, and ecosystem factors.

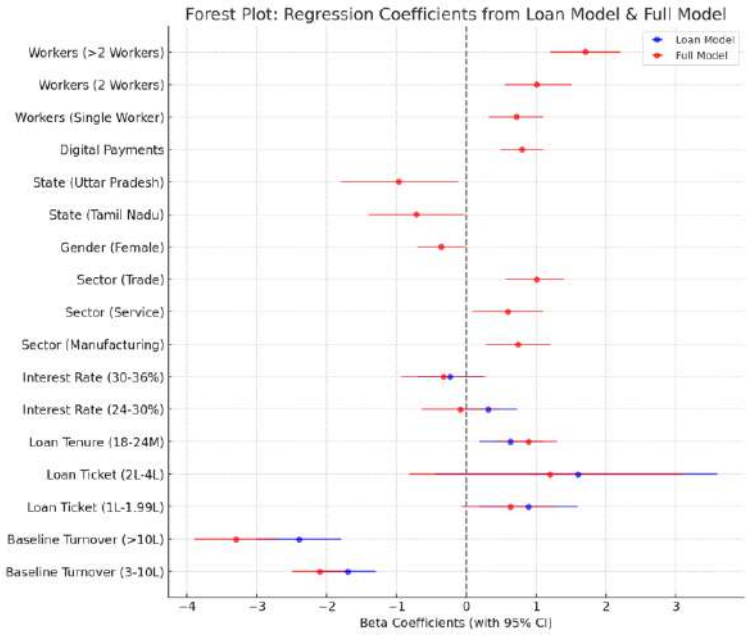
Before finalizing the model, we checked OLS assumptions such as normality, homoscedasticity, multicollinearity, and linearity of residuals. Given the positive skew of the outcome variables, we applied a cube root transformation to normalize the distributions.

To finalize the model, we first included loan attributes (ticket size, tenure, interest rate) and baseline annual turnover. Data visualization helped us understand variable interactions. For turnover percentage change, the interaction between loan ticket size and tenure was weak, as indicated by the graph and model significance.

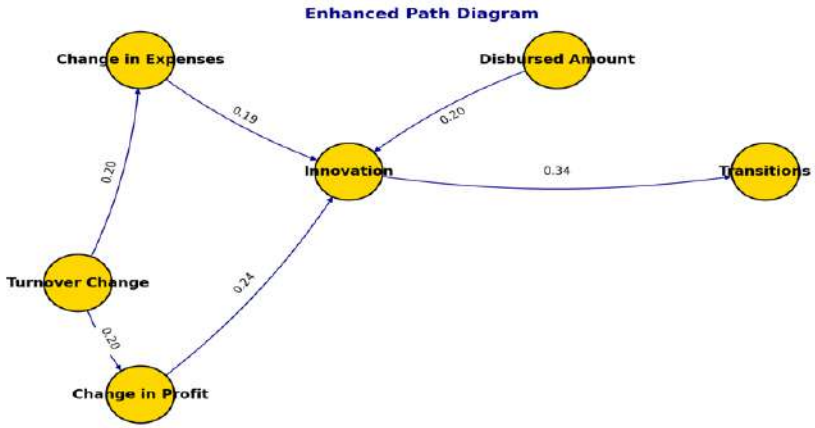
To estimate the impact of credit loan ticket size, an indicative regression model of the following type is employed as below:

Y_post - Y_pre = b0 + b1*X + b2*(Z_post - Z_pre) + b3*Z + e,

- Where Y denotes the generic outcome (e.g., profit); X indicates loan ticket size; Z_t is a set of time varying covariates;
- Z is a set of time invariant variables and e is the error term. (The term Post can include both 1 year and 2-year loan tenure.)
- Time varying covariates: turnover, Udyam registration, digital adoption etc.
- Time invariant controls: investee companies, state of operation, Gender of proprietor, sector

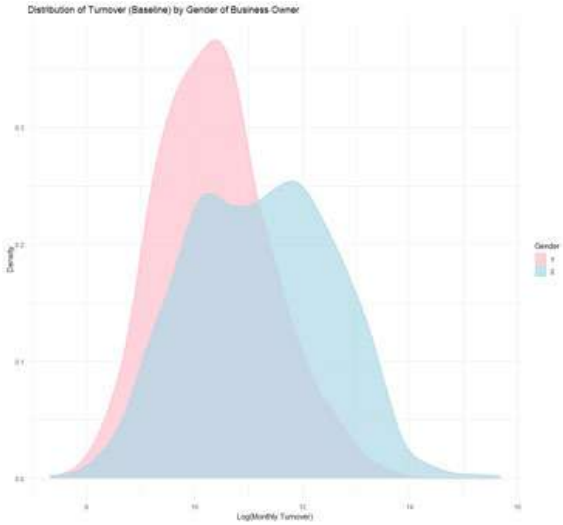


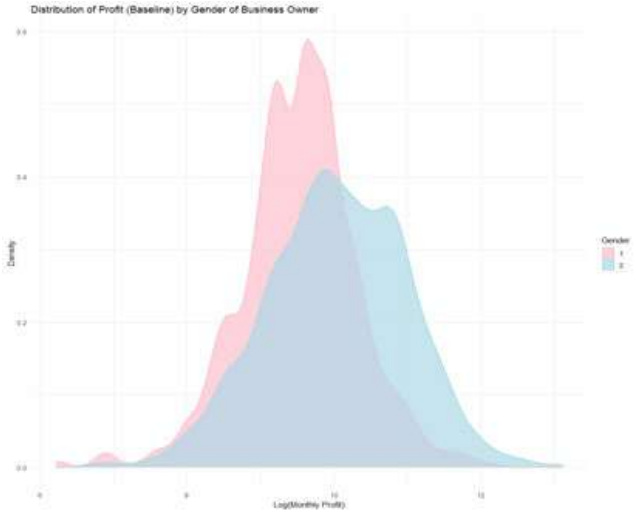
We ran two models—Loan and Full Models—to analyze turnover growth with 95% Confidence Intervals (CIs). Smaller businesses (₹10L or less) benefit more from loans, while larger businesses grow slower. Larger loan sizes (₹2L-₹4L) drive growth in the Loan Model, but this effect weakens in the Full Model. Longer loan tenures (18-24 months) boost growth, while higher interest rates (24%-36%) negatively impact turnover. The Trade sector shows the strongest turnover growth, followed by Manufacturing and Services. Women-led businesses grow slower, and businesses in Tamil Nadu and Uttar Pradesh underperform compared to Andhra Pradesh. Digital payments and a workforce of more than two employees are key growth drivers.



This SEM path diagram highlights how Turnover Change impacts both Change in Profit (0.20) and Change in Expenses (0.20), with Expenses (0.19) and Profit (0.24) contributing to Innovation. Disbursed Amount (0.20) also drives Innovation, underscoring the role of financial capital. Ultimately, Innovation (0.34) is the strongest predictor of Transitions, indicating its critical role in business growth.

The model shows that Innovation bridges business performance and enterprise transitions. Financial inputs (Disbursed Amount) and operational factors (Turnover, Profit, Expenses) fuel Innovation, which in turn drives business evolution. The strongest effect (0.34) confirms that fostering innovation is key to enterprise transitions.





Annexure 4 - Comparison of Male and Female Entrepreneurs

Despite reversed trends in median profits by percentile groups, males and females have the same overall median profit. In the Below 25th percentile, female-owned businesses have a higher median profit than male-owned businesses. In the 25-50th and 50-75th percentiles, both genders have the same median profit. However, in the Above 75th percentile, male-owned businesses outperform female-owned businesses.

This creates a balancing effect. Female businesses outperform in the lower percentiles, which contribute heavily to the overall median, while males dominate the highest percentiles, pushing the male median higher. The 50-75th percentile stabilizes the data, as both genders perform equally there.

The overall median represents the middle business in the dataset, where the balancing trends across percentiles cancel each other out. Females' advantage in lower groups and males' dominance in the highest group offset each other, leading to an equal overall median profit.

Key insights: Profit distribution across percentiles is more important than just focusing on the highest earners. The balance of trends in lower, middle, and higher groups results in no gender gap in the overall median, highlighting the importance of data distribution in analyzing gender disparities in business performance.

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