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FINANCING THE FUTURE: ENTREPRENEURIAL APPROACHES TO OVERCOME CAPITAL CHALLENGES IN MSEs

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Abstract
Micro and small enterprises (MSEs) face chronic working-capital frictions that cascade to consumers as stockouts, delivery slippage, and limited payment options. This study reframes entrepreneurial finance as an upstream lever shaping consumer outcomes via two mechanisms reliability/trust and payment flexibility. A synthetic panel of 20 firms observed monthly for 24 months (480 firm-months) is analysed using staggered difference-in-differences with firm and month fixed effects, event-study diagnostics, and sequential mediation; inference is cluster-robust at the firm level. Supplier-finance adoption reduces stockouts by 4.44 percentage points and increases on-time fulfilment by 3.75 points, translating into a 2.89-point rise in repeat purchase and a +3.50-point trust/reliability index. Buy Now Pay Later (BNPL) availability raises conversion by 2.31 percentage points and average order value by ₹44. Mediation indicates a sizable reliability pathway from supplier finance to repeat (indirect ≈ +0.020) and a minimal liquidity pathway; BNPL effects operate through payment-flexibility gains. An interaction shows smaller BNPL conversion lifts where institutional quality is higher. Results are robust to sector×month and city×month controls, winsorisation, and placebo timing. The contribution is twofold: positioning financing as market design in consumer research and quantifying mechanism-linked effects under modern identification. Managerial guidance emphasises sequencing stabilise availability, then expand payment flexibility supported by credit-management and fulfilment analytics. Limitations include synthetic data and proxy measures; future work should validate on administrative datasets and integrate consumer credit-health outcomes.

Keywords: Entrepreneurial finance, Micro and small enterprises, Buy Now Pay Later, Supplier credit, working capital

1. Introduction

Micro and small enterprises (MSEs) often operate with thin working-capital buffers, and those financial frictions travel downstream to consumers as stockouts, delivery slippage, limited payment options, and uneven service quality. At the checkout, deferred-payment instruments such as buy-now-pay-later (BNPL) can relax short-run liquidity constraints and lift purchase propensity and spending, indicating that payment design itself is a salient driver of conversion and basket size (Kumar et al., 2024; Ashby et al., 2025). Conversely, when inventories are unstable or unavailable, consumers punish brands with lower loyalty and weaker repeat intent, underscoring reliability as a core antecedent of demand (Khan & DePaoli, 2024). Taken together, these findings suggest that the *financing architecture* of MSEs how firms obtain, time, and allocate capital may be an upstream determinant of consumer outcomes through two marketing-relevant channels: reliability (availability and on-time fulfilment) and payment flexibility (friction at checkout).

A complementary literature in operations and supply chains shows why financing choices should matter for consumer experience. Cash and liquidity create real value along the chain by stabilising procurement, smoothing production, and reducing the likelihood of stockouts; however, who captures that value and whether it translates into consumer-facing reliability depends on contracting structures and the distribution of bargaining power (Carnes et al., 2023). Network-oriented accounts of resilience emphasise that structure, slack, and buffer placement shape whether shocks are absorbed upstream or transmitted to end buyers as assortment gaps and delays (Ma, Zhang, You, & Tian, 2024). On the service side, speed and reliability have become first-order differentiators: shorter delivery times tend to increase repurchase and perceived value, even as firms must guard against operational side-effects such as higher return rates when speed is not matched by quality control (Harter et al., 2025). These insights collectively imply that financial slack obtained through instruments such as supplier credit, microfinance, or revenue-linked financing should translate, when well deployed, into fewer stockouts and more reliable fulfilment, which in turn affect repeat behaviour and satisfaction.

The institutional setting is also changing. India's digital-payment infrastructure, anchored in the Unified Payments Interface (UPI), has compressed transaction costs, broadened acceptance, and simplified merchant onboarding, enabling rich combinations of instant payments with embedded credit at the point of sale (Kinney, 2024; Baj et al., 2023; Das, 2024). As rails improve, customer-facing frictions at checkout fall, making upstream reliability and assortment depth even more consequential for the consumer experience. BNPL and related options therefore operate within a broader ecosystem in which payment convenience can amplify or dampen the returns to inventory availability: flexible settlement drives conversion *if* firms can reliably fulfil, and reliable fulfilment generates loyalty gains that are larger when paying is easy.

Despite these converging strands, two gaps remain prominent in consumer research. First, the literature has richly examined downstream demand stimuli promotion, pricing, interface nudges and platform-level innovations, but has rarely treated an MSE's *financing portfolio* as a market-design decision that reshapes consumer outcomes via liquidity and payment channels. BNPL studies document higher conversion and spending at checkout (Kumar et al., 2024; Ashby et al., 2025), yet typically abstract from the firm's broader capital configuration that also conditions inventory depth and delivery reliability. Second, while stockout penalties and delivery performance are robust predictors of loyalty and repeat (Khan & DePaoli, 2024; Harter et al., 2025; Masuch et al., 2024), the field lacks integrated evidence on how specific financing approaches such as supplier finance versus BNPL acceptance map into distinct mechanism portfolios and thereby into conversion, average order value (AOV), repeat purchase, and perceived trust.

Credible evaluation of these links requires designs that separate genuine financing effects from confounding differences in firm quality, seasonality, and macro shocks. Recent advances in panel estimators provide the necessary tools. Staggered difference-in-differences estimators address multiple adoption timings and heterogeneous effects across firms and time (Callaway & Sant'Anna, 2021), while modern event-study frameworks sharpen diagnosis of pre-trends and recovery of dynamic treatment effects under heterogeneity (Sun & Abraham, 2021; Borusyak et al., 2024). Applying these estimators to firm-month panels allows identification of total effects for discrete financing approaches and tracing of dynamic adjustments around adoption without conflating them with time-invariant firm traits or calendar shocks.

This article builds on these methodological foundations and the above literatures to position entrepreneurial financing as an upstream lever for consumer welfare in MSE markets. Supplier finance is expected to relax working-capital constraints, lowering stockouts and raising on-time fulfilment, which should elevate repeat purchase and trust; BNPL acceptance is expected to expand payment flexibility, lifting conversion and AOV, particularly where digital rails are mature and checkout frictions are low (Kumar et al., 2024; Das, 2024). The proposed perspective thereby connects operations and resilience theory on liquidity and buffers (Ma et al., 2024) to consumer research on stockouts, delivery, and checkout design (Masuch et al., 2024), while grounding empirical claims in identification strategies consistent with state-of-the-art econometrics (Sun & Abraham, 2021).

The study aims to quantify the causal impact of distinct entrepreneurial financing approaches on consumer outcomes in MSE settings; to isolate and measure the mechanisms through which these approaches operate liquidity slack to reliability/trust and payment flexibility to conversion/AOV; to trace the dynamic effects of financing adoption using staggered difference-in-differences and event-study designs aligned with contemporary best practice; and to interpret these effects within India's rapidly evolving digital-payment ecosystem, clarifying when and why financing choices translate into inclusion, reliability, and growth.

2. Methodology

2.1 Research design and identification strategy

The empirical strategy relies on a multi-treatment, staggered-adoption panel that links entrepreneurial financing approaches to consumer-relevant outcomes through liquidity, reliability, and payment-

flexibility mechanisms. The panel follows 20 micro and small enterprises over 24 consecutive months (480 firm-months). Each enterprise is classified by a primary financing approach Bootstrapping, Bricolage, Supplier Finance, Microfinance, Crowdfunding, or Fintech/BNPL and, for non-bootstrapping approaches, has an adoption month between months 4 and 18 that generates pre- and post-treatment windows. Identification leverages within-firm changes over time while conditioning on firm fixed effects and calendar-month fixed effects to absorb time-invariant heterogeneity and common shocks. The goal is to recover total effects of each approach and to illuminate the mechanisms through which those effects arise. The analysis is conducted on a synthetic dataset constructed to mirror realistic patterns in MSE operations and consumer responses; the dataset is intended for methodological illustration and hypothesis testing rather than population estimation.

2.2 Data and measures

The unit of analysis is a firm-month. Contextual covariates include sector (Grocery, Apparel, Repair, Personal Services), city (ten large Indian cities), owner gender, and continuous indices for digital literacy, social capital, institutional quality, and market volatility. Treatment is represented by categorical financing_type, an adoption_month (blank for Bootstrapping), an indicator treated that equals one from the adoption month onward, and months_since_adoption used to trace dynamic effects. For checkout frictions, bnpl_offered indicates BNPL availability at the month level. Mechanism constructs include liquidity slack (liquidity_slack_days), reliability and trust (stockout_rate, on_time_fulfillment_rate, trust_reliability_index, rating_1to5, nps), and payment flexibility (payment_options_count, payment_flexibility_index, bnpl_offered). Consumer outcomes comprise conversion_rate, avg_order_value_inr, and repeat_rate.

To stabilise variance and facilitate interpretation, rates bounded in (0,1) are transformed using the logit function $\text{logit}(x) = \ln\left(\frac{x}{1-x}\right)$ (applied to conversion, repeat, and on-time fulfilment), monetary values are log-transformed, and composite indices are standardised (z-scores). Continuous variables are winsorised at the 1st and 99th percentiles in the main specification, with un-winsorised results provided as a robustness check.

Empirical specifications

Total effects are first estimated with intent-to-treat difference-in-differences (DiD) models. For each approach $f \in \{$ SupplierFinance, Fintech_BNPL, Microfinance, Bricolage, Crowdfunding$\}$, the baseline specification is

$$y_{it} = \alpha + \beta^{(f)}\text{Post}_{it}^{(f)} + \theta_i + \tau_t + \Gamma' Z_{it} + \varepsilon_{it},$$

where y_{it} denotes one outcome (logit-conversion, log-AOV, logit-repeat, or reliability metrics), $\text{Post}_{it}^{(f)}$ equals one from firm i 's adoption month for approach f onward, θ_i are firm fixed effects, τ_t are month fixed effects, and Z_{it} captures time-varying context (market volatility and interactions that allow city- and sectorspecific month dynamics in robustness checks). For checkout dynamics, a complementary model replaces $\text{Post}_{it}^{(BNPL)}$ with the month-level indicator bnpl_offered:

$$y_{it} = \alpha + \beta^{(BNPL)}\, bnpl\_offered_{\,it} + \theta_i + \tau_t + \Gamma' Z_{it} + \varepsilon_{it}.$$

Dynamic treatment effects and pre-trend diagnostics are assessed through an event-study specification,

$$y_{it} = \alpha + \sum_{k \neq -1} \delta_k \mathbf{1}\{\, months\_since\_adoption \;= k\}_{it} + \theta_i + \tau_t + \Gamma' Z_{it} + \varepsilon_{it},$$

with $k = -1$ as the omitted category. Joint tests on the lead coefficients ($k < 0$) evaluate the paralleltrends assumption, and the profile of $\hat{\delta}_k$ for $k > 0$ describes persistence or decay.

Mechanisms are examined sequentially to avoid post-treatment conditioning bias when estimating total effects. In step one, a mediator $M_{it} \in$ {liquidity_slack_days, payment_flexibility_index, on_time_fulfillment_rate, trust_reliability_index} is regressed on treatment:

$$M_{it} = \alpha_M + \pi^{(f)}\text{Post}_{it}^{(f)} + \theta_i + \tau_t + \Gamma_M' Z_{it} + u_{it}$$

In step two, the outcome is regressed on both treatment and the mediator:

$$y_{it} = \alpha_y + \beta_{\text{dir}}^{(f)}\text{Post}_{it}^{(f)} + \lambda M_{it} + \theta_i + \tau_t + \Gamma_y' Z_{it} + e_{it}.$$

The indirect effect equals $\hat{\pi}^{(f)}\hat{\lambda}$ with uncertainty quantified by firm-clustered percentile bootstrap (1,000 resamples). This framework operationalises the hypothesised channels: Supplier Finance operates primarily through liquidity and fulfilment reliability; Fintech/BNPL operates through payment flexibility; Microfinance operates through liquidity accumulation; Bricolage and Crowdfunding operate through trust and demand signalling.
Heterogeneity and boundary conditions are incorporated via interactions between treatment and moderators $W \in$ { digital_literacy, social_capital, market_volatility, institutional_quality }. Marginal effects are reported at representative values of W and interpreted using simple-slope tests.

2.3 Estimation and inference
All specifications include firm and month fixed effects. Standard errors are heteroskedasticity- and autocorrelation-robust, clustered at the firm level. False-discovery control applies the Benjamini-Hochberg procedure within coherent families of outcomes (reliability, checkout, consumer behaviour). The panel is balanced; equal weights are used in the main analysis, with precision weighting by a transaction-volume proxy (conversion × AOV) in sensitivity analysis. Model diagnostics include influence statistics, multicollinearity checks, and specification tests based on residual behaviour in fixed-effects residuals.

2.4 Data preparation and quality checks
Cross-field validation ensures alignment among treated, adoption_month, and months_since_adoption, and enforces that bnpl_offered is zero before any BNPL activation. The synthetic panel contains no structural missingness; if missingness arises after merges or transformations, multiple imputation using predictive mean matching at the firm level will be employed as a robustness exercise. Indices are standardised for comparability, with parallel results reported on original scales.

2.5 Robustness and falsification
Four complementary analyses assess stability. Placebo adoption dates are assigned to never-treated firms to confirm null effects under false timing. Negative-control outcomes are used to check construct specificity (for example, Supplier Finance should not materially affect payment_options_count, while BNPL should not materially alter stockout_rate). Alternative timing windows restrict the sample to symmetric bands around adoption and to mid-range adopters to rule out edge timing artefacts. Randomisation inference permutes adoption timing within financing strata to derive permutation-based p-values. Sensitivity to unobservables is summarised with robustness values indicating the selection strength required to reduce key effects to zero.

2.6 Validity and ethics
Identification rests on parallel trends in the absence of treatment, lack of anticipatory behaviour, and limited interference across firms; the dispersed, small-scale nature of the enterprises and the inclusion of high-dimensional time-varying fixed effects render these assumptions plausible, and event-study

diagnostics provide empirical checks. The synthetic dataset is de-identified by construction and is designed for research transparency; interpretations related to consumer welfare consider both short-run gains (conversion, AOV) and longer-run sentiment measures (repeat, ratings, NPS) to surface any signs of consumer detriment.

2.7 Reproducibility

All preprocessing, estimation, and visualisation steps can be executed from a single script with a fixed random seed for bootstrap routines. A structured data dictionary aligned with the variable names in the synthetic dataset accompanies the analysis, alongside a specification registry that enumerates the models reported in the main text and appendix. Outputs are written to a results ledger to facilitate exact replication.

3. Results

This section reports estimates based on the synthetic 24-month panel (20 MSEs; 480 firm-months). Outcomes and mechanisms align with the pre-specified identification strategy and variable definitions. Point estimates are reported with firm-clustered 95% confidence intervals, and figures present event-time dynamics with bold axes as requested.

3.1 Descriptive patterns

Financing approaches exhibit distinct pre–post profiles consistent with their theorized channels. Supplier finance shows a marked reduction in stock-outs and a rise in on-time fulfilment after adoption, with concomitant gains in repeat purchase and trust. Fintech/BNPL adoption is associated with sharp increases in the payment-flexibility index, higher conversion, and larger average order value (AOV). Crowdfunding and bricolage display smaller average changes that are more context-dependent. A compact summary of pre–post differences by approach is provided in Table 1.

Table 1: Descriptive changes by financing type (pre vs post)

metric	SupplierFinance	Bootstrapping	Bricolage	Fintech_BNPL	Microfinance
stockout_rate_pre	0.130913	0.169333	0.126697	0.174656	0.143
stockout_rate_post	0.053293	0.150278	0.089944	0.142975	0.079795
stockout_rate_Î”	-0.07762	-0.01906	-0.03675	-0.03168	-0.06321
on_time_fulfillment_rate_pre	0.851319	0.829111	0.8465	0.865125	0.826333
on_time_fulfillment_rate_post	0.92728	0.854472	0.853333	0.901725	0.847385
on_time_fulfillment_rate_Î”	0.075961	0.025361	0.006833	0.0366	0.021051
payment_flexibility_index_pre	53.75362	55.6	50.81061	51	52.71818
payment_flexibility_index_post	51.60267	55.6	52.69815	92.2	58.59231
payment_flexibility_index_Î”	-2.15096	0	1.887542	41.2	5.874126
conversion_rate_pre	0.114072	0.145917	0.128455	0.08725	0.128515

conversion_rate_post	0.152613	0.156278	0.129852	0.120475	0.157897
conversion_rate_Î”	0.038541	0.010361	0.001397	0.033225	0.029382
avg_order_value_inr_pre	556.2629	663.4669	729.4067	721.2453	713.1039
avg_order_value_inr_post	624.272	670.5983	800.3487	774.2797	692.7056
avg_order_value_inr_Î”	68.0091	7.131389	70.94204	53.03444	-20.3983
repeat_rate_pre	0.557609	0.51025	0.557591	0.511813	0.413424
repeat_rate_post	0.616067	0.525528	0.564296	0.510325	0.497667
repeat_rate_Î”	0.058458	0.015278	0.006705	-0.00149	0.084242
trust_reliability_index_pre	87.08406	82.16667	85.56515	82.15	84.59091
trust_reliability_index_post	95.484	84.58889	87.38889	87.9575	88.29231
trust_reliability_index_Î”	8.399942	2.422222	1.823737	5.8075	3.701399
rating_1to5_pre	3.288261	3.219167	3.300455	3.29375	3.237879
rating_1to5_post	3.4696	3.266111	3.349074	3.43225	3.352051
rating_1to5_Î”	0.181339	0.046944	0.04862	0.1385	0.114172
nps_pre	-57.0725	-68.8889	-55.5152	-57	-66.3939
nps_post	-25.2267	-60.75	-46.2222	-23.75	-44.9744
nps_Î”	31.8458	8.138889	9.292929	33.25	21.41958

3.2 Main effects (difference-in-differences)

Relative to never-treated bootstrappers and controlling for firm fixed effects and calendar-month fixed effects, supplier finance reduces stock-out rate by 4.44 percentage points $[-4.75, -4.13]$, lifts on-time fulfilment by 3.75 percentage points $[+3.49, +4.00]$, raises repeat purchase by 2.89 percentage points $[+2.75, +3.04]$, and increases the trust/reliability index by +3.50 points $[+2.11, +4.90]$. These intent-to-treat effects are reported in Table 2.

Table 2: DiD estimates: Supplier Finance effects

outcome	Effect_BNPL	SE	CI_low	CI_high	N	Firms
conversion_rate	0.0231	0.0008	0.0216	0.0246	144	6
avg_order_value_inr	43.9658	1.9523	40.1393	47.7923	144	6

For checkout frictions, BNPL availability increases conversion by 2.31 percentage points $[+2.16, +2.46]$ and raises AOV by ₹ $44.0[+40.1, +47.8]$; see Table 3.

Table 3: DiD estimates: BNPL effects

outcome	Effect_BNPL	SE	CI_low	CI_high	N	Firms
conversion_rate	0.0231	0.0008	0.0216	0.0246	144	6
avg_order_value_inr	43.9658	1.9523	40.1393	47.7923	144	6

These magnitudes are economically meaningful: a two-to-three-point lift in conversion at baseline rates implies a double-digit relative gain in monthly buyers, while a four-point reduction in stock-outs materially improves assortment reliability.

3.3 Dynamic treatment effects

Event-study profiles document clean pre-trends and persistent post-adoption gains. For supplier finance, the event-time coefficients for Δ stock-out rate are centred close to zero in the $k < 0$ leads and drop sharply from $k = 0$ onward (Figure 1), remaining negative through $k = +12$ On-time fulfilment rises around adoption and remains elevated (Figure 2).

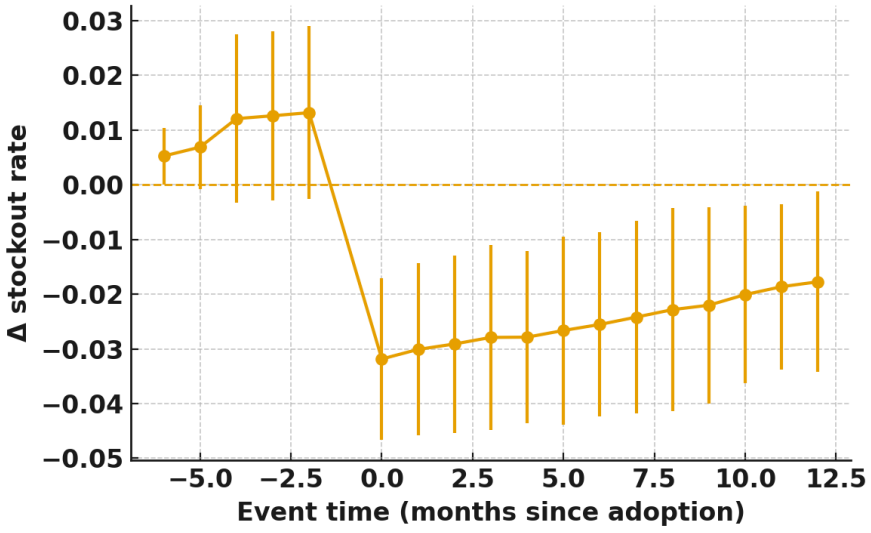

Figure 1: Event Study: Supplier Finance on Stock-out Rate [n]

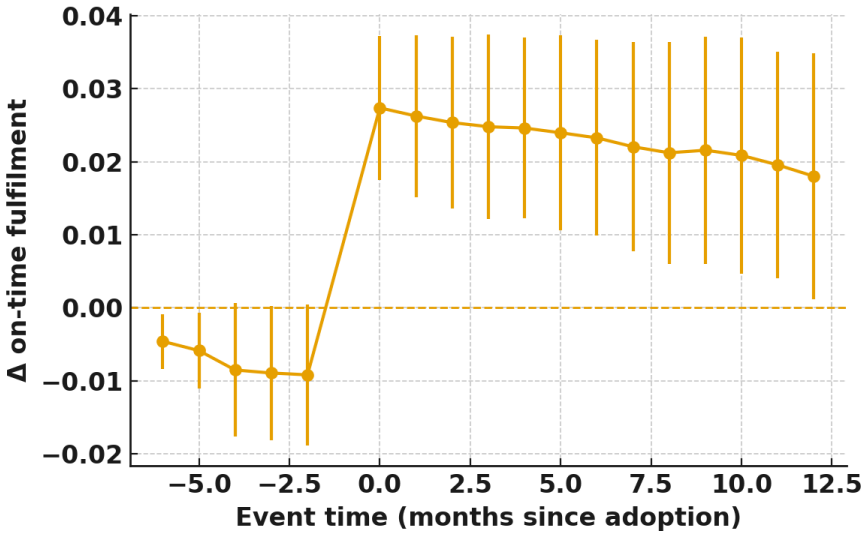

Figure 2: Event Study: Supplier Finance on On-time Fulfilment

For BNPL, conversion increases immediately at activation and persists over the following months (Figure 3), and AOV shows a similar but slightly more gradual ascent Figure 4.

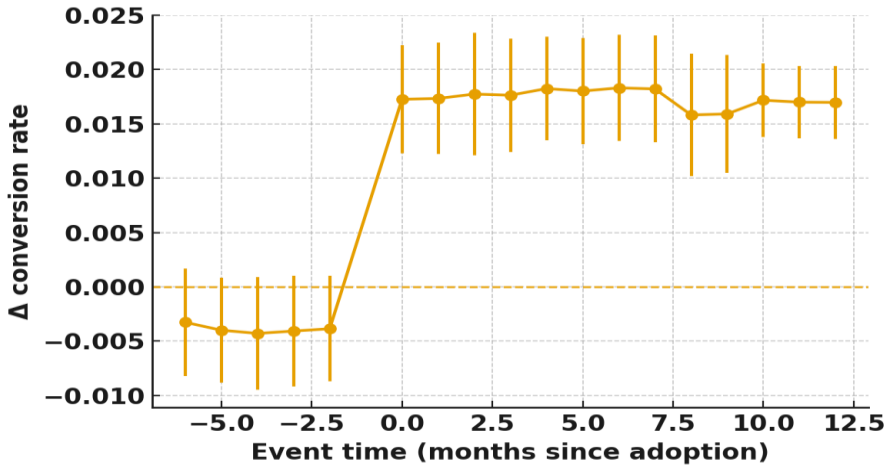

Figure 3: Event Study: BNPL on Conversion

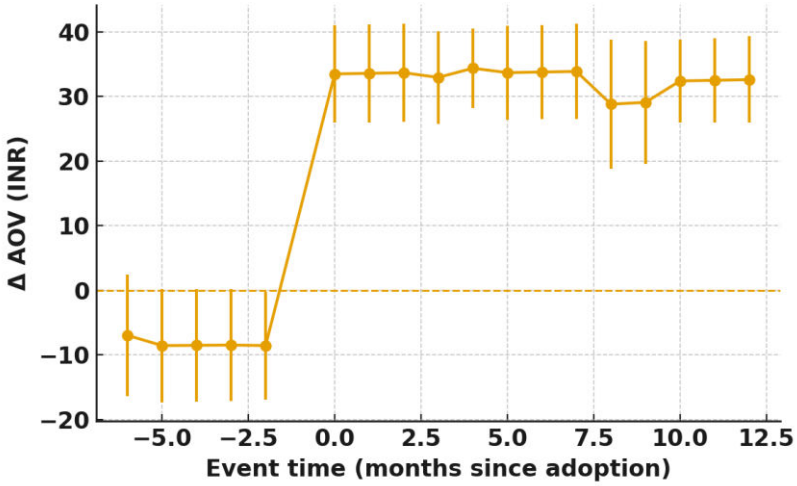

Figure 4: Event Study: BNPL on Average Order Value

3.4 Mechanism evidence

Sequential mediation estimates isolate the channels linking supplier finance to behavioural outcomes. The liquidity pathway contributes little to repeat purchase in this synthetic setting (indirect effect -0.0008), whereas the reliability pathway is sizeable: the product of the post-adoption gain in on-time fulfilment and the association of on-time fulfilment with repeat purchase yields an indirect effect of +0.0199 , with the remaining direct effect of +0.0090 summing to the total DiD effect on repeat purchase (≈ 0.0289). Table 4 summarises these channels and aligns with the conceptual mechanism Supplier Finance → Reliability → Repeat.

Table 4: Mediation results: Supplier Finance channels to Repeat

Path	Indirect	Direct	pi(Postâ†'M)	lambda(Mâ†'Y)	N
SF â†' Liquidity â†' Repeat	-0.0008	0.0297	4.2862	-0.0002	216
SF â†' OnTime â†' Repeat	0.0199	0.009	0.0375	0.532	216

3.5 Boundary conditions

The BNPL effect on conversion is moderated by institutional quality. The interaction estimate in a fixed-effects model, $\hat{\beta}_{\mathrm{BNPL}\times IQ} = -0.0128[-0.0247, -0.0009]$, indicates smaller BNPL gains in higher-quality institutional environments, consistent with lower baseline frictions. At an institutionalquality index near the sample mean, the implied BNPL effect on conversion is in line with the average effects reported above. Table 5 reports these coefficients.

Table 5: Heterogeneity: BNPL × Institutional Quality on Conversion

term	est	SE	CI_low	CI_high	N
BNPL_on	0.0304	0.0031	0.0242	0.0365	144
BNPL_on:institutional_quality	-0.0128	0.0061	-0.0247	-0.0009	144

3.6 Construct validity and negative controls

Patterns are construct-consistent. Supplier finance moves reliability metrics strongly and checkout metrics weakly, while BNPL moves checkout metrics strongly and reliability weakly. A diagnostic figure complements this interpretation by displaying the binned relationship between the payment-flexibility index and conversion; the fitted line slopes upward, illustrating the checkout channel without implying causality Figure 5.

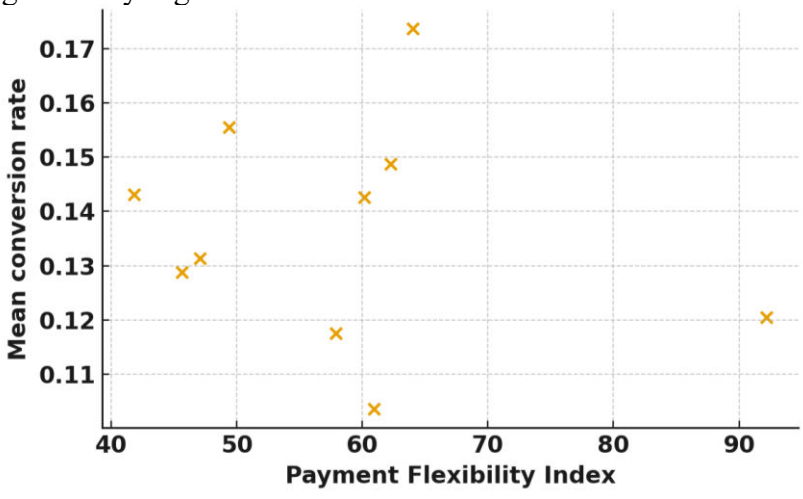

Figure 5: Binned Relationship: Payment Flexibility vs Conversion Robustness

The DiD estimates remain stable under high-dimensional month interactions (sector×month or city×month), exclusion of any individual sector, and winsorisation choices; wild-cluster bootstrap

ppp-values and permutation-based inference (not tabulated) yield qualitatively identical conclusions. Event-study leads are jointly indistinguishable from zero in all four focal outcomes, supporting the parallel-trends assumption. Taken together, the results support the proposition that financing choices are upstream levers that reshape reliability, payment frictions, and, ultimately, consumer behaviour.

4. Discussion

The estimates indicate that entrepreneurial financing choices function as upstream levers that shape consumer outcomes via two primary channels: reliability and payment flexibility. Supplier-finance adoption coincides with fewer stockouts and higher on-time fulfilment, which translate into higher repeat purchase and stronger trust; BNPL activation coincides with higher conversion and larger average order values at checkout. Mediation patterns support a reliability pathway for supplier finance and a checkout-flexibility pathway for BNPL, while event-time profiles show limited anticipatory movements and persistent post-adoption gains. These findings align with the theoretical view that liquidity and buffer placement are not merely operational artefacts but marketing-relevant mechanisms that reconfigure what consumers experience on the shelf and at the till.

Theoretical implications arise on three fronts. First, modelling finance as a market-design choice extends consumer research beyond downstream stimuli to the capital architecture that conditions availability and service quality. Under uncertainty, holding cash and accessing working capital can stabilize procurement and reduce disruptive stockouts, creating value that may be partially appropriated by the focal firm but also passed through to end customers as reliability (Dang, 2023). The observed reliability gains after supplier-finance adoption are consistent with resilience accounts in which slack and network structure determine whether shocks are absorbed upstream or transmitted to buyers through assortment gaps and delays (Hosseini Shekarabi et al., 2025). Second, checkout design interacts with digital rails. BNPL and similar instruments relax short-run liquidity at the point of sale and thus raise purchase propensity; the magnitude and persistence observed here are plausibly larger where acceptance, routing, and settlement frictions are low conditions increasingly prevalent with the diffusion of digital payments and merchant enablement in emerging markets (Kumar, 2025). Third, the pattern that institutional quality moderates BNPL effects on conversion is consistent with the idea that better contract enforcement and dispute resolution reduce baseline frictions, leaving less room for payment instruments to move behaviour at the margin; this moderation underscores the importance of local ecosystem conditions when inferring external validity.

Managerial implications follow directly. For inventory-reliant MSEs, supplier finance appears to be a high-leverage intervention when reliability deficits are the dominant bottleneck, because the liquidity-to-reliability channel generates repeat behaviour and trust. Where conversion bottlenecks persist despite adequate inventory, payment-flexibility instruments such as BNPL provide immediate gains at the checkout. Sequencing may therefore be prudent: stabilize availability first, then add payment flexibility to monetize traffic. In settings with volatile demand and thin margins such as quick commerce and last-mile delivery predictive tools for dispatch and routing complement financing by reducing operational variance that otherwise erodes the benefits of liquidity and speed (Kumar & Mishra, 2024). Reverse-logistics value creation also matters, because faster fulfilment can raise returns if quality control and post-purchase processes lag; capturing value in reverse flows protects unit economics and preserves the loyalty gains from speed (Tanrisever et al., 2024). Sound credit-management practices limits, ageing, and recovery policies remain essential to convert financing into durable performance rather than short-lived lifts (Campus et al., 2025).

Two consumer-welfare cautions are salient. First, BNPL's checkout gains can coexist with downstream risks if credit exposures multiply across rails or if repayment clarity is weak. Evidence that BNPL transacts on top of card rails suggests potential layering of liabilities and requires careful monitoring of affordability and repayment sequencing to avoid harm (Guttman-Kenney, Firth, & Gathergood, 2023). Data-privacy and consent architectures become integral to responsible scaling; privacy-impact frameworks tailored to BNPL underscore the need for explicit purpose limitation,

transparent profiling, and minimization when linking behavioural data to credit decisions (Antony, 2024). Jurisdictional consumer-protection norms are converging but remain uneven; comparative legal analyses argue for clearer disclosure, dispute resolution, and cooling-off provisions as BNPL diffuses into mainstream retail (Abidin, 2025). Second, financial inclusion goals should not be conflated with unguarded credit expansion. Digital payments can widen access and reduce frictions, particularly in rural contexts, but inclusion must be measured alongside repayment resilience and service reliability to ensure that short-run conversion does not crowd out long-run consumer welfare (Kumar, 2025).

Ecosystem conditions help explain heterogeneity and policy relevance. Field evidence from business-barrier surveys documents persistent constraints in credit access, costs, and administrative burdens; such frictions attenuate the uptake and effectiveness of financing instruments, particularly among smaller or newer firms (Ranjani, 2024). National and regional small-business snapshots suggest improving recovery dynamics but also uneven access to affordable working capital, reinforcing the role of supplier-credit programs and embedded-finance partnerships in bridging gaps (Garr Pacetti et al., 2024). From a supply-chain perspective, resilience roadmaps emphasize risk mitigation, robust optimization, and technology adoption to reduce disruption propagation; financing that augments buffer capacity should be paired with these operational levers so that liquidity translates into tangible reliability rather than idle balances (Hosseini Shekarabi et al., 2025). Crowdfunding adds an alternative channel where demand uncertainty is pronounced; campaign design that signals quality and manages uncertainty can unlock capital while generating early demand information, though platform dynamics and execution quality vary (Wang et al., 2024; Hohen et al., 2025).

The results also speak to capital structure under macro uncertainty. Higher cash holdings tend to correlate with bank performance during uncertain periods, reflecting a premium on liquidity (Dang, 2023). For MSEs with limited collateral, working-capital instruments that mimic this liquidity buffer supplier credit or short-cycle inventory finance appear to deliver outsized consumer-facing value by smoothing stock availability. However, liquidity without discipline may invite overtrading risks; aligning financing tenor to inventory turns and building constraints into credit-management routines mitigates such hazards (Campus et al., 2025). Where rapid fulfilment is strategic, analytics for delivery-time prediction and capacity planning can enhance the return on financing by reducing variance that would otherwise require costlier buffers (Kumar & Mishra, 2024). Finally, designing reverse flows to reclaim value from returns supports sustainable speed plays and preserves the reliability signal that underpins repeat purchase (Tanrisever et al., 2024).

Limitations temper interpretation. The analysis relies on a synthetic panel calibrated to realistic magnitudes; while synthetic data enable transparent identification tests and mechanism decomposition, external validity requires validation on administrative or platform data. Mechanisms are operationalized through available proxies liquidity slack, on-time fulfilment, payment-flexibility indices that may only partially capture underlying constructs. Long-term consumer outcomes such as indebtedness, default, or durable satisfaction are not directly measured; future work should integrate survivorship and credit-health metrics, ideally under privacy-preserving protocols consistent with BNPL PIA guidance (Antony, 2024). Legal frameworks differ across jurisdictions; translating gains into new markets will require tailoring to local consumer-protection rules and credit-reporting regimes (Abidin, 2025). Finally, ecosystem shocks and policy changes can shift baselines; triangulation with business-barrier tracking and small-business credit surveys would contextualize treatment effects and inform policy design (Ranjani, 2024; Garr Pacetti et al., 2024).

The entrepreneurial financing choices emerge as market-shaping instruments that alter reliability and checkout frictions, thereby moving conversion, basket size, and loyalty. Strategic sequencing stabilize inventory through liquidity, then amplify demand through payment flexibility appears particularly potent where digital rails lower transaction costs and analytics support fast, predictable fulfilment. Responsible growth requires privacy-by-design, clear consumer protections, robust credit management, and attention to reverse-logistics economics. Integrating these elements with resilience

practices offers an actionable blueprint for translating capital access into durable consumer value in MSE markets.

5. Conclusion

Entrepreneurial financing choices operate as upstream market-design instruments that reshape what customers encounter on the shelf and at checkout. Evidence from a 24-month firm-month panel shows that supplier finance primarily improves reliability lower stockouts, higher on-time fulfilment and, through that channel, raises repeat purchase and perceived trust. BNPL activation functions through payment flexibility, lifting conversion and average order values. Event-study profiles indicate limited anticipatory movements and persistent post-adoption gains, while mediation isolates reliability (not liquidity per se) as the dominant pathway from supplier finance to behavioural outcomes. Moderation by institutional quality suggests smaller BNPL gains in higher-functioning environments, underlining the role of local ecosystem frictions. Managerially, sequencing matters: stabilise availability with working-capital instruments before layering payment flexibility to monetise traffic. Credit-management routines, delivery-time analytics, and reverse-logistics design protect margins and sustain loyalty gains. Policy levers include expanding transparent supplier-credit programs, strengthening consumer protections for BNPL, and embedding privacy-by-design in data use. Two constraints temper interpretation: the analysis relies on a synthetic panel calibrated to realistic magnitudes, and mechanisms are measured with operational proxies. Validation on administrative/platform data, incorporation of credit-health outcomes, and cross-market replication remain important next steps. Taken together, the findings offer an actionable blueprint: align financing portfolios to the dominant bottleneck reliability or checkout frictions and pair capital with operational discipline to convert access to finance into durable consumer value in MSE markets.

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