

FROM CREDIT ACCESS TO PRODUCTIVE OUTCOMES

How productive credit relates to enterprise growth,
financial resilience and household welfare among
microenterprises in Nigeria

Lagos • Kano • Anambra • Borno

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What the evidence says across the credit-to-outcome pathway

20.3%

used business credit

10.2% used regulated formal credit

44.2%

expressed productive demand

−5.0 pp

female formal-access gap

adjusted four-state association

₦500k

median most-recent loan

mainly short-term working capital

37.5%

median reported turnover change

ENTERPRISE CONVERSION

Most measured growth was intensive: more sales/restocking within the existing business. Hiring and structural expansion were less common.

RESILIENCE

A raw borrower advantage appears on the broad resilience index, but disappears when credit-confidence items are removed. Shock-coping results are more informative.

HOUSEHOLD OUTCOMES

No consistent independent association was detected between credit-use group and the composite welfare measures. Component results are mixed and exploratory.

CENTRAL MESSAGE

Credit access is only the first step. Productive outcomes depend on product fit, business capability, the ability to retain gains, shock exposure and provider conduct. The ecosystem should measure conversion at each stage rather than treat disbursement or repayment as the end result.

Source: Productive Credit Study, final verified four-state dataset (n=1,595), 2026.

Why the study asks more than “who has access?”

THE POLICY TENSION

Financial inclusion can expand while financial health remains weak. Access therefore needs to be assessed alongside affordability, business outcomes, resilience and household wellbeing.

Five questions guided the research

- 1 Who wants and accesses productive credit?
- 2 Is credit associated with enterprise activity and scaling?
- 3 Does it strengthen shock absorption and business continuity?
- 4 Do enterprise gains reach household welfare and women’s agency?
- 5 Which market, product and institutional constraints interrupt the pathway?

ACCESS IS AN INPUT

A loan can increase liquidity without changing capability, resilience or welfare.

REPAYMENT IS NOT THE SAME AS IMPACT

A borrower can repay while reducing household consumption, selling assets or refinancing.

PRODUCT FIT MATTERS

Amount, tenor, repayment cadence, price comprehension and provider conduct shape whether credit converts into productive outcomes.

CONTEXT MATTERS

State-level ecosystems differ in market depth, trust, religious fit, security and supplier relationships.

Definitions used in this deck and the conceptual impact pathway



The question is: for whom, under what credit conditions, and at which stage does conversion strengthen or weaken?

Evidence base and who is in the sample

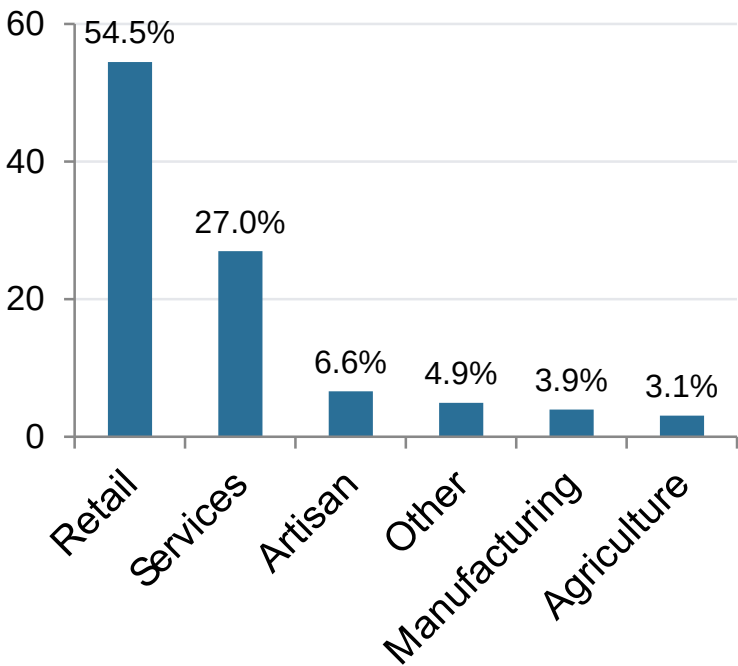
1,595
enterprises
12 LGAs

4
states
Lagos, Kano, Anambra,
Borno

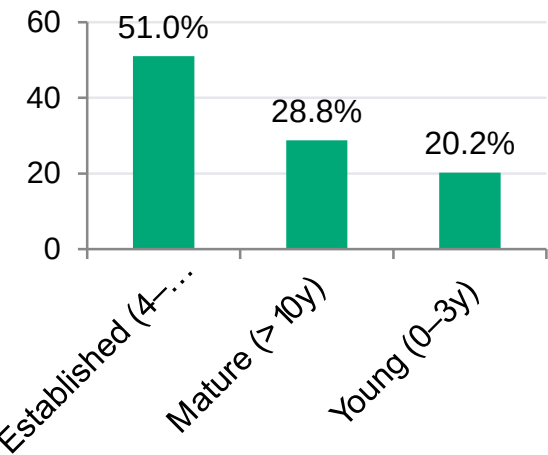
7
empirical IDIs

EVIDENCE DESIGN
Cross-sectional mixed-method study. Quantitative models use state controls and robust inference; propensity adjustment is used only as a sensitivity check. Purposive sites support four-state comparison, not national prevalence.

Sector distribution

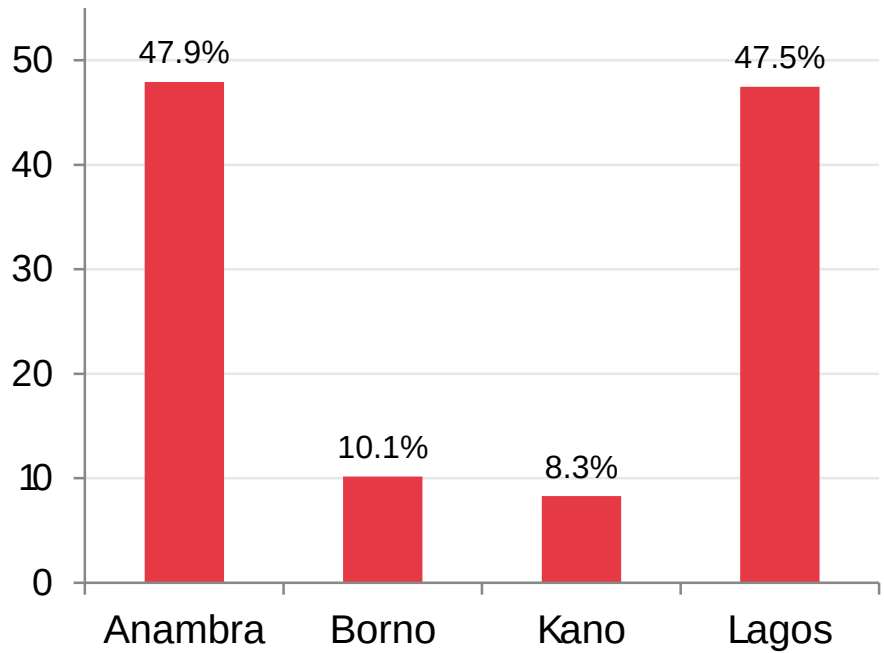


Business maturity

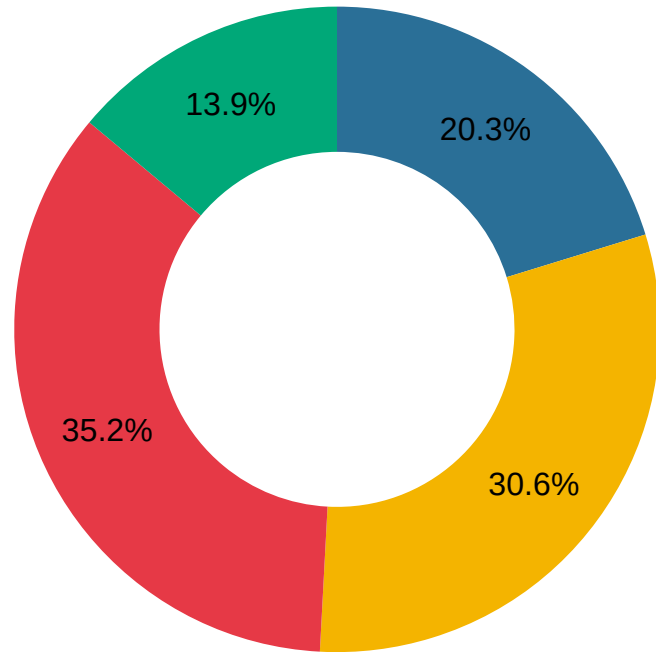


TURNOVER PROFILE
57.1% report monthly turnover of ₦250k–₦500k; 8.3% are above ₦1m.

Female representation differs sharply by state



Credit non-use is not one condition



■ Accessed credit ■ Discouraged potential
■ Voluntary non-demand ■ Uncertain / latent

ACCESSED CREDIT

20.3% of the sample.

DISCOURAGED POTENTIAL

488 enterprises are willing but cite modifiable constraints such as price, repayment, religion, collateral, process or trust.

VOLUNTARY NON-DEMAND

562 enterprises currently say no, prefer savings, or do not identify a borrowing need.

UNCERTAIN/LATENT

222 enterprises are not clearly classified as willing or voluntarily debt-free.

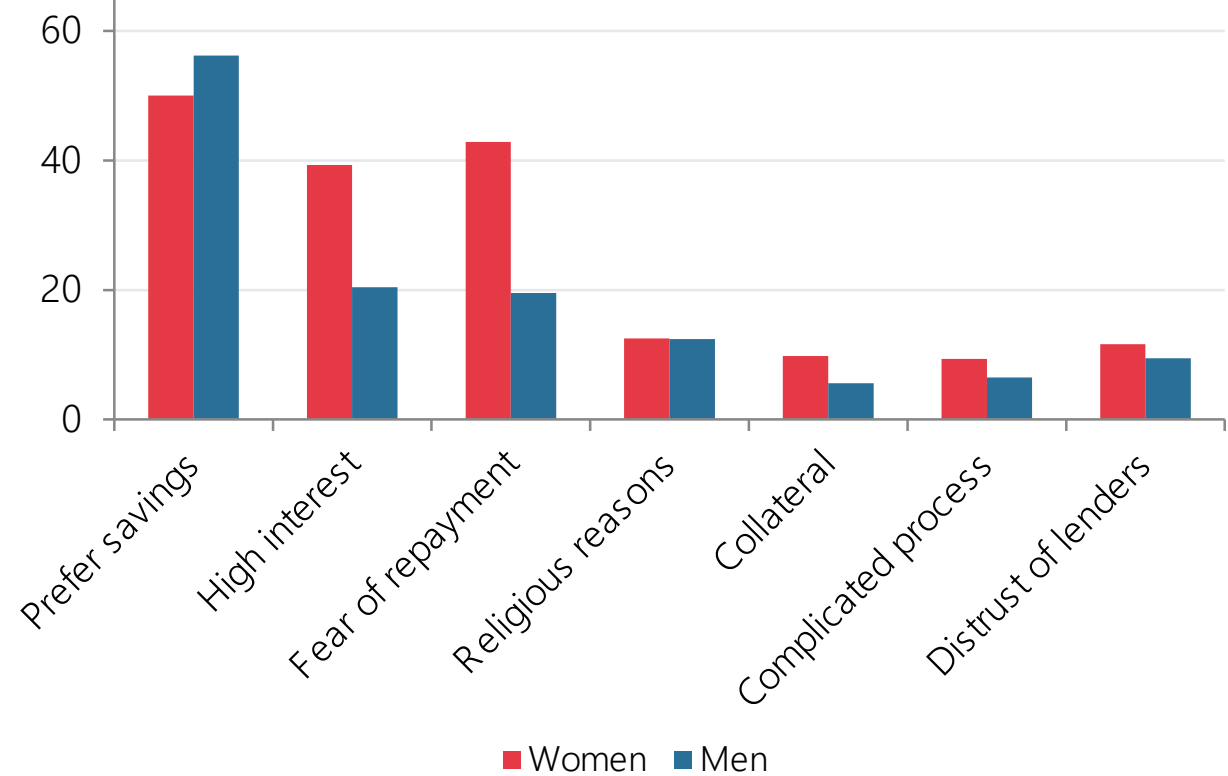
WHY THIS MATTERS

A voluntary non-borrower is not the same as an entrepreneur who wants suitable credit but is discouraged. The ecosystem should diagnose the reason for non-use before trying to “convert” a business into borrowing.

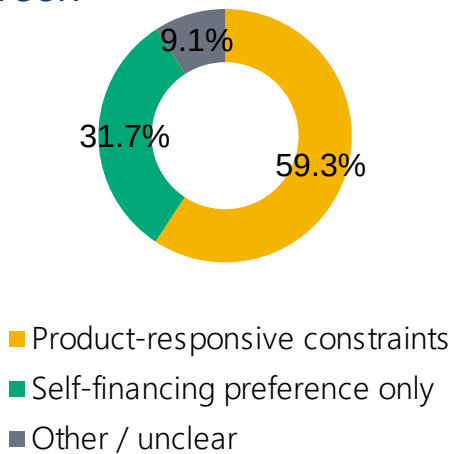
OBJECTIVE 1 • DEMAND & ACCESS

The 35.2% voluntary non-demand group contains both self-financing and product-responsive opportunities
Among non-borrowers, voluntary non-demand is 63.3% for women versus 36.9% for men.

Why voluntary non-borrowers currently avoid credit (multi-select, n=562)



Conservative opportunity screen



59.3%

of this voluntary group still cite at least one modifiable product/market constraint.

31.7%

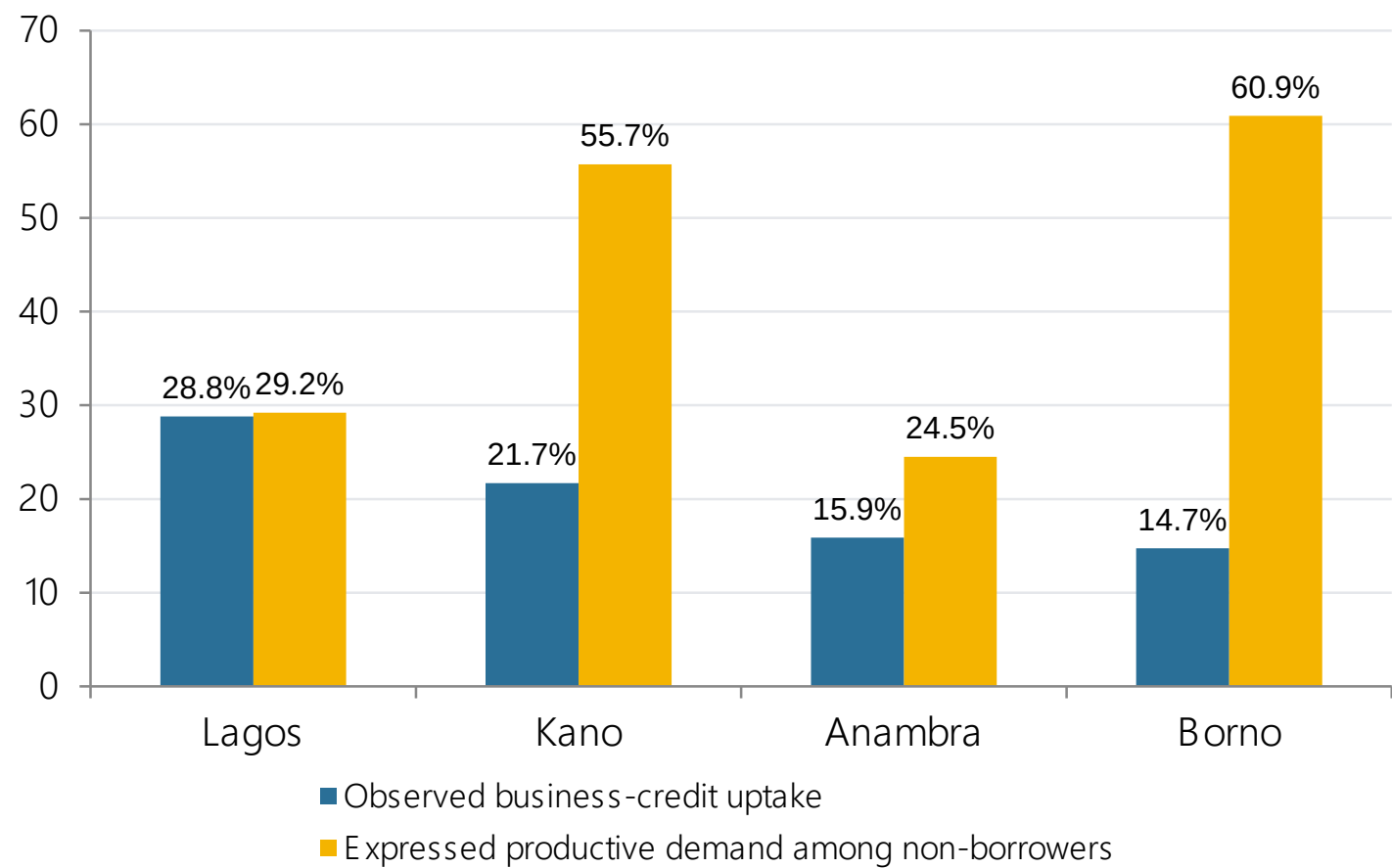
prefer savings without citing a modifiable product constraint; likely lower-priority for credit conversion.

GENDER SIGNAL

Within voluntary non-demand, 74.6% of women versus 49.1% of men cite a modifiable product/market constraint. This is an inferred product-contingent opportunity, not guaranteed future take-up.

OBJECTIVE 1 • DEMAND & ACCESS

Expressed productive demand is high in Kano and Borno, despite lower observed uptake



DEFINITION

Expressed productive demand = a non-borrower says “yes” to suitable credit and names a productive intended use such as stock, tools, expansion or hiring.

44.2% of non-borrowers

meet this definition.

Gender gap before application

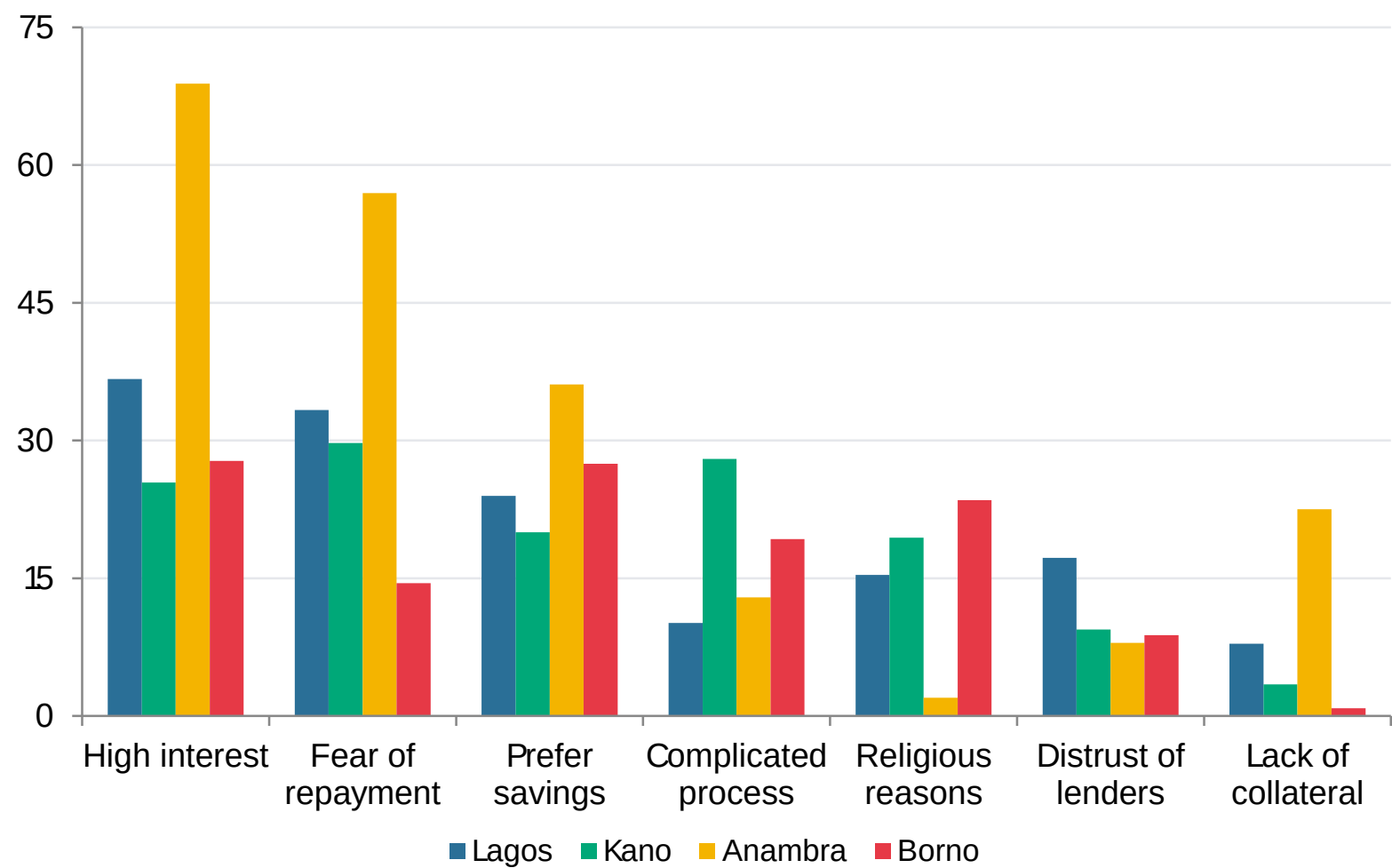
52.2% of male non-borrowers versus 23.4% of female non-borrowers.

INTERPRETATION

This is an access–willingness mismatch consistent with unmet or poorly matched demand.

OBJECTIVE 1 • DEMAND & ACCESS

Barriers are state-specific; a collateral-only diagnosis misses the larger cost–risk problem



ANAMBRA

Strongest cost and repayment-risk signal.

KANO & BORNO

Religious/product-fit concerns are materially more visible.

LAGOS

Higher formal access coexists with a stronger distrust signal.

DENOMINATOR

All non-borrowers. Multi-select question, so percentages do not sum to 100.

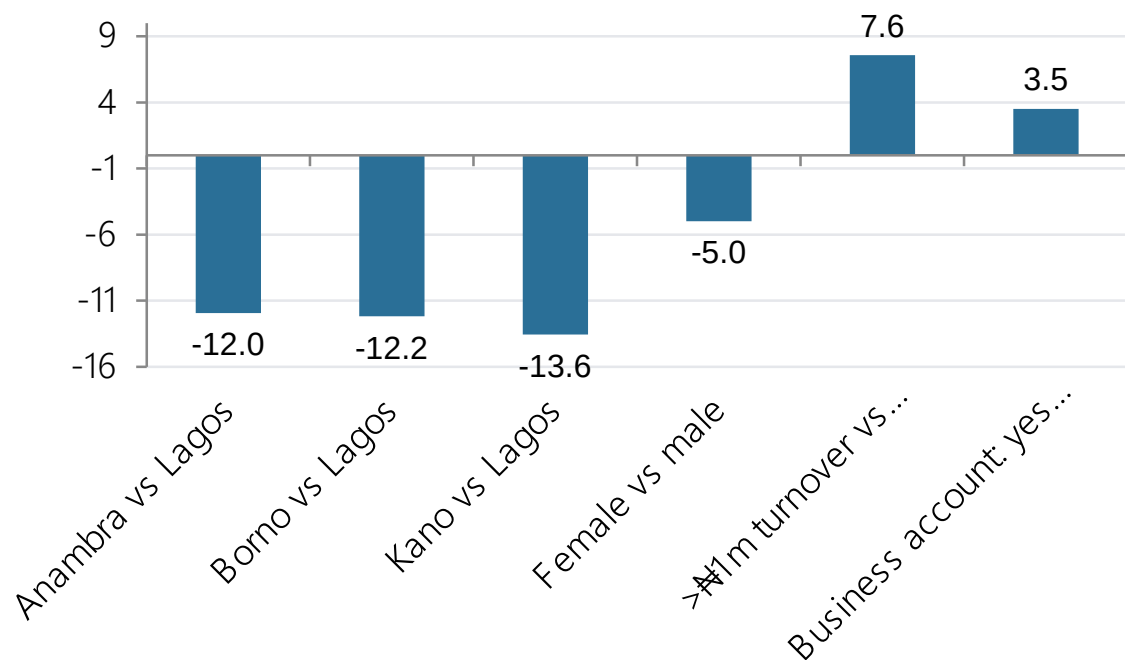
OBJECTIVE 1 • ADJUSTED MODELS

State context and gender remain strong correlates of formal access; willingness has a different pattern

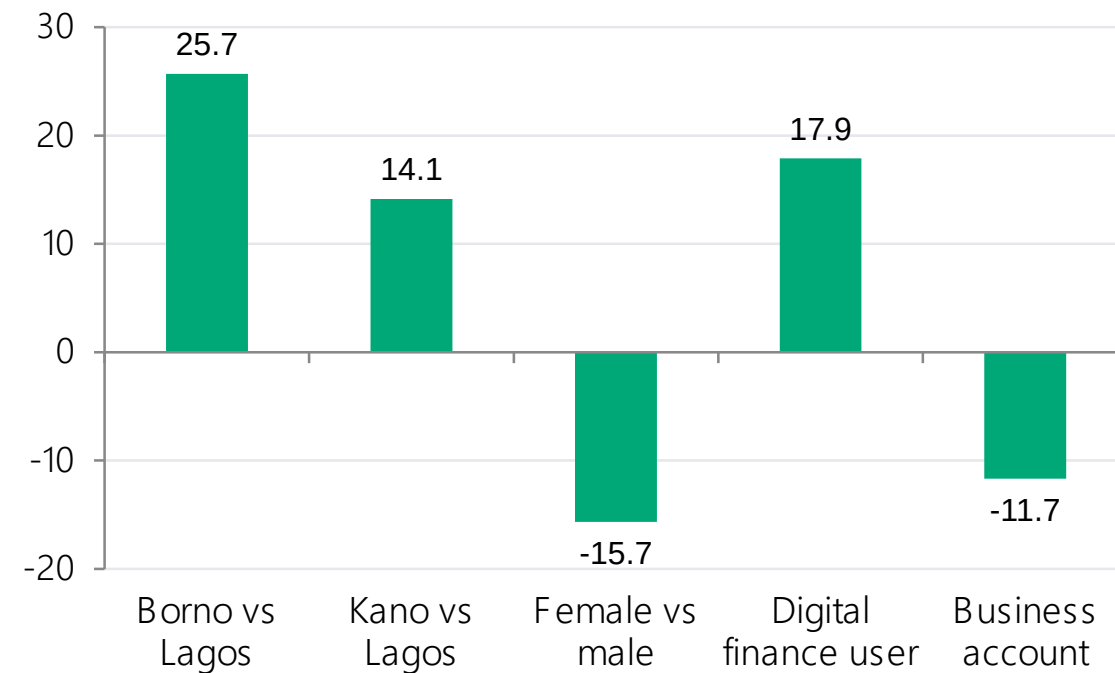
HOW TO READ

Average marginal effect (AME) = model-predicted percentage-point difference, holding included observed characteristics constant. Reference state is Lagos; reference gender is male.

Formal-credit uptake, expanded model (N≈1,581)



Willingness among non-borrowers



MODEL DISCIPLINE

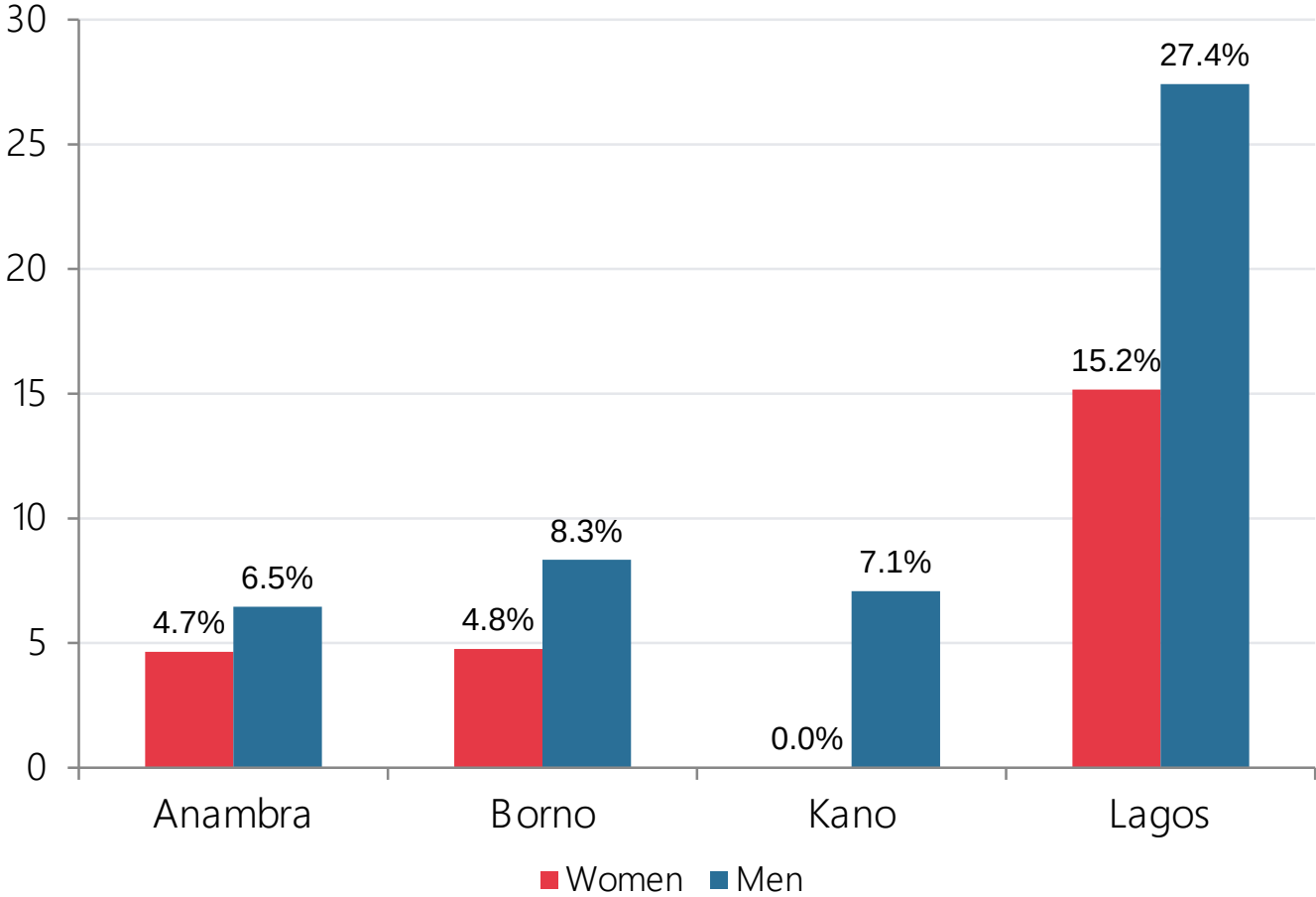
State is jointly highly significant in the formal model ($p < 0.001$; pseudo- R^2 rises from 0.064 to 0.119 when state is added).

Core model also tests age, education, sector, maturity, CAC registration, NIN and digital use; full factor list and reference groups are in the appendix.

OBJECTIVE 1 • GENDER × STATE SUPPORT

The gender gap is real at the four-state level, but state-specific gender estimates are data-limited

Raw regulated formal-credit uptake by gender within state



SAMPLE SUPPORT

Female respondents: Anambra 172, Lagos 178, Borno 42, Kano 37.

FORMAL FEMALE BORROWERS

Anambra 8, Lagos 27, Borno 2, Kano 0. State-specific female credit cells are sparse.

WHAT WE CAN INFER

The four-state probit estimates a –5.0pp female formal-access association after state controls.

OBJECTIVE 2 • CREDIT CONDITIONS

Credit conditions were assessed structurally, but the survey does not support a full loan-quality score

Observed credit conditions

Credit channel	n	Median amount	Median tenor	Monthly	Lump sum
Cooperative/group	33	₦800k	2.5 mo	27.3%	33.3%
Informal/interpersonal	96	₦500k	2.0 mo	21.9%	27.1%
Regulated formal	163	₦500k	6.0 mo	48.5%	9.8%

BUSINESS-SIZE CONTEXT

Estimated current monthly turnover: sample mean $\approx$ ₦538k, median ₦375k; borrowers mean $\approx$ ₦575k, median ₦375k. Among valid borrower cases, median loan size was 1.5 $\times$ reported pre-loan monthly turnover.

₦500k

median most-recent loan
all borrowers

25.5%

did not know the interest structure
53 of 208 with valid responses

WHAT THE TOOL CAPTURED

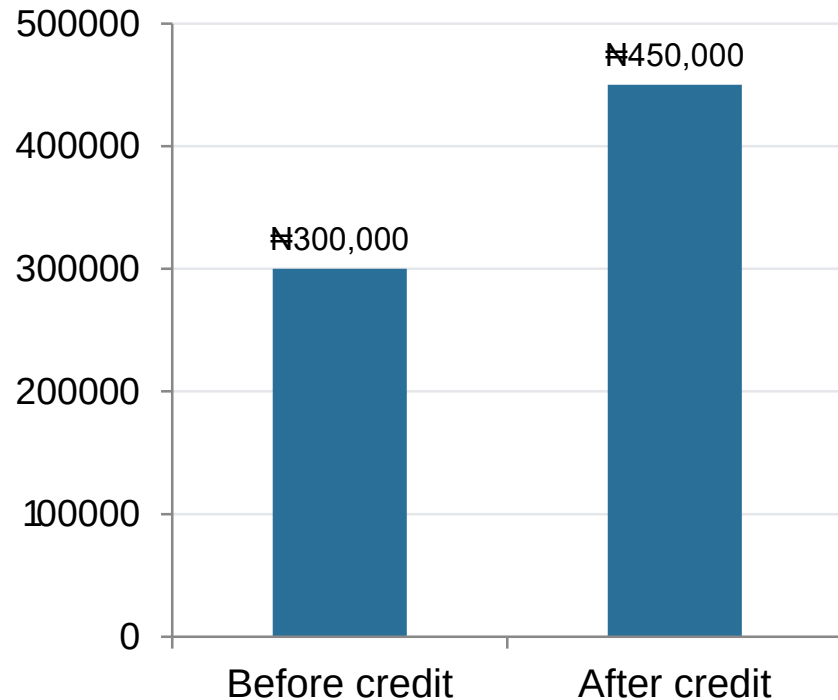
Amount received, credit source, repayment duration/frequency, broad interest structure and intended/actual use.

WHAT IT DID NOT CAPTURE

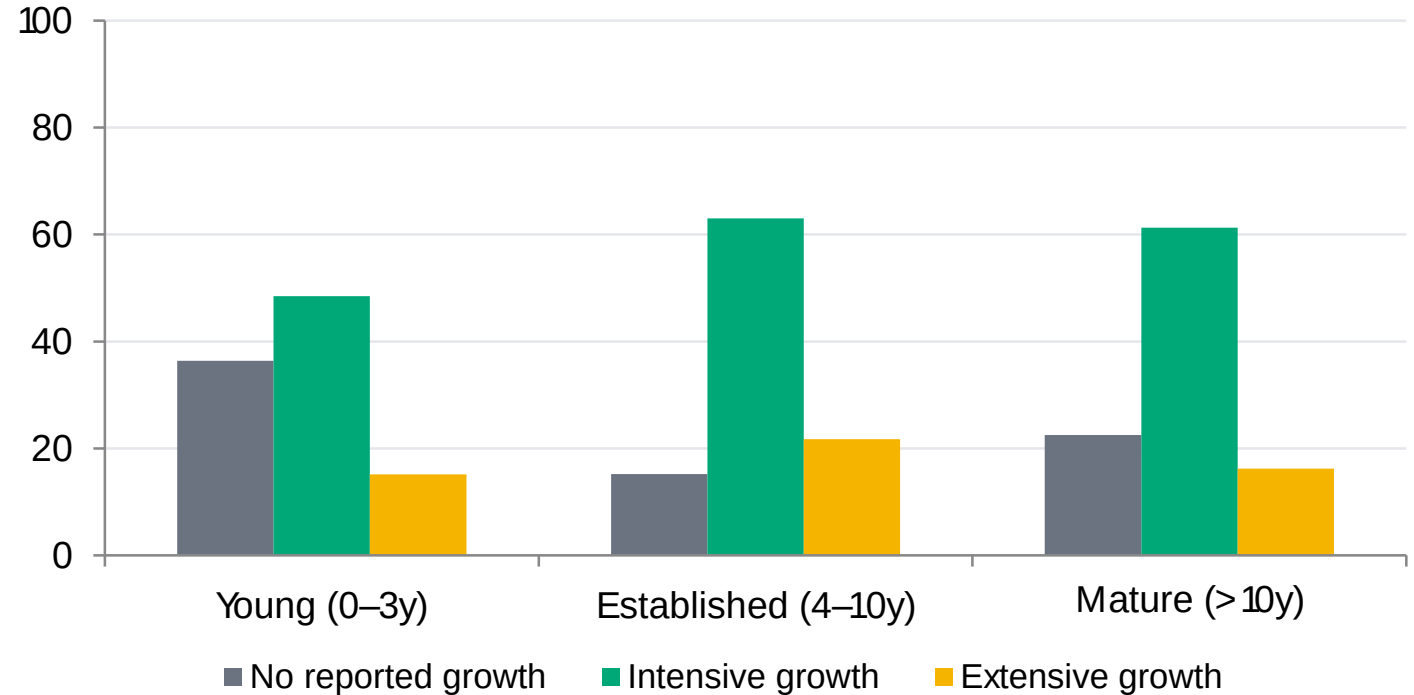
Amount requested vs. received, comparable numerical interest rate, fees, total repayable, effective cost or debt-service burden. We therefore cannot rank provider loan quality comprehensively.

Credit users commonly report higher activity; structural expansion is less common

Paired reported turnover (n=154 of 323 borrowers)



Growth pattern among borrowers with complete growth indicators



HOW TO READ +37.5%

37.5% is the median of each respondent's nominal percentage change.

60.1% intensive

Revenue/restocking improved without hiring.

18.8% extensive

Hiring occurred; structural change was less common.

21.2% no growth

No revenue, restocking or hiring gain was reported.

OBJECTIVE 2 • MECHANISMS

Qualitative evidence shows how productive credit creates gains — and how gains can be eroded

1. INVENTORY DEPTH

Credit allowed retailers to hold more stock during high demand, reducing lost sales and improving customer fulfilment.

2. EQUIPMENT OWNERSHIP

A borrower moved from outsourcing printing to owning a printer, retaining more production value inside the business.

3. SELF-RATIONING

Some entrepreneurs had productive needs but delayed borrowing because interest, repayment period, collateral or repayment method did not fit.

4. OPERATING ABSORPTION

Power, fuel, transport, insecurity and weak location can absorb liquidity before it changes capability.

CONSUMER-PROTECTION COUNTER-PATH

Poor provider conduct does not make a loan “non-productive”. A borrower can use credit productively and still have the gain eroded by unclear pricing, unauthorised deductions or weak redress.

“I finished paying the loan, but deductions continued...the additional deductions are close to ₦200,000.”

IDI — provider-conduct experience

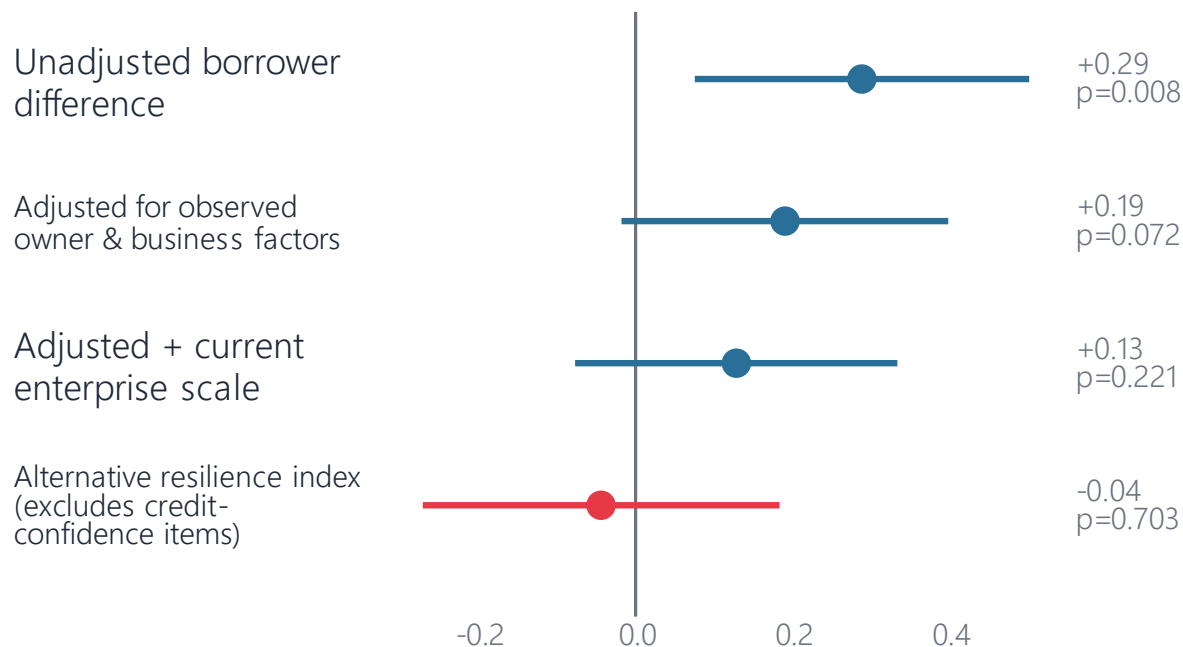
MECHANISM SUMMARY

Credit can deepen working capital or productive assets. Whether that becomes durable growth depends on fit, discipline, provider conduct and the operating environment.

OBJECTIVE 3 • FINANCIAL RESILIENCE

Resilience depends on how it is measured; shock behaviour is more revealing than borrowing confidence alone

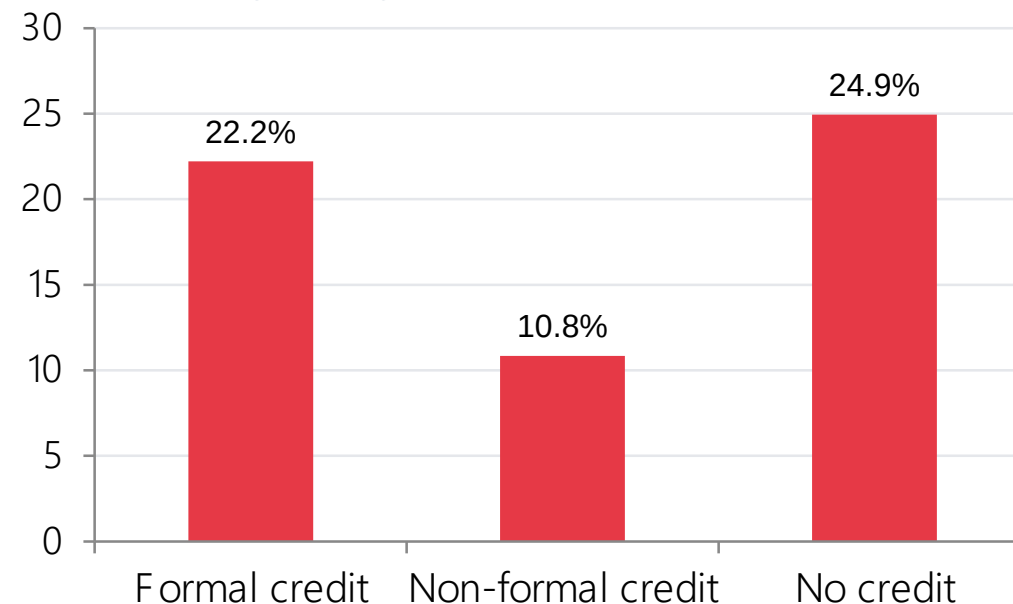
Borrower association with resilience score (points on a 0–10 scale)



MEASUREMENT LESSON

The apparent borrower advantage disappears when confidence in obtaining/managing credit is removed. Financial connectedness is not the same as objective capacity to absorb a shock.

Distress coping among shock-exposed businesses (n=661)



WHAT IS DISTRESS COPING?

Selling a business asset, reducing household consumption, or taking a new loan. Non-formal borrowers show lower observed distress, but the clustered confidence interval for the adjusted result just crosses 1.0.

Non-formal group includes cooperative/group, family/friend and other non-regulated credit.

Signals are mixed and timing matters

Exploratory component-level signals

Outcome	Credit group	E stimate	95% CI	p
Housing support	Formal credit	OR 1.46	1.00–2.14	0.049
Subjective welfare ladder	Formal credit	+0.037	0.001–0.074	0.046
Feeding support	Non-formal credit	OR 0.43	0.20–0.90	0.024

How this sits with recent evidence

NIGERIA DIGITAL-CREDIT RCT (2025)

Random access to a small digital loan increased subjective wellbeing at three months, but did not significantly change income, expenditure, resilience or WEE.

MALAWI FORMAL-CREDIT STUDY (2025)

Formal credit was associated with higher weekly food expenditure using econometric selection methods.

LITERATURE MESSAGE

Welfare effects are outcome-, product-, context- and time-specific. Our cross-sectional composite null is not a universal verdict.

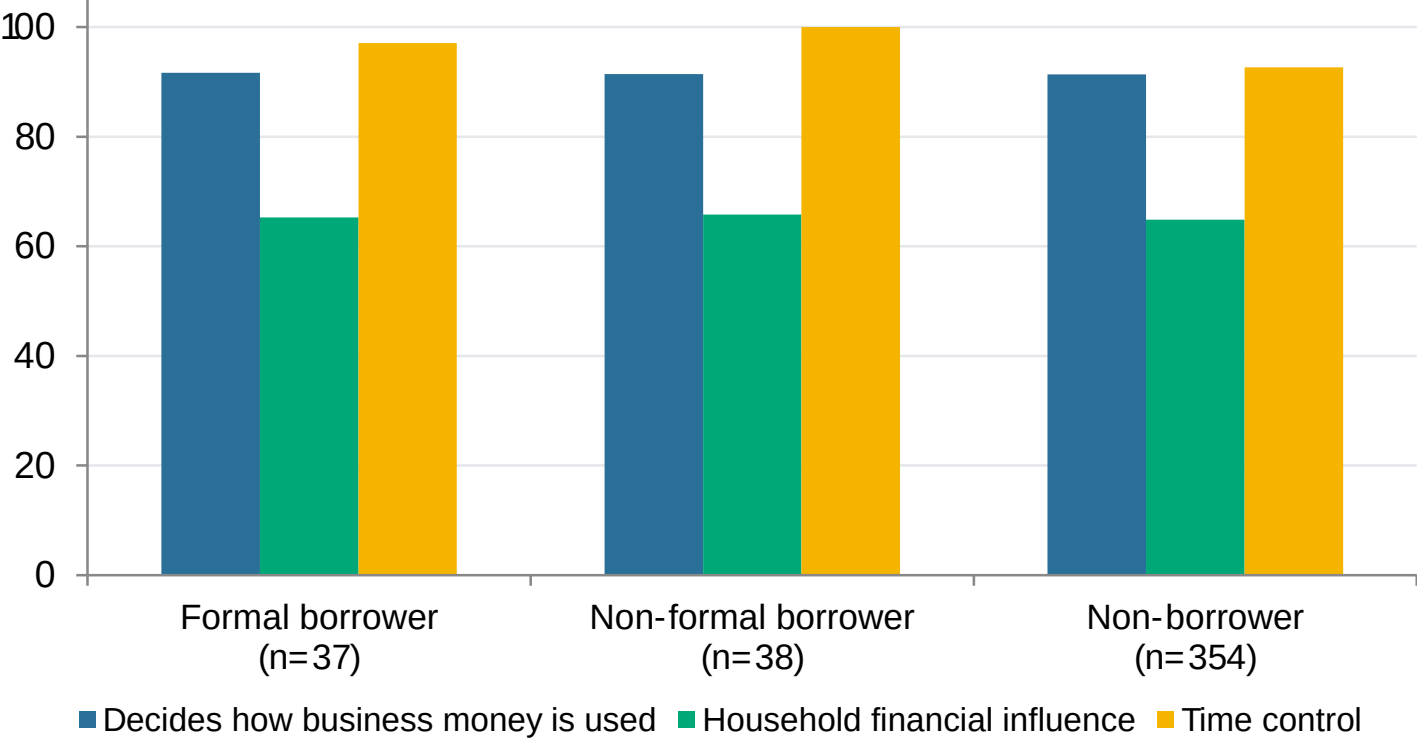
Literature: Björkegren et al. (2025), Economic Development and Cultural Change; Jombo & Sohn (2025), Applied Economics.

OBJECTIVE 4 • GENDER & AGENCY

Women’s economic empowerment: the clearest gap is in willingness and formal access

DEFINITION

Women’s Economic Empowerment (WEE) is assessed here through control of business money, influence over household financial decisions, autonomy/ social norms and control over time..



SMALL BORROWER CELLS

Only 37 formal and 38 non-formal women are in the borrower groups. Women are concentrated in Lagos and Anambra.

CEILING / LIMITED VARIATION

Decision and time-control measures are above 90% in all groups, reducing the ability to detect differences.

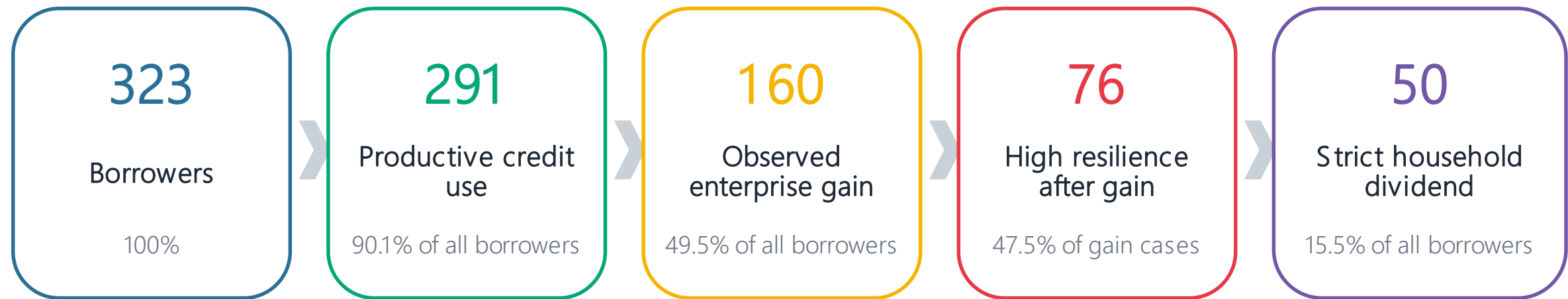
DOMAIN MODELS

No coherent credit-use pattern emerges. One small negative autonomy signal for formal borrowers (p=0.041) is exploratory and not robust to multiple-testing concerns.

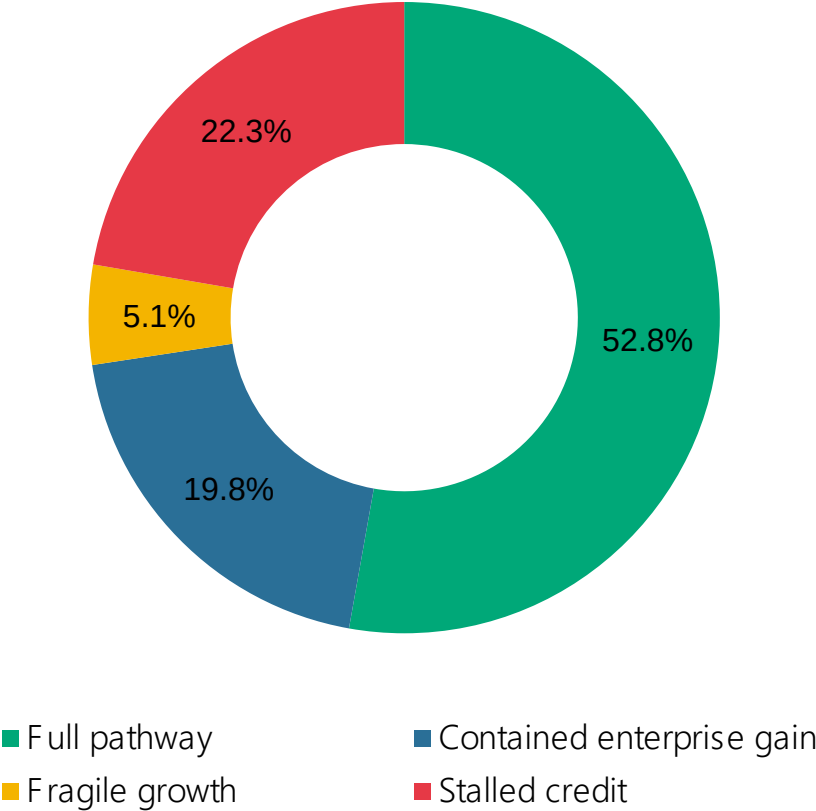
Strongest gender evidence remains earlier in the pathway: –15.7pp willingness and –5.0pp formal uptake for women after adjustment.

A strict all-borrower pathway shows where observed conversion falls away

The denominator begins with all 323 borrowers. Missing growth is treated conservatively as not passing the enterprise-gain stage.



Complete-case borrower types reveal very different pathways — and many resilient firms do not borrow



FULL PATHWAY
Growth + at least moderate resilience + strong household dividend.

CONTAINED ENTERPRISE GAIN
Growth and resilience, with some measured household dividend.

FRAGILE GROWTH
Growth is reported, but resilience remains low.

STALLED CREDIT
Credit is observed without a measured enterprise gain.

368
high-resilience non-borrowers
28.9% of non-borrowers

PROGRAMME MEANING
Credit is not the only route to resilience. Some enterprises may need savings, insurance, supplier finance or capability support rather than debt.

What the ecosystem should do differently

1. MEASURE THE FULL PATHWAY

Track access, credit conditions, enterprise gain, shock performance, household outcomes and provider conduct — not disbursement and repayment alone.

2. BUILD STATE-SPECIFIC PORTFOLIOS

Test non-interest/trusted products in Kano and Borno, cost/repayment fit in Anambra, and conduct/trust improvements in Lagos.

3. SEPARATE LIQUIDITY FROM TRANSFORMATION

Short working-capital products should not be evaluated against job-creation goals. Equipment and expansion need different size, tenor and grace.

4. DESIGN GENDER ACCESS EARLIER

Address willingness, privacy, control, home-based business visibility, supplier power and cash-flow fit, not only female disbursement targets.

5. MAKE CONSUMER PROTECTION PRODUCTIVE

Standardise total-cost disclosure, recovery conduct, deduction controls, complaint resolution and pricing comprehension as credit-quality indicators.

6. BUILD STRONGER EVIDENCE

Follow enterprises longitudinally, capture requested vs received amounts and effective cost, measure supplier/in-kind credit, and observe outcomes after shocks.

A PRACTICAL NEXT STEP FOR EFInA

Pilot a common productive-credit results framework with providers, then test differentiated product features in contrasting state ecosystems. Use the pathway to identify where conversion improves, and where harm or attrition occurs.

Consultation questions

Which pathway indicators can the ecosystem standardise? • Which product-fit opportunity should be piloted first? • How should provider conduct and shock performance enter the definition of successful credit?

Overall conclusion: credit is conditionally productive. The next policy question is not “more credit or less credit”, but better matching and better measurement.

A1. Key analytical definitions and denominators

Construct	Definition	Primary denominator
Any business credit	Any reported business-purpose credit in the study reference period	1,595 all respondents
Regulated formal credit	Bank, MFB, regulated digital lender or government/development intervention	1,595 all respondents
Non-formal credit	Cooperative/group, family/friend or other non-regulated source	Borrowers only
Expressed productive demand	Non-borrower willing to take suitable credit + productive intended use	1,272 non-borrowers
Paired turnover	Valid numeric reported turnover before and after credit	154 of 323 borrowers
Complete growth	Revenue-growth, restocking and hiring indicators all observed	208 borrowers
Distress coping	Sold business asset, cut household consumption, or took a new loan	661 shock-exposed respondents
WEE	Women's agency domains; overall score is secondary	≈428 women with valid score

A2. What was included in the credit-uptake models?

CORE MODEL

State, gender, age, education, sector, business maturity, CAC registration, NIN and digital-finance use. These are intended to be relatively stable owner/business characteristics.

EXPANDED MODEL

Adds current turnover band and business account. These improve fit but are contemporaneous and may themselves be affected by previous access or business success.

REFERENCE GROUPS

State: Lagos; gender: male; age: 18–34; sector: Other; maturity: Young 0–3y; turnover: ₦250–500k; binary variables: No.

WHY STATE MATTERS

In the expanded formal-credit model, state is jointly highly significant (LR $\chi^2 \approx 56.3$, $df=3$, $p<0.001$). Adding state increases McFadden pseudo- R^2 from 0.064 to 0.119. State effects capture an ecosystem bundle; they do not identify a single causal mechanism.

WHAT WAS NOT STABLE IN THE EXPANDED FORMAL MODEL

Age, sector, mature-business status, tertiary education, NIN and digital-finance use were not independently associated with formal uptake after adjustment. CAC registration was borderline ($p \approx 0.062$). Absence of statistical significance is not proof that these factors do not matter.

A3. Selected model effects: formal uptake, any-credit uptake and willingness

Model	Contrast	AME	p
Formal, expanded	Female vs male	–5.0 pp	0.004
Formal, expanded	Anambra vs Lagos	–12.0 pp	<0.001
Formal, expanded	Borno vs Lagos	–12.2 pp	<0.001
Formal, expanded	Kano vs Lagos	–13.6 pp	<0.001
Formal, expanded	> ₦1m turnover	+7.6 pp	0.001
Formal, expanded	Business account	+3.5 pp	0.022
Any credit, core	Mature >10y	+9.5 pp	0.006
Any credit, core	Female vs male	–5.1 pp	0.048
Any credit, core	CAC registered	+6.6 pp	0.006
Willingness	Female vs male	–15.7 pp	<0.001
Willingness	Borno vs Lagos	+25.7 pp	<0.001
Willingness	Kano vs Lagos	+14.1 pp	0.005
Willingness	Digital-finance user	+17.9 pp	<0.001
Willingness	Business account	–11.7 pp	<0.001

A4. Paired turnover result: complete-case profile and selection caution

154 / 323

**borrowers with numeric
before + after turnover**

47.7% of borrowers

PAIRED CASES

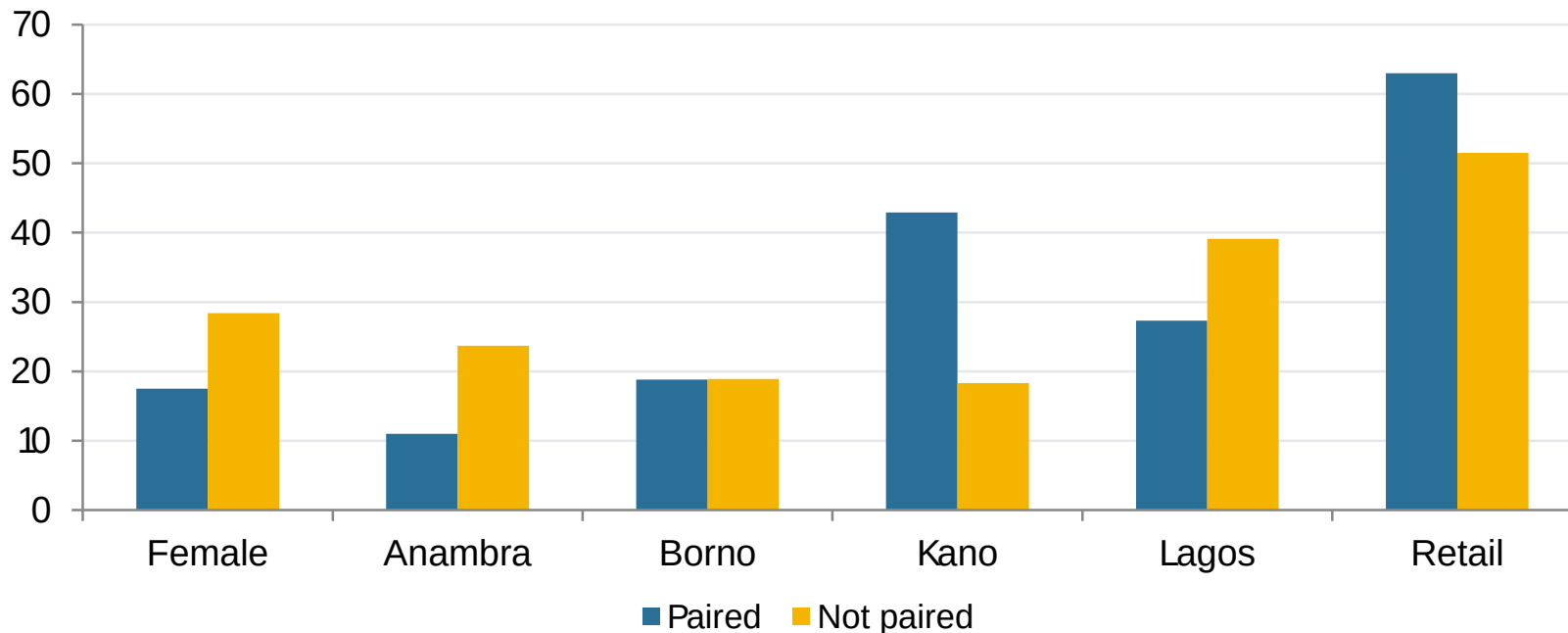
17.5% female; 42.9% Kano;
27.3% Lagos; 63.0% retail.

NOT PAIRED

28.4% female; 18.3% Kano;
39.1% Lagos; 51.5% retail.

BUSINESS MATURITY

Similar across paired and non-paired borrower cases; selection is more visible by state, gender and sector.



INTERPRETATION

The before/after turnover result is a borrower-subset signal, not a representative estimate for all 323 borrowers. It is nominal, self-reported and may reflect price changes, seasonality, business selection and credit timing as well as real activity.

A5. Enterprise growth disaggregation

Subgroup	n	No growth	Intensive	Extensive
Anambra	24	25.0%	66.7%	8.3%
Borno	36	8.3%	77.8%	13.9%
Kano	70	20.0%	55.7%	24.3%
Lagos	78	26.9%	53.8%	19.2%
Female	50	22.0%	58.0%	20.0%
Male	158	20.9%	60.8%	18.4%
Young (0-3 years)	33	36.4%	48.5%	15.2%
Established (4-10 years)	92	15.2%	63.0%	21.7%
Mature (>10 years)	80	22.5%	61.3%	16.3%

DEFINITIONS

Intensive = revenue/restocking improved without hiring. Extensive = hiring occurred. "No growth" = none of the three observed indicators improved.

PATTERNS

Borno shows the highest intensive-growth share; Kano the highest extensive-growth share. Young businesses show the highest no-growth share.

A6. Loan-quality assessment: what the survey can and cannot answer

MEASURED

- Amount received for the most recent loan
- Credit source / channel
- Repayment duration and frequency
- Broad interest-rate structure: flat / reducing / non-interest / don't know
- What the credit funded
- Reported productive use
- Loan amount relative to reported pre-loan turnover
- Selected provider-conduct experiences from IDIs

NOT CAPTURED RELIABLY

- Amount requested versus amount approved / disbursed
- Numerical interest rate on a comparable basis
- Effective annual rate / APR
- Fees, penalties, compulsory savings or insurance charges
- Total amount repayable
- Instalment as a share of cash flow or profit
- Complete terms-and-conditions comprehension
- A validated affordability or loan-quality score

A7. Resilience robustness and shock-composition checks

Specification	Borrower estimate	p
Unadjusted original index	+0.288	0.008
Core adjusted original index	+0.190	0.072
Adjusted + current scale	+0.128	0.221
Alternative index	−0.044	0.703
ATT-weighted original	+0.241	0.032

ATT DIAGNOSTIC

Observable balance improved strongly: maximum absolute standardised mean difference fell from 0.305 to 0.024. This does not remove unobserved selection.

Shock-exposed group	n	Distress	Cooperative	Mature
Formal	81	22.2%	34.6%	39.5%
Non-formal	83	10.8%	41.0%	37.3%
No credit	497	24.9%	22.1%	31.0%

WHY NON-FORMAL MAY LOOK DIFFERENT

Non-formal borrowers belong to cooperatives and have a very different state mix. Informal arrangements may also be more flexible or arrive at a different point in the shock cycle.

A8. Welfare component results and interpretation

Outcome	Credit group	Estimate	95% CI	p
School-fee support	Formal	OR 1.16	0.76–1.79	0.492
Feeding support	Formal	OR 0.64	0.27–1.51	0.307
Health support	Formal	OR 0.67	0.40–1.14	0.137
Housing support	Formal	OR 1.46	1.00–2.14	0.049
Meal deprivation	Formal	OR 1.37	0.71–2.62	0.350
Profits reach household	Formal	OR 1.21	—	0.441
Feeding support	Non-formal	OR 0.43	0.20–0.90	0.024
Subjective welfare ladder	Formal	+0.037	0.001–0.074	0.046

WHY COMPONENTS MATTER

A composite can hide directionally different outcomes. Component analysis is more interpretable, but multiple testing increases the chance of isolated “significant” results.

RECENT NIGERIA EVIDENCE

A 2025 randomised digital-credit evaluation found higher subjective wellbeing after a small loan but no significant income, expenditure, resilience or WEE effects.

INTERPRETATION

Effects differ by product, outcome, horizon, context and research design.

A9. WEE domains, support and model limits

Women only	n	Mean WEE	Business-money decision	Household influence	Time control
Formal borrower	37	7.15	91.7%	65.3%	97.1%
Non-formal borrower	38	7.30	91.5%	65.8%	100.0%
Non-borrower	354	7.26	91.4%	64.9%	92.6%

AUTONOMY / SOCIAL-NORMS DOMAIN

Formal vs non-borrower: -0.054 on a 0–1 scale, $p=0.041$.

BUSINESS-MONEY DECISION

Formal vs non-borrower: -0.023 , $p=0.484$. No statistically detectable association.

HOUSEHOLD FINANCIAL INFLUENCE

Formal vs non-borrower: $+0.030$, $p=0.454$. No statistically detectable association.

TIME CONTROL

Near-ceiling values create separation and unstable adjusted modelling, especially among non-formal women where descriptive time control is 100%.