

Microcredit made to measure: *Evidence from rural Morocco*

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This *Impact Brief* asks whether microcredit works better when repayment schedules match borrowers' expected cash flows. In rural Morocco, over 3,000 eligible applicants were randomly offered either a standard loan or a new type of contract, namely a five-month grace-period loan, or a loan with instalments individually tailored to expected revenues. About one-third of applicants who were offered a new product chose it over a standard contract, while overall borrowing remained similar across groups. The two new contracts appealed to different clients: agricultural households tended to choose the grace-period loan, while households running smaller and more capital-constrained businesses chose the tailored loan. The tailored-loan offer increased annual business sales and profits, mainly in non-agricultural activities, without worsening repayment. The grace-period offer produced similar but smaller and less precisely estimated effects. A second experiment across 440 villages found that door-to-door information campaigns changed which loan people said they preferred, but did not increase actual borrowing. These findings support offering prospective microcredit clients a menu of repayment options rather than a single, standard schedule.

Why microcredit repayment design matters

Microcredit gives households and small businesses access to finance when conventional banks do not. Yet standard microcredit has typically produced only modest gains, on average, for entrepreneurship and poverty reduction. Take-up is usually low and the benefits tend to be concentrated among borrowers who already run a business or have particularly promising opportunities (see EBRD Impact Briefs 1, 2 and 3). Earlier research in rural Morocco, for example, showed that only 17 per cent of households borrowed when microcredit became available. Among borrowers, investment and self-employment profits increased, but these gains were partly offset by lower casual wage income and did not raise household consumption (see Crépon et al., 2015).

One reason for these disappointing results may be that microcredit's rigid repayment schedule does not fit every microenterprise. Standard loans usually require constant monthly payments that start soon after disbursement, even when income arrives unevenly or only later. A farmer may pay for seeds, feed or livestock months before earning revenue. A craft producer may earn most around a festival or tourism season. An otherwise viable activity can, therefore, face repayment pressure before it generates enough cash, forcing the borrower to draw down working capital, sell assets or rely on other household income.

For lenders, this is a product design problem. The mismatch is one of timing, not capacity, so a larger loan or looser screening will not solve it. A menu of repayment schedules may serve different clients better while preserving credit standards.

Consequently, this *Impact Brief* asks whether tailoring repayment schedules to expected income makes microcredit more attractive to borrowers and more effective for those who take it up. In collaboration with Al Amana, Morocco's largest microfinance institution, the study compares the standard loan with two alternatives: a five-month grace period before principal repayment and a schedule tailored in advance to the borrower's expected revenues. It examines whether clients choose these new products, whether they improve business and household outcomes without weakening repayment, and whether information campaigns about these new loan products can increase borrowing.

Microcredit made to measure

The study was conducted in rural areas of central and northern Morocco. Al Amana operates close to 600 service points, including rural branches and mobile units. The new products were developed with input from focus groups of (non-)clients, loan officers, agricultural specialists and Al Amana management. A recurring concern was that equal monthly repayments did not fit agricultural and other seasonal income flows.

Three ways to structure repayment

Figure 1 illustrates the three repayment structures compared in the study.

The **standard loan** is Al Amana's standard individual-liability loan. After a one-month grace period, borrowers start to make equal monthly repayments.

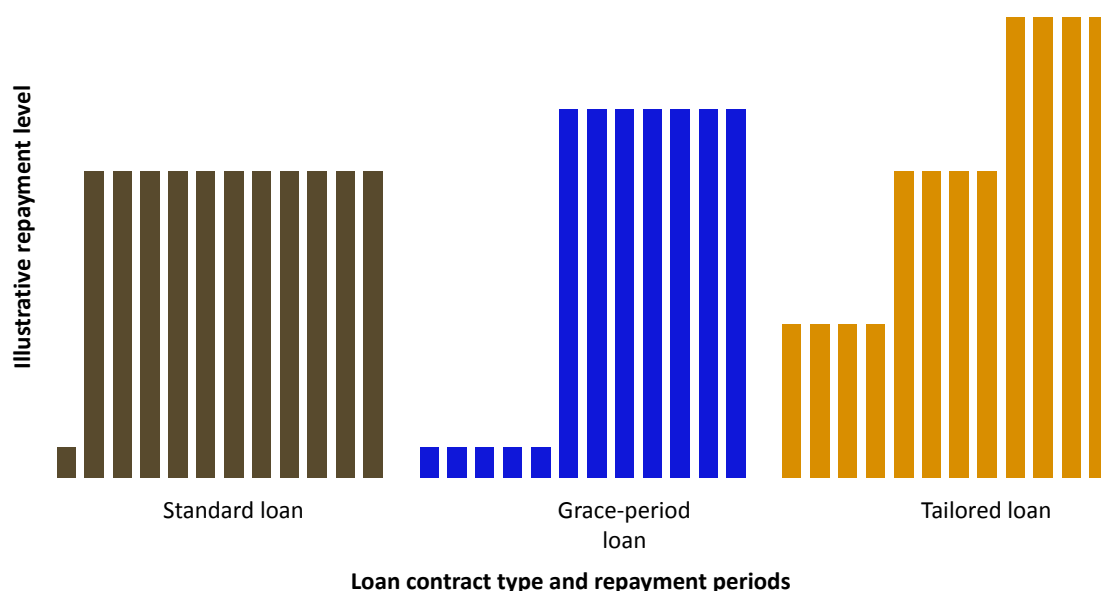
The **grace-period loan** extends the period before principal repayment from one month to five months. Borrowers pay interest during those five months and then repay principal (with interest) in equal monthly instalments. The aim is to give activities such as farming and livestock more time to generate revenue.

The **tailored loan** divides the loan term into three periods of equal length. Before disbursement, the

borrower and the loan officer agree on the repayment level for each period. Payments can be lower or higher over the three periods, subject to a minimum equal to the interest due.

Both new schedules were fixed before the loan was signed. They were designed to accommodate predictable variation in income, not to allow payments to be postponed after an unexpected shock. The grace-period and tailored loans were not offered at an explicit discount, although the timing of principal repayment could affect loan maturity and total nominal interest.

Figure 1. Standard and made-to-measure microcredit contracts



Note: The bars show stylised repayment profiles, not actual amounts or months. The standard loan included a one-month grace period followed by equal monthly instalments. Under the grace-period loan, borrowers paid interest only for five months and then repaid principal and interest. Under the tailored loan, the term was divided into three equal periods, with the monthly instalment in each period agreed before disbursement. The tailored profile shown is one possible schedule. For the same principal amount, the products were designed to have the same expected present value of repayments for Al Amana, although maturity and total nominal interest could differ.

Source: Authors' illustration based on Al Amana loan product descriptions.

Two complementary experiments

The study posed two questions: does repayment design help people who already want credit? And does promoting better-fitting products attract people who would not otherwise visit a branch? Figure 2 summarises the two experiments.

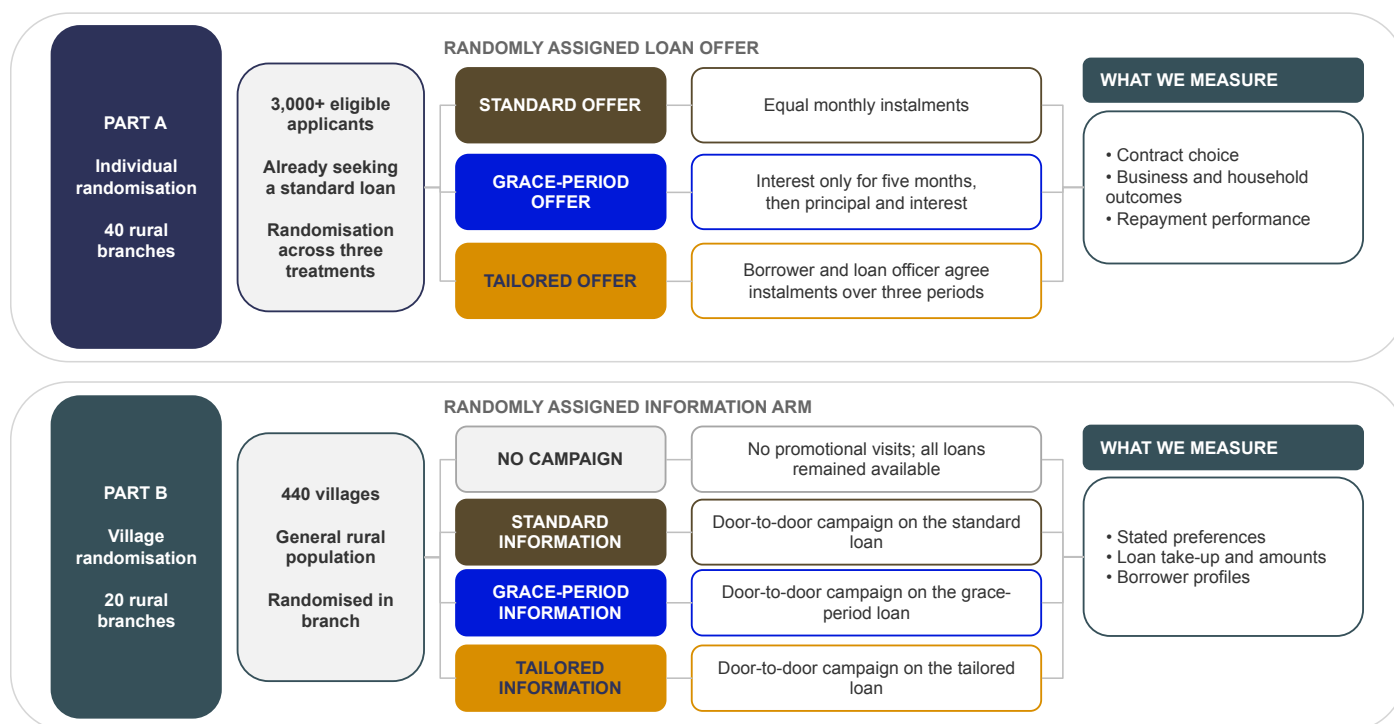
The borrower-level contract experiment focused on existing applicants. At 40 rural branches, 3,068 eligible first-time and returning applicants who expressed an interest in a standard loan were randomly offered a standard, grace-period or tailored contract. Applicants offered a new product could still take the standard loan or decide not to borrow. Household surveys and Al Amana's administrative records were used to track contract choice, economic outcomes and repayment. More than 2,600 applicants were re-interviewed at least 18 months after signing or declining a loan. Because all participants had approached Al Amana before learning which contract they would be offered, differences in subsequent

outcomes reflect the loan offer rather than one product attracting a different type of applicant to the branch.

The village-level information experiment focused on the wider rural population. In the catchment areas of 20 branches, 440 villages were randomly assigned either to no additional campaign or to a door-to-door campaign promoting the standard, grace-period or tailored loan. Some campaigns also included borrower testimonials. Residents remained free to request any available product and were subject to Al Amana's normal screening.

The first experiment, therefore, asks whether repayment design creates value for people already seeking credit. The second asks whether information about those products helps to generate additional credit demand.

Figure 2. Overview of research design



Note: In Part A, 3,068 eligible applicants across 40 rural branches were assigned to the standard-loan offer (N=995), the grace-period offer (N=1,035) or the tailored-loan offer (N=1,038). Applicants offered a new product could choose the standard loan or decline to borrow. In Part B, 440 villages around 20 branches were assigned to no additional campaign (N=120), standard-loan information (N=80), grace-period-loan information (N=120) or tailored-loan information (N=120). In 40 grace-period and 40 tailored-loan villages, the campaign also included borrower testimonials; these villages are pooled with the corresponding information groups in the main results. Source: Authors' illustration.

Offering the new contracts changed loan choices and business outcomes

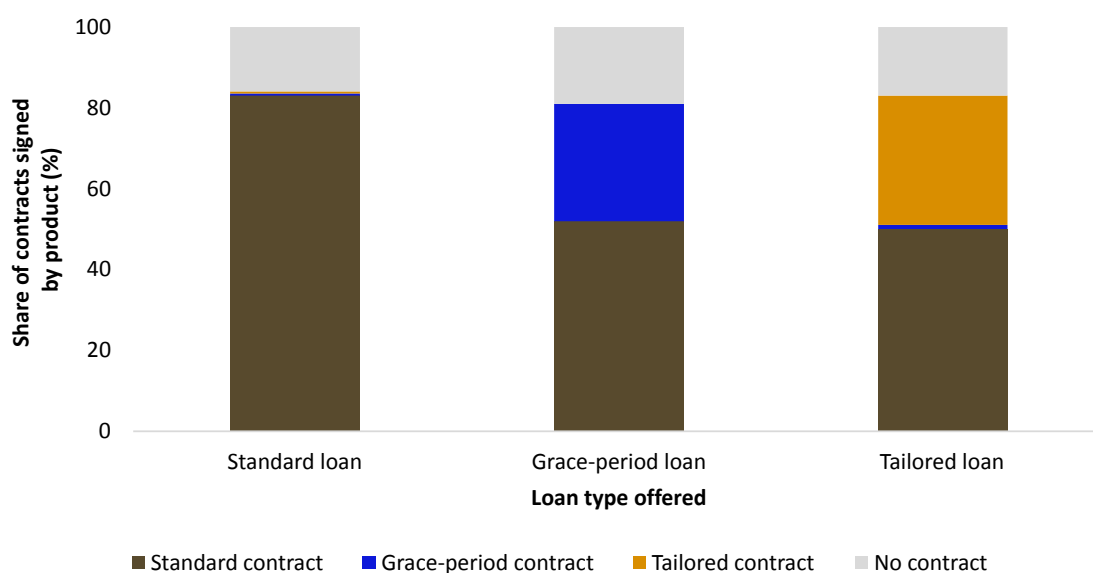
New contracts shifted loan choices, not the number of borrowers

Demand for the new contracts was substantial but not universal. Among applicants offered the grace-period loan, 29 per cent signed that contract and 52 per cent took a standard loan. Among those offered the tailored loan, 32 per cent selected it and 50 per cent chose the standard product.

Offering more choice did not increase overall borrowing. The applicant share signing any loan was 81 per cent in the grace-period group, 83 per cent in the tailored-loan group and 84 per cent in the standard-loan group. The new products, therefore, mainly changed *which* contract applicants signed rather than *whether* they borrowed.

These results support offering a menu of microcredit contracts rather than replacing the standard product. Applicants sorted between the standard contract and the two new contracts, so keeping all three serves a wider range of borrowers than any one contract individually.

Figure 3. About one-third of applicants chose a made-to-measure contract when offered one



Note: This figure shows the contract ultimately signed by applicants assigned to each loan offer. Applicants offered a new product could instead take the standard loan or decline to borrow. Take-up of the other new product was approximately 1 per cent or less.

Totals may not add up to 100 per cent because of rounding.

Source: Al Amana administrative data and authors' calculations.

The tailored-loan offer increased sales and profits

After about 18 months, households offered the tailored loan reported annual business sales that were MAD 7,897 (around €720)¹ higher than those of households offered the standard loan. Annual profits were MAD 4,895 (around €450) higher. These increases were equivalent to 40 per cent and 51 per cent of the respective standard-offer group averages. These averages hide wide variation. The gains were concentrated in the upper tail of the distribution (that

is, among the most successful businesses), with little change for the majority, in line with earlier literature showing that microcredit tends to benefit a small subset of borrowers rather than the average borrower. The estimated grace-period effects pointed in the same direction: annual sales were MAD 4,786 (around €440) higher and profits MAD 2,896 (around €260) higher. However, these estimates were not statistically distinguishable from zero.

¹ Throughout this *Impact Brief*, euro equivalents are based on a dirham-to-euro exchange rate of around 11:1, the average market rate over the period covered by the endline survey. Euro values are provided for guidance only; all estimates are in nominal dirhams.

The tailored-loan gains came mainly from non-agricultural businesses, such as commerce, crafts and services. The offer did not lead to more households starting businesses. Rather, it helped some households to expand activities they already operated, particularly for those generating frequent sales and relatively quick returns.

The broader pattern is consistent with households using working capital more intensively in existing

businesses rather than financing large fixed investments. Labour shifted from casual work towards self-employment. There was no detectable increase in equipment purchases or household consumption, and the estimated gain in total household income was positive but imprecise (as the rise in business profits was partly offset by lower casual-wage earnings).

Figure 4. The tailored-loan offer raised annual business sales and profits



Note: * = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$; "n.s." = coefficient is not statistically significant at any of these three levels. Bars show the estimated effect of being offered each new product relative to being offered the standard loan. Outcomes are annual household sales and profits from crop farming, livestock and non-agricultural own-account activities, measured in Moroccan dirhams. Whiskers show 95 per cent confidence intervals. Percentage labels express each estimate relative to the standard-offer group mean. The tailored-loan estimates are statistically significant at the 5 per cent level; the grace-period estimates are not statistically significant at the 10 per cent level. The estimates capture the effect of the offer on all assigned applicants, including those who took a standard loan or did not borrow. To adjust for outliers, outcomes are winsorised at the 95th (upper 5th) percentile. For details, see Crépon et al. (2026).
Source: Endline household survey and authors' calculations.

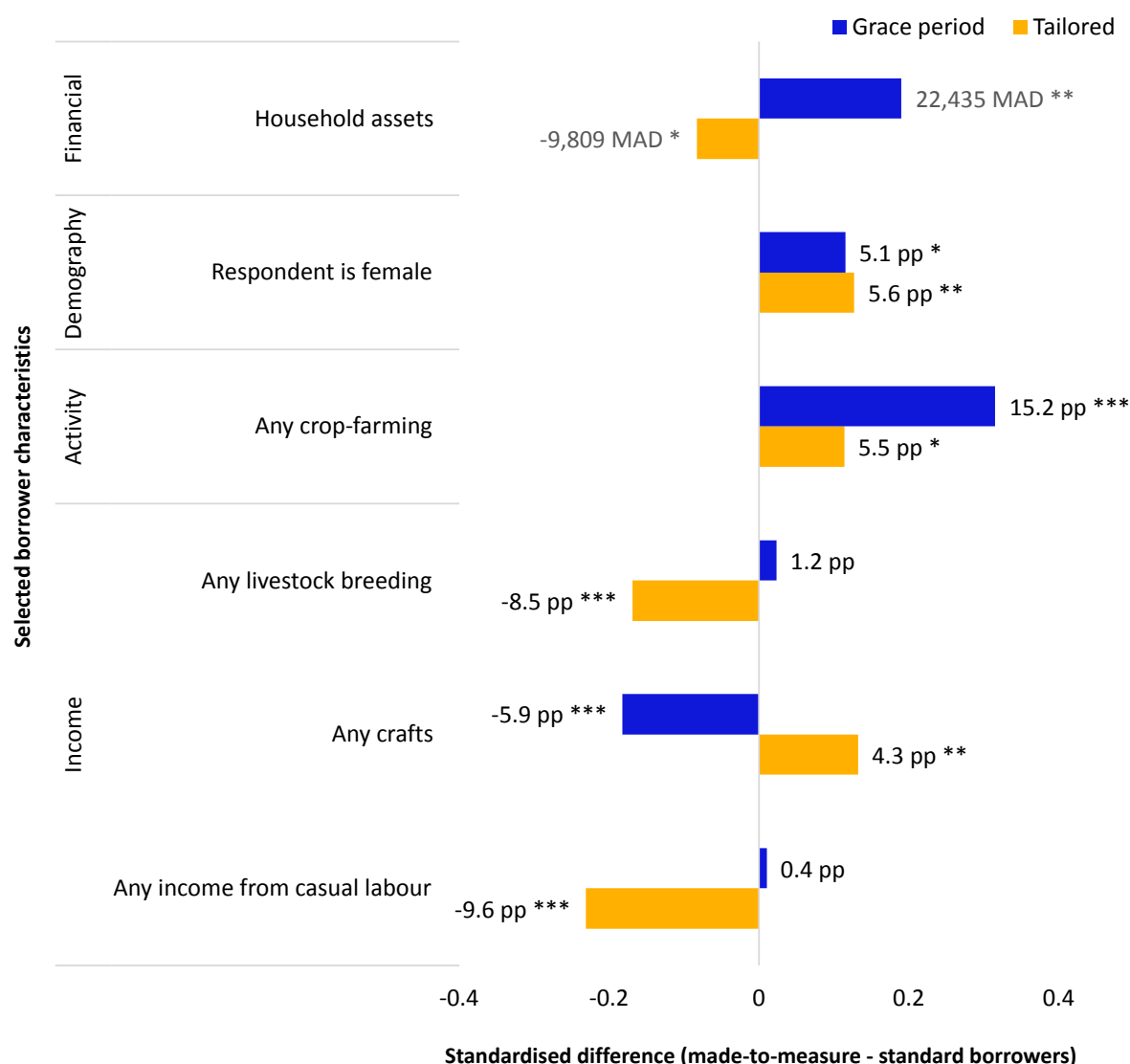
Different contracts appealed to different borrowers

Applicants who chose the grace-period loan were more likely to engage in agricultural activities with delayed revenue. Half engaged in crop farming, compared with one-third of other applicants offered the same product. They also operated larger businesses and owned more household assets. Those choosing the tailored loan had a different profile. They tended to operate smaller, more capital-constrained businesses and were more likely to work in crafts. Women were more likely to select either of the two new contracts than other applicants offered the same product. Al Amana's own

assessment also recorded lower repayment capacity and fewer business assets among those choosing the tailored loan.

The two new microcredit products, therefore, addressed different constraints. The grace period appealed to agricultural households that expected revenue later in the production cycle. The tailored schedule appealed to smaller businesses that benefited from varying their instalments over time.

Figure 5. The tailored and grace-period contracts appealed to different types of borrower



Note: * = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$. This figure compares applicants who selected the grace-period or tailored contract they were offered with applicants in the same offer group who did not select it. Bars are standardised differences; labels show original units. Grace-period borrowers were more likely to engage in agriculture and held more household assets. Tailored-loan borrowers were more likely to operate craft businesses, and had lower measured repayment capacity and business assets. Borrowers selecting either new contract were more likely to be women than other applicants offered the same product. These patterns describe selection into each product and should not be interpreted as effects of the contracts on borrower characteristics.

Source: Baseline household survey, Al Amana loan assessments and authors' calculations.

New credit products changed timing and cost without weakening repayment

Borrowers did not use the tailored schedule only to postpone repayment. About two-thirds of borrowers under this schedule placed the highest instalment in the first third of the loan cycle, reducing later interest charges.

Both new offers modestly extended scheduled maturity. Relative to the 19.5-month timeframe under the standard offer, maturity increased by 0.6 months for the grace-period offer and 0.9 months for the tailored offer. The grace-period offer raised scheduled interest relative to principal by 1.4 percentage points; the smaller

tailored-loan estimate was not statistically significant. Neither offer worsened repayment. There was no detectable effect on contracts ending more than 30 days late, unpaid instalments or completion relative to schedule. Point estimates suggested that borrowers offered either made-to-measure product completed their contracts about two weeks further ahead of schedule, but these differences were not statistically significant. The business gains under the tailored offer did not, therefore, come with larger loan amounts or weaker repayment.

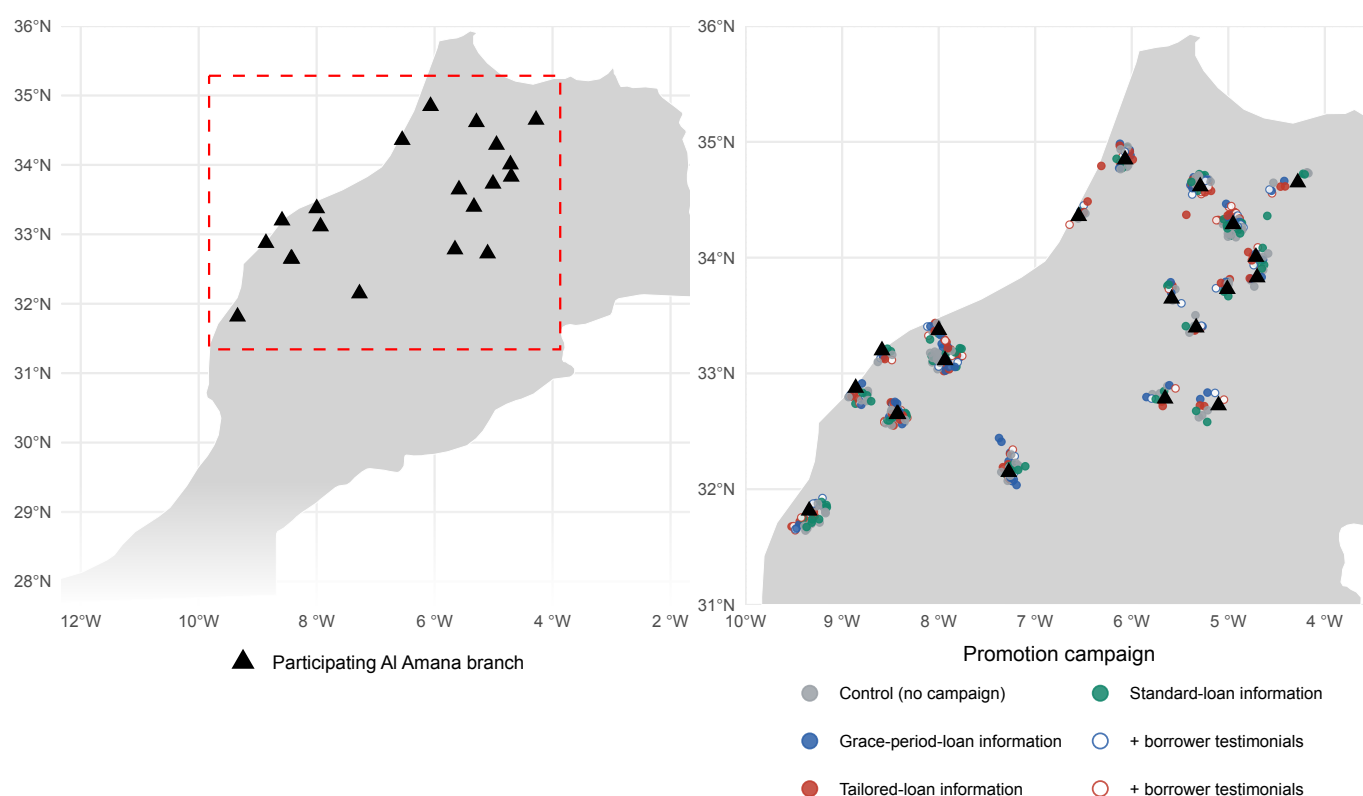
Village-level information campaigns changed preferences, not borrowing

The borrower-level intervention studied people who had already approached Al Amana for a loan. The second experiment asked whether information about the products could attract additional borrowers. This part of the study covered 440 villages served by 20 rural branches. Of these villages, 120 received no

additional campaign and 320 received door-to-door promotion of the standard, grace-period or tailored loan.

Trained teams completed 5,805 household promotion sessions using short videos and follow-up messages (about 18 per campaign village). In 40 grace-period and 40 tailored-loan villages, the campaign also included borrower testimonials. Only the information provided was randomised: residents remained free to request any available product and were subject to Al Amana's normal screening.

Figure 6. The campaign covered 440 villages around 20 rural branches



Note: The left-hand panel shows the locations of the 20 participating branches in Morocco; two branches are located sufficiently close to one another that their markers overlap at this scale. The right-hand panel shows the villages and their assigned campaigns. The 440 villages comprised 120 with no additional campaign, 80 receiving standard-loan information and 120 each receiving grace-period- or tailored-loan information. Forty villages in each new loan group also received borrower testimonials.

Source: Promotional-campaign randomisation file, based primarily on the Initiative Nationale pour le Développement Humain (INDH) database and supplemented by Haut Commissariat au Plan data.

Information changed stated preferences...

Among participants provided with information about the standard loan, 62.3 per cent preferred that product, while fewer than 2 per cent preferred one of the new loan types. Grace-period promotion increased the share preferring the grace-period product by about 65 percentage points; tailored-loan promotion increased preference for the tailored product by about 63 points. Adding borrower testimonials did not produce a meaningfully larger shift. In other words, the product videos alone were sufficient to change what participants said they preferred.

... without increasing actual borrowing

Higher stated preferences did not translate into more borrowing. Villages that received no campaign took out only 0.38 loans on average, while just 18 per cent recorded any loans at all – a low base against which any increase would have been easy to detect. None of the three campaigns raised the number of contracts signed or the total amount disbursed: the estimated effects were small, statistically insignificant and mixed in sign. Most loans remained standard contracts, and not a single tailored contract was recorded among borrowers who could be linked to a study village. Because these counts cover only consenting, matched borrowers, they understate total lending. Yet the gap between what participants said they preferred and what they borrowed is clear.

Operational and policy implications

Three practical lessons emerge. First, the new repayment options should complement rather than replace the standard loan. About half of applicants offered a new product still chose the standard contract, and the two alternatives appealed to different clients. The value lies in a menu that lets borrowers select the schedule that best fits their expected cash flow. Because the two new contracts appeal to distinct borrower types, a menu also lets an institution segment its portfolio, rather than offering every client the same product. Both new repayment options may also be practical channels for reaching women entrepreneurs.

Second, tailored and grace-period contracts should come with clear information about cost. Many tailored-loan borrowers chose to repay principal early, while the grace period raised scheduled interest. Product advice should make the trade-off between early liquidity, maturity and total borrowing cost easy to understand.

Third, product design and delivery must be considered together. The tailored offer improved business outcomes among people already seeking credit, without weakening repayment. Village promotion, by contrast, shifted stated preferences but did not expand borrowing. Awareness alone was not enough: normal eligibility checks, limited promotion by branch staff and a difficult post-pandemic, drought-affected environment all appear to have reduced the conversion of awareness into actual borrowing (although the experiment cannot isolate the contribution of each). Institutions introducing new loan products should, therefore, invest in branch processes (staff training, screening guidance, active promotion and follow-up with interested applicants) alongside client awareness.

The findings show that better matching of repayments to predictable cash flows can create value for existing borrowers, while information alone may not bring new borrowers into the market. These gains do not appear to come at the lender's expense: the tailored contract carried no price discount, left the amount borrowed unchanged and did not worsen repayment, so the improvement in borrower outcomes reflects a closer match between repayment and cash flows rather than value transferred from lender to borrower. For a microfinance institution, this means that a more diverse menu can raise client welfare without negatively affecting portfolio quality.



Suggestions for further reading and references

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About this study

Study registration and source. This *Impact Brief* draws on *Microcredit Made to Measure: Experimental Evidence from Rural Morocco* by Bruno Crépon, Ralph De Haas, Tim Deisemann, Florencia Devoto and William Parienté, published as EBRD Working Paper No. 315. The study was preregistered with the *Journal of Development Economics* as a *Stage 1 Registered Report* and is registered in the *AEA RCT Registry* under trial number AEARCTR-0002618.

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Further information. Visit www.ebrd.com/oce.

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