Microfinance at the margin
Evidence from Bosnia and Herzegovina

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EBRD IMPACT BRIEF

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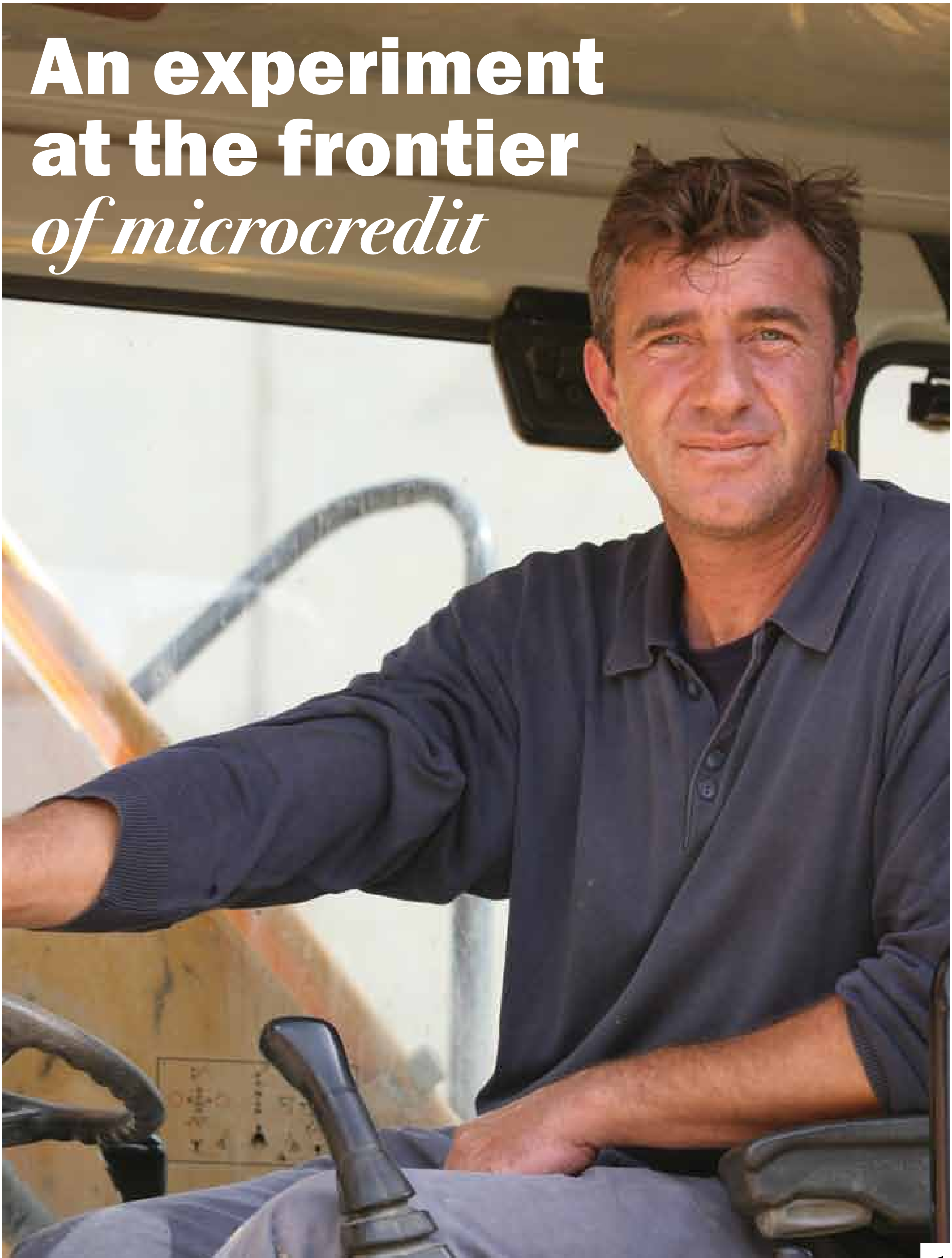
An experiment at the frontier *of microcredit*



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A substantial part of the world's population has no or only limited access to formal financial services. Many of the poor depend on informal networks and family ties – which are often less reliable or relatively expensive – and this may constrain potential entrepreneurs in executing profitable investment projects. To analyse to what extent a lack of credit may inhibit entrepreneurship and perpetuate poverty, this EBRD Impact Brief reports on a randomised field experiment in Bosnia and Herzegovina.

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1: A worker at a Bosnian brick factory
2: A client of EKI outside his bakery

The goal of the field experiment was twofold. First, to find out whether microcredit could be extended to a slightly more inclusive borrower population without unduly compromising loan quality. In Bosnia and Herzegovina a relatively large number of microfinance institutions, as well as banks, had been competing for what seemed to be quite a narrow segment of the population who were potential small entrepreneurs. The research team aimed to find out whether this segment could be broadened somewhat "at the margin" so that a larger part of the population could receive access to finance.

Second, and relatedly, the experiment meant to quantify the causal impact of access to credit on small-scale entrepreneurship and poverty alleviation at this margin – that is, among those who normally would not have qualified for microcredit.

The study was undertaken by the EBRD in collaboration with EKI, a large non-profit microfinance institution, and the Institute for Fiscal Studies in London.* EKI aims to reduce poverty by providing financial services and technical support to those parts of the Bosnian population that have no access to formal financial services. To fulfil this mission in a sustainable manner, it needs to know where exactly the "frontier" of its lending operations lies.

As part of the experiment, loan officers across all branches were asked to identify potential "marginal" clients over a period of several months. All of these marginal applicants would normally have been rejected, for instance because they lacked sufficient collateral, because their business ideas were less convincing or because they were perceived as somewhat riskier for other reasons. On average these marginal clients also turned out to be less educated or poorer than regular EKI clients. Importantly, the loan-officer training for the experiment stressed that marginal clients were not applicants with a poor credit history, who were over-indebted, or who were expected to be fraudulent.

In total, 1,198 of these marginal loan applicants were gradually identified and subsequently interviewed as part of a detailed baseline survey. During several months the research team in London would allocate these newly interviewed applicants randomly with a 50 per cent probability to either the treatment (receiving a loan) or the control group (no loan). ➦

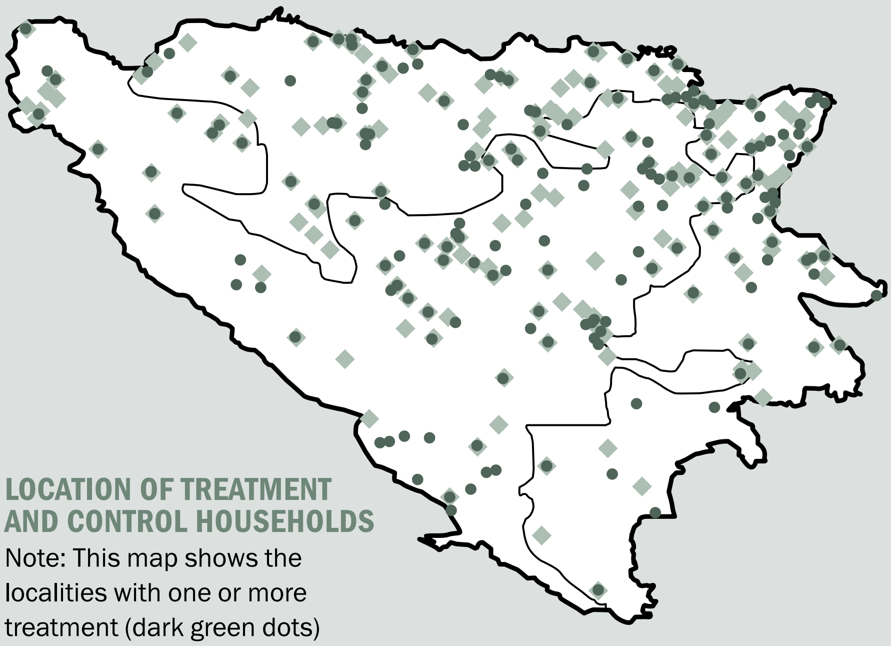
*For more details see Britta Augsburg, Ralph De Haas, Heike Harmgart and Costas Meghir (2012), "Microfinance at the margin: evidence from a randomised field experiment in Bosnia and Herzegovina", EBRD Working Paper No. 146, EBRD, London.

Successful applicants received a loan within a week.[1] In contrast, applicants who were allocated to the control group did not receive a loan from EKI for the duration of the study. Fourteen months after the baseline survey, all participants – both those who received a loan and those who did not – were approached to be re-interviewed. The interview lasted up to 60 minutes and was, as at baseline, conducted by a professional survey company using computer-assisted telephone interviews.

In all, this strategy allowed the research team to compare how the treatment and control households (see map) developed over time and to clearly establish the causal impact of access to the credit on various entrepreneurship and poverty measures among this group of people who had limited access to formal financial services and who had so far been excluded by one of the main microfinance institutions in the country.

[1] The average loan amounted to about US$ 1,000 and had a maturity of just over a year.

For more information visit:
www.eki.ba
www.ebrd.com/pages/research/economics



LOCATION OF TREATMENT AND CONTROL HOUSEHOLDS

Note: This map shows the localities with one or more treatment (dark green dots) or control (light green diamonds) households.

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AT A GLANCE

8

the percentage point difference in female entrepreneurship between the treatment and control groups due to borrowing

1,198

potential marginal loan applicants were gradually identified and subsequently interviewed as part of a detailed baseline survey

3x

non-repayment among marginal clients was three times higher than regular, first-time clients

14 months

length of the observation period

Main findings

First, the study showed that access to credit caused increased levels of business activity and more self-employment. Credit availability (partially) relaxed the liquidity constraints of the treatment group and had a positive impact on business creation and business survival. About 14 months after the start of the programme, marginal borrowers were 6 per cent more likely to own an enterprise compared with the control group. Borrowers with higher education levels mainly started businesses in the services sector whereas the less educated established small-scale agricultural activities. Indeed, investing in livestock, combined with buying seed, fodder and other agricultural items, was one of the most common uses of the small loans. However, business creation did not translate into increased profits or higher household income, at least not in the 14 months of the observation period.

Second, those borrowing households that already had a business and those that were highly educated ran down their savings (compared with the control group) while less-educated households reduced their consumption expenditures. These findings are consistent with investments being large and indivisible so that households needed to crowd in additional resources to make up the difference and to implement investments that would have been unattainable without the loan.

A third finding of the study is that households of marginal clients with low education levels reduced the school attendance of their teenagers (aged 16-19) and let them work more in the household's business instead. On average these children worked 35 hours a week more in this business compared with the control group and, not surprisingly given the substantial increase in working hours, were 19 per cent less likely to attend school. This was an unanticipated finding as previous focus group research among regular EKI clients had shown that many of these normal clients use (part of) their loans to support their children's education.

Such unintended effects of access to microcredit for this specific borrower group need to be interpreted carefully. On the one hand, these young adults may be prevented (say, through funding restrictions) from attending school by their families who feel internal labour is cheaper and who may not fully take into account the benefits of education that will accrue to the youth. On the other hand, if returns to education are perceived to be low, the new home business may provide an opportunity, and working there may be a more efficient way of allocating time. The research team and EKI are planning additional research to further investigate this issue.

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1: An EKI client tends tomatoes
2: Small businesses line the streets in Sarajevo
3: EKI supports many people in running their own enterprises
4: The interview team at work

Overall, the study's findings paint a mixed picture of the impact of microcredit on this new and more risky borrower group. On the one hand, households did use the loans to start up new businesses, to keep existing ones afloat during the 2008-09 crisis or to expand them. Where necessary they even cut back on consumption and used their savings to make sufficiently large investments. On the other hand, these entrepreneurial activities did not have a positive impact on income. Even for households that already had an enterprise at the time of the baseline survey, and for whom an increase in consumption would have been most likely, the research team did not find such a positive impact.

Lastly, the data show that the new marginal client group was significantly riskier than first-time regular clients. In particular, late payment was 1.5 times higher among marginal clients than regular first-time clients while non-repayment was even three times higher. On the positive side, this also shows that EKI's loan officers had been very effectively using information on applicants' characteristics to distinguish between regular clients – to whom they granted loans – and marginal clients, who were screened out.

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Borrowers with higher education levels mainly started businesses in the services sector

1: People enjoying one of Sarajevo's buzzing cafes

1

What is the role of the *borrowers' gender?*

About 40 per cent of the marginal clients were female. When one disaggregates the impacts of access to loans by gender, an interesting pattern is uncovered. The effect on business creation and the likelihood of being self-employed seems to be mainly driven by female clients, who as a result of access to credit are 8 per cent more likely to be self-employed and to own a business compared with the control group. These women are also 7 per cent more likely to own business inventory.

In contrast, the other effects appear to be mainly driven by male borrowers. It is male marginal clients who decrease household savings and cut back consumption. Moreover, it is also male marginal clients in whose households young adults work more in the business and are less likely to attend school.

A possible explanation for this pattern that was proposed by EKI's loan officers is that access to credit allowed men to expand and scale-up pre-existing businesses, whereas women created new businesses. If these new female-operated businesses were very small there was no need to supplement the loan with existing savings, to reduce consumption or to take young adults out of school. In contrast, male borrowers that expanded existing businesses may have only been able to do so by crowding in resources from savings and by reducing consumption.

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1, 2 and 3:
Once given access to credit, male EKI clients tended to expand their businesses whereas women created new ones

Lessons learned

There are various possible reasons why there is not yet any evidence of a positive impact of microcredit on enterprise profits, household income or consumption for these marginal borrowers, notwithstanding an increase in entrepreneurial activity. One reason is that the period between the baseline and follow-up surveys – about 14 months – may have been too short to allow households to fully implement investments and increase firm profitability. Households that cut back consumption when they received a loan will have done so in the expectation that their investment would lead to higher future consumption. While profitability may thus still increase over time, one should also keep in mind that the businesses were mainly in the services and agricultural sectors and quite straightforward in nature. After loan disbursal, borrowers should in most cases have been able to implement investments and reap their pay-offs quite quickly.

1 and 2: EKI helps clients set up or expand their agricultural businesses

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Another explanation is that access to finance may not be the only binding constraint on successful entrepreneurial activity. An interesting area for future research is therefore to uncover whether combinations of credit and business training can help people to improve existing businesses and start new profitable enterprises. In addition, ways could be explored to alleviate liquidity constraints for these relatively poor households while ensuring that children complete high school. An interesting policy to consider is a two-tiered one: a condition cash transfer (CCT) component and an additional micro-loan to offer greater scope for expanding businesses.

Lastly, this study has shown that even without a formal credit-scoring system a microfinance institution with experienced loan officers can be well placed to adequately distinguish between good clients and slightly riskier ones. Many microfinance institutions have often been criticised for being too conservative and for focusing too much on very low levels of non-performing loans. This study shows that when an established microfinance institution – within a limited, experimental setting – decides to slightly broaden its client base, non-performing loans may quickly increase, at least when no other policies (such as client training) are put in place.

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