IDB Invest

DEBrief

Development Effectiveness and Strategy Briefs N°25 / March 2023

Boosting Business Growth while Leveling the Credit Playing Field for Women MSMEs in Mexico

- High interest rates, onerous requirements, and complex application procedures prevent many MSMEs in Mexico from accessing credit, limiting their growth potential.
- The financing gap is larger for women-owned MSMEs due to prevailing gender biases in lending; they are rejected more often than their male peers and when they do access credit, the terms are typically harsher.
- The Mexican fintech firm Konfio is effectively eliminating gender bias by using fair algorithms to make lending decisions based solely on applicants' credit risk.
- IDB Invest, together with Konfio, conducted a study to measure the impact that a loan from Konfio has on MSME sales.
- The results show that two years after receiving a loan, the sales growth of Konfio clients was 19.4% higher than similar firms that were rejected for financing. Among women-owned firms, the difference was even higher at 41.9%.
- The big gap in sales among women is likely less due to Konfio's female clients performing better, and more due to the other women performing much worse given prevalent credit market constraints in Mexico.

5 GENDER EQUALITY

SUSTAINABLE DEVELOPMENT GOALS

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

DEEPER MSME FINANCING GAP FOR WOMEN

Limited access to credit for micro, small and medium-sized enterprises (MSMEs) hinders economic growth across Latin America and the Caribbean. In Mexico, the financing gap for formal MSMEs is estimated at US$163.9 billion, more than six times the supply of credit for this segment.[1] Without access to credit, businesses must rely on retained earnings to reinvest in their operations, limiting their growth potential; this is the case for 47.5% of Mexican MSMEs.[2] In 2021, the main barriers to accessing credit reported by Mexican MSMEs were high interest rates (62.5%), onerous requirements (40%), and the number and complexity of application procedures (34.2%).

In addition, a larger share of female-owned/led MSMEs in Mexico are fully or partially credit-constrained compared to their male counterparts—34.8% versus 27.9%.[3] Even though 36.6% of MSMEs are owned by women, only 13% received credit in 2020, compared to 23.9% for MSMEs overall.[4]

Globally, evidence shows that women-owned/led MSMEs face worse loan terms than their male counterparts. For example, a study in Italy found that although women borrowers are not riskier than men, they pay more for commercial credit.[5] Similarly, European evidence shows that after controlling by firm characteristics and financial indicators, women-led SMEs face higher interest rates, fees, and commissions than men.[6] A field experiment in Turkey found that loan officers are 26% more likely to require a guarantor for women entrepreneur loan applicants than for men.[7] Women microentrepreneurs in Brazil also receive smaller loans than men with similar characteristics.[8] In all of these cases, at least some of the loan terms were set at the discretion of credit officers, leading to women facing harsher credit conditions than men.

THE CASE OF KONFIO: EQUITABLE CREDIT FOR MEN AND WOMEN

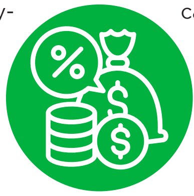
Credit providers that offer similar conditions for firms regardless of the owner's gender are likely to disproportionately benefit women. By reducing the cost of borrowing (via larger amounts, lower interest

rates, longer tenors, and lower collateral requirements), credit providers can level the playing field for women, helping their businesses catch up to those owned by men.

One way to reduce gender bias in lending is to minimize the discretion that credit officers have when setting loan terms. For instance, the Mexican fintech firm, Konfio, uses an online, automated, paperless process to assess MSMEs using data from the Mexican tax agency, the credit bureau, and other non-traditional sources. Their algorithm processes the information in seconds and recommends the loan amount, interest rate, and tenor that should be offered based on the risk level of the business.

1. IFC. SME Finance Forum. Data retrieved on December 22, 2022.
2. Instituto Nacional de Estadística y Geografía (INEGI). Encuesta Nacional de Financiamiento de las Empresas (ENAFIN) 2021.
3. IFC. SME Finance Forum. Data retrieved on December 22, 2022. Fully credit-constrained firms are those that applied for a loan and were rejected, or were discouraged from applying because of unfavorable credit conditions or because they thought their application would be rejected. Partially credit-constrained firms are those that have external financing (but not from a financial institution) or that applied for a loan that was partially approved or rejected.
4. INEGI (2020).
5. Alesina, A.F., F. Lotti and P.E. Mistrulli. 2013. Do Women Pay More for Credit? Evidence from Italy. Journal of the European Economic Association 11(s1), 45-66.
6. Mascia, D., and S. Rossi. 2017. Is There a Gender Effect on the Cost of Bank Financing? Journal of Financial Stability, 31: 136–153.
7. Brock, JM., and R. De Haas. 2022. Discriminatory Lending: Evidence from Bankers in the Lab. American Economic Journal: Applied Economics, forthcoming.
8. Agier, I., and A. Szafarz. 2013. Microfinance and Gender: Is There a Glass Ceiling on Loan Size? World Development, 42: 165–181.

About 28.7% of Konfio's loan applicants are women-owned firms. However, slightly more women get approved for loans than men (20.1% vs. 19.3%). They are also more likely to accept the loan offer, implying that proportionally, more women-owned firms get loans from Konfio than their male peers (11.6% vs. 11.0% of applicants).[9] While this 0.6 percentage point difference is small, it is also rare. Similar analyses from other countries show that women are often rejected for loans in larger proportions than men.



In addition to being fair, Konfio is agile. It processes applications 24/7, 365 days a year. Borrowers can apply, get approved, and receive funds on the same day, while traditional banks can take up to 25 days to disburse funds. Similarly, Konfio works with new businesses that have been reporting sales to the tax authority for only three months, while traditional banks require track records of at least three years.

HOW DOES GETTING A LOAN AFFECT MSME SALES?

IDB Invest conducted a study to estimate the effect that a loan from Konfio has on MSME sales over time. We used anonymized data from applications processed between January 2018 and December 2020, and followed these businesses for 24 months (until June 2021). This includes data about the type of legal entity of the applicant (individual or firm), business age and size in terms of sales, sector of economic activity, and location, as well as data generated from the credit assessment.

As part of the study, Konfio extracted firm sales data from the tax agency for the month of the loan application and every three months thereafter for two years.[10] In addition, it extracted past sales data for firms six, three, two, and one month before the loan application. We restricted the sample to firms that received only one loan (90.2% of the cases), or that received multiple loans approved at least six months apart.

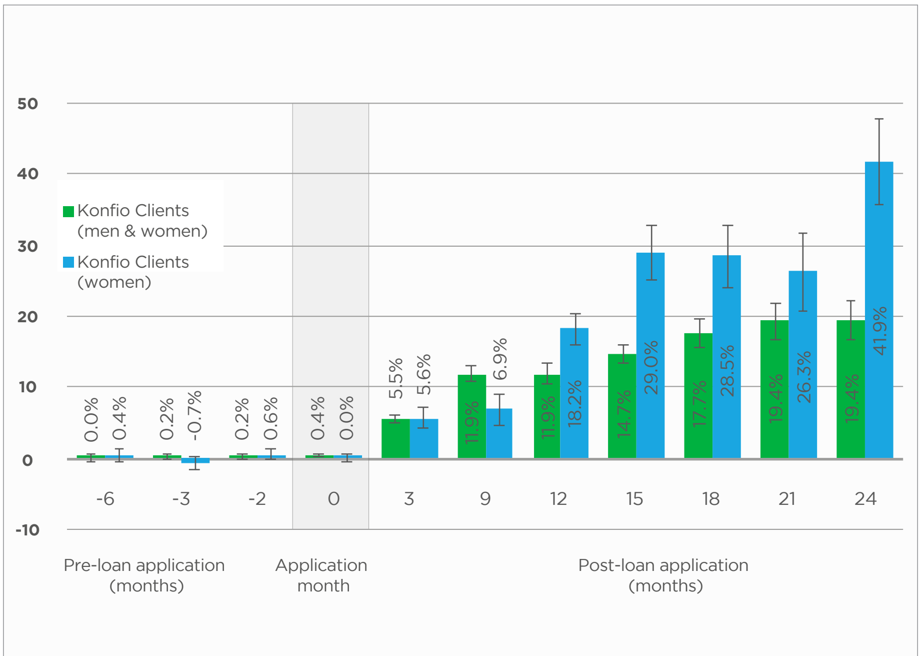
Given the data available to estimate the impact of these loans on MSME sales (staggered cohorts of businesses across multiple periods), our analysis uses the latest methods to guarantee the robustness of the results and ensure that all firms included in the sample behaved similarly before applying for the loan (e.g., in terms of sales levels), whether or not they were accepted or rejected.[11] We limited the comparison to businesses that applied in the same month (and were either rejected or approved) to capture their willingness to take out a loan at that time.

We estimate the difference in sales growth between businesses that accepted a credit offer from Konfio, and those that were rejected by the algorithm. The reference point in both cases is the business's sales the month before the application. Businesses that were rejected by Konfio could have gotten a loan from a different bank, but we have no way of knowing.

KONFIO LOANS BOOST BUSINESS GROWTH, ESPECIALLY FOR WOMEN

Our results show that firms accessing credit from Konfio steadily grew their sales from the moment they received the funds. Two years post-application, the sales growth for Konfio clients was 19.4% higher than firms that were rejected for a loan, and their average sales growth rate was 10.6% higher over the same period (Figure 1).

Figure 1: Sales Growth Difference, Before and After a Loan from Konfio vs. Similar Businesses that Were Rejected



Note: Bars represent the 90% confidence interval of the point estimates.

9. These statistics are derived using data from users who completed the loan application only once in a particular month and for which Konfio reached a decision (accept or reject).
10. The effect at six months post-application was estimated but not included in the results due to an error in the extraction process for this data point.
11. Based on Callaway, Brantly & Sant'Anna, Pedro. 2021. [Difference-in-Difference with multiple time periods.] Journal of Econometrics. 225(2). 200-230.

The results are even more impressive among female clients: their sales growth was 41.9% higher at the two-year mark versus similar women-owned businesses whose loan applications were rejected, and their average growth rate was 15.2% higher over the same period.

What explains the large sales growth difference among women with otherwise similar businesses? Going back to the evidence mentioned above, it is typically more difficult for women-owned businesses to access credit, and when they do, the terms are often worse than those offered to their male counterparts. This is likely what happened to the women who were rejected for financing by Konfio. In turn, these constraints—no credit or costly credit—affected the growth of these women's businesses. Meanwhile, more of the men who were rejected by Konfio were likely able to access financing elsewhere, and therefore experienced better sales growth in comparison.

In short, the large difference in sales growth among women is likely less due to Konfio's female clients performing better, and more due to the other women performing much worse due to prevailing credit market constraints in Mexico.

Finally, our findings confirm that Konfio provides similar credit offers to both female and male clients based on their creditworthiness. After controlling by business and owner characteristics, we find no statistically significant difference between the amount approved and the interest rate charged for loans to female and male clients. Moreover, both female and male clients exhibit similar repayment behaviors, signaling that the terms offered are indeed based on their creditworthiness.

EQUALITY IS GOOD BUSINESS

Gender bias, unconscious or not, is prevalent in lending. Konfio's experience shows that this bias can be effectively eliminated through fair algorithms that make lending decisions based only on credit risk. By offering business owners with similar risk profiles equitable credit terms regardless of sex, women can realize the growth potential of their businesses without sacrificing returns for banks, representing a win-win for financial equity in the region. ■

Additional Information

Author: Irani Arráiz
Editor: Norah Sullivan
For more information, contact:
iarraiz@iadb.org

This brief summarizes the findings of a study conducted by IDB Invest to measure the impact of credit from Konfio on the sales growth of Mexican MSMEs.

Photography: Konfio
Design: Mario Segovia Guzmán