# RESEARCH INSIGHTS

## Do Bank Officers Favor Male over Female Loan Applicants?

- A randomized study in Chile found that otherwise equivalent loan requests from women are 18.3 percent less likely to be approved than those from men, largely due to gender-biased officers, particularly males.
- Median forgone profits associated with applications rejected due to gender discrimination amount to US$1,785 or 23 percent of the median loan size.
- Considering only discriminated applications from applicants aged 25 to 35 years for amounts between US$1,500 and US$13,500, the forgone profits at the industry level amount to US$5.8 million per year, which is equivalent to 4 percent of the annual labor cost for all loan officers in the Chilean banking system.

## CONTEXT

Compared to female borrowers, men are more likely to get access to consumer loans and pay lower interest rates. Uncovering gender discrimination and its mechanisms is critical for an appropriate welfare analysis of the consumer credit market. It is also important to determine whether discrimination is statistical or taste-based. The former involves actual or perceived qualities of female borrowers, while the latter involves bias unrelated to borrowers' objectively observed characteristics. Moreover, just as it is important to distinguish between taste-based and statistical discrimination, it is equally important to separate inaccurate from accurate statistical discrimination.

## THE PROJECT

A baseline survey of loan officers in Chile was conducted through a collaborative agreement with the Superintendency of Banks and Financial Institutions (SBIF), and a sample was recruited of potential borrowers ("testers"). Male and female profiles were matched on demographics, incomes, employment status, and credit history. Testers were then asked to email four randomly assigned loan requests varying in amount and term to four randomly assigned loan officers drawn from the survey's roster. The testers were trained to interact in a systematic way with loan officers and forward all tester-officer interactions to the research team.

**Key Concept**

### TASTE-BASED DISCRIMINATION

Occurs when decisions are made on the basis of prejudices and dislikes rather than observable objective criteria.

**Key Concept**

### STATISTICAL DISCRIMINATION

Occurs when decisions are made according to actual or perceived differences among different groups of people.

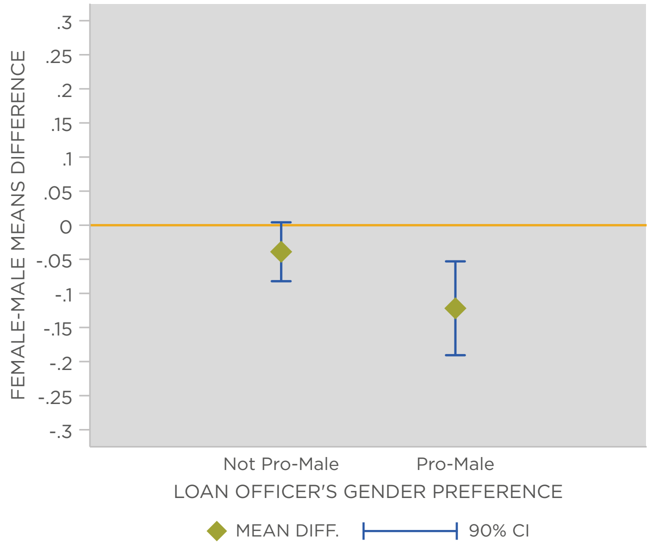
## RESULTS

Almost 90 percent of submitted loan requests received responses from loan officers, and roughly 35 percent were approved. The approval rate for female applicants' loan requests was 18.3 percent lower than for male applicants who submitted identical loan requests. The effect is sizable, equivalent to the difference in approval rates between borrowers in the fourth and seventh deciles of the income distribution.

A potential mechanism driving gender discrimination is animus against women or taste-based discrimination. Experimental tests aimed at eliciting gender preferences showed that gender-neutral or pro-female officers did not discriminate in favor of or against female borrowers. However, pro-male officers approved female applicants 54 percent less than men, suggesting that gender discrimination against female borrowers was due to taste. Closer analysis revealed that male loan officers who were pro-male accounted for the bulk of this effect. This is in line with evidence from the literature that indicates women are more likely to experience discrimination in male-female relationships than in female-female ones. There was substantial variability of male-female differences in both response and approval rates across banks. Banks with a larger share of male officers were associated with larger levels of discrimination against women.

Interestingly, official statistics show that women repay their loans at higher rates than men, suggesting that loan officers may hold inaccurate beliefs on their repayment performance. A gender salience experiment aimed to correct these beliefs. Half of the sample of loan officers randomly received a message informing them that female borrowers have higher repayment rates than men. The message also acknowledged the potential costs associated with gender discrimination in the consumer credit market. Surprisingly, loan officers who received the message did not discriminate less against female borrowers in terms of response and approval rates. Pro-male officers who received the treatment message even increased gender discrimination compared to their counterparts in the control group—a result that reinforces the taste-based mechanism.

### Figure 1: Female-Male Means Difference on Loan Approval Rate, by Loan Officer's Gender Preference




*Standard errors clustered at the region-bank level.

In line with other findings in the literature, pro-male officers may have reacted negatively to the treatment message due to their self-serving views about discrimination, potentially due to overconfidence bias.

Finally, the study examined the relationship between credit market structure and gender discrimination. Becker's model predicts that as new entrants in the lending market take advantage of the opportunity to cash in on profits, the relative cost of discriminating against female applicants increases and biased lenders are competed away. Upon comparing experimental data against the number of local bank offices in each municipality, female-male differences in approval rates tended to be larger in municipalities with higher levels of market concentration. This was only the case for loan requests submitted to pro-male loan officers, who were previously shown to be biased against female borrowers. This result is consistent with Becker's theory of discrimination and suggests that taste-based attitudes against women are likely to be responsible for the negative effects of market competition as they are no longer profitable.

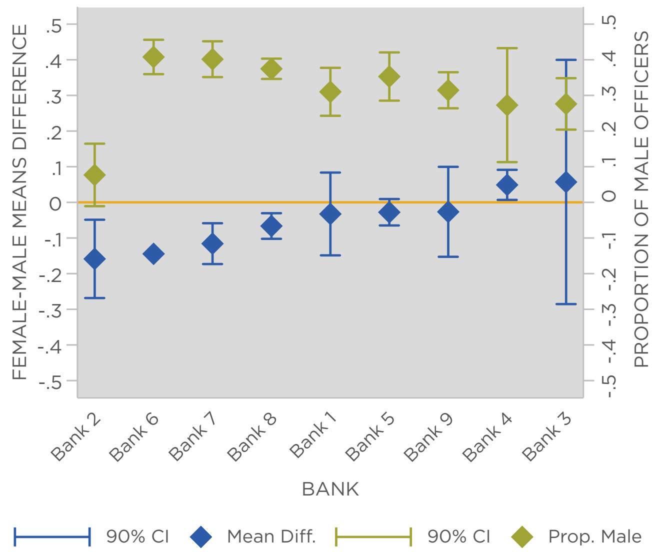
## POLICY IMPLICATIONS

Taste-based discrimination harms bank profitability, and the loss is not trivial. Median forgone profits associated with applications rejected due to gender discrimination amount to US$1,785 or 23 percent of the median loan size (US$7,500). Considering only discriminated applications from applicants aged 25-35 for amounts between US$1,500 and US$13,500, the forgone profits at the industry level amount to US$5.8 million per year, which is equivalent to 4 percent of the annual labor cost for all loan officers in the Chilean banking system.

While economic development appears to reduce gender inequality over time, growth alone cannot be expected to resolve this problem in the short term. Several approaches may help close the gender gap in accessing consumer loans. As discrimination appears to be driven by male loan officers with a pro-male bias, screening the attitudes and preferences of male job applicants may provide a cost-effective strategy. Alternatively, automating the evaluation process through algorithms that limit the influence of loan officers on the final decision might also prove beneficial, although this could reduce loyalty among clients who prefer a more personal relationship with loan officers. Niche banks that specialize in consumer loans and target female borrowers could also prove helpful, but run the risk of creating market segregation.

Reducing gender discrimination without market segmentation is most likely to be achieved by increasing competition across banks. Regulatory policies reducing barriers to entry for new banks—and increase competition—are likely to contribute to reducing gender discrimination in consumer credit markets.

### Figure 2: Female-Male Mean Difference on Loan Approval Rate and Proportion of Male Officers, by Bank




### FULL STUDY

Montoya, A. M., E. Parrado, A. Solís, and R. Undurraga. 2020. *"Bad Taste: Gender Discrimination in the Consumer Credit Market."*

### DEPARTMENT OF RESEARCH AND CHIEF ECONOMIST

The Department of Research and Chief Economist generates new ideas to enrich the knowledge base that supports the policy agenda of the Inter-American Development Bank (IDB) and its member countries for achieving sustainable and equitable development in the region. To maximize the impact of its research, the Research Department carries out activities that serve as inputs to other IDB departments, governments, the academic community and public opinion in the region.

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