

The Effects of Gendered Occupational Roles on Men's and Women's Workplace Authority:
Evidence from Microfinance

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ABSTRACT

Research in sociology and social psychology has documented how the gendering of occupational roles can affect a variety of outcomes for workers and organizations. Although laboratory experiments offer insights into the processes by which occupational roles become gendered and lead to systematically gendered outcomes, there is a relative dearth of evidence from field settings. Such field-based evidence is scarce because existing occupations are rarely gender balanced and workers' tasks often change with new occupants. In the present paper, we fill this gap by utilizing unique data from a commercial microfinance bank in Central America. We examine how the occupational role of a loan manager becomes gendered, and how such initial gendering affects the authority of subsequent role occupants. Our findings both confirm and extend existing research. On average, male loan managers are more likely to obtain borrower compliance (i.e. on-time loan payments) than female managers. However, the gender of the initial manager continues to shape clients' compliance even when clients are transferred to a second manager. Overall, this paper offers a unique empirical test of existing theories and demonstrates how a single individual can inscribe gendered expectations onto an occupational role, thereby generating divergent outcomes for male and female managers.

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Since Kanter's (1977) seminal work on differences in organizational life for men and women, sociologists have considered how the gendered nature of work breeds social inequalities. In one of the field's most important developments, researchers have documented how the gendering of an occupational role, and not simply the gender of the individual who occupies that role, can affect a variety of outcomes. For instance, scholars have shown that labeling a job as masculine or feminine shapes applicant pools, hiring decisions, pay rates, and performance evaluations (England 2010; Jacobs 1989; Reskin and Roos 1990; Ridgeway 2011; Rudman and Glick 2008). Thus, the simple cognitive tendency to classify occupational roles as suited for either men or women has pervasive consequences for gendered labor force outcomes.

Given ample evidence that gendered job labeling influences patterns of both stability and change in occupational sex segregation (England 2010; Reskin and Roos 1990), a key challenge for scholars interested in the persistence of inequality is identifying the process by which an occupation that is new or has a fairly gender-balanced composition becomes gender-labeled over time. Drawing on a large body of experimental and observational evidence, Ridgeway (1997, 2011) has posited that this process likely occurs via social interactions that require individuals to "sex categorize" one another. Specifically, she argues that, once individuals categorize a worker as either male or female and organize their interactions on that basis, gender stereotypes are likely to become infused into occupational roles and responsibilities, thereby affecting the way the job is done, understood, and represented to others. Because the work is implicitly nested within an individual incumbent's identity as a man or a woman, those activities become "tinged" (Ridgeway 1997:226) with gender, effectively leading individuals to construct jobs and justify job-related activities that originally seemed gender irrelevant in gender-stereotypic terms. Importantly, once gendered, occupational roles have pervasive effects on the degree to which

individuals may be viewed as competent, status-worthy, and legitimate sources of authority (Eagly, Karau, and Makhijani 1995; Ridgeway 2001).

Ridgeway's account is supported by a wealth of social psychological research documenting how sex categorization and the gender labeling of jobs affect expectations and behaviors. However, scholars have yet to demonstrate in a field setting that interacting with a single (gendered) individual in an otherwise gender-balanced occupational role is sufficient to inject that role with gendered beliefs and expectations. This relative dearth of evidence from natural settings likely stems from two factors. First, few occupations are truly "gender balanced" in that they consist of approximately equal proportions of men and women and are not dominantly associated with either gender. Second, the nature of occupational tasks can change over time and with new occupants. Such complicating factors make it difficult to isolate the effect of an individual role incumbent's gender on the subsequent "gendering" of that role.

The objective of our study is to fill this gap by offering an empirical test of occupational gendering in a natural setting. In particular, we evaluate and provide external validity for a social psychological theory of how occupations and jobs become gendered, a theory that is consistent with much observational data, but that has been, to a large degree, formally developed and evaluated in laboratory settings. Utilizing unique data from a commercial microfinance bank in Latin America, we examine how a relatively gender-balanced occupational role—a loan manager—becomes linked to gendered behavioral outcomes, and how such gendering affects future managers who fill the position. An important feature of our research setting is that individuals who fill this position are rotated via a quasi-random process. This process allows us to isolate the effects of gender and cleanly measure how the gender of the initial role occupant shapes subsequent outcomes.

Our results offer support for many of our theoretical predictions, in particular as they relate to the gendered authority of occupational roles. First, we provide evidence that a single individual can effectively gender an occupational role. That is, the gender of the individual who first fills an otherwise gender-balanced role has lasting effects on subordinates' compliance to future managers. Specifically, we find that when a woman initially fills the gender-balanced role, borrowers are less compliant with subsequent managers than when a man initially fills the role. Second, we find that male loan managers experience more compliance than their female counterparts when they inherit a borrower who has previously dealt with a male manager, but less compliance than their female counterparts when they inherit a borrower who has previously dealt with a female manager. This finding supports the expectation that men are advantaged when they occupy male-typed roles, whereas women may be advantaged when they occupy female-typed roles (Eagly et al. 1995; Ridgeway 2011).

Beyond validating existing theory, our study highlights an important implication of occupational gendering: its effects on men. While female managers' advantages and disadvantages effectively cancel out within-gender differences in compliance, male managers' differential outcomes are more acute. Ultimately, male managers experience highly divergent compliance outcomes depending on the initial gendering of the occupational role. Thus, in contrast to most studies, which highlight the disadvantages that gender stereotypes create for women in the workplace, our study reveals one process through which stereotypical gender beliefs generate powerful advantages *and* disadvantages for men.

GENDER STATUS BELIEFS, WORKPLACE AUTHORITY, AND GENDERED ROLES

A large and growing body of literature suggests that gender status beliefs—beliefs that are widely shared by both men and women about the way men and women are or should be—can systematically affect women’s ability to effectively exert influence and authority in the workplace (Heilman 2001; Ridgeway 2011). First, men are often believed to be more generally competent, agentic, and status-worthy than their female counterparts (Fiske et al. 2002; Koenig and Eagly 2014; Lueptow, Garovich-Szabo, and Lueptow 2001; Ridgeway and Correll 2004; Spence and Buckner 2000; Wagner and Berger 1997). For instance, among a diverse sample of respondents in the US, men were rated higher than women on a scale that included perceptions of competence, intelligence, confidence, competitiveness, and independence (Fiske et al. 2002). Second, people tend to believe that men ought to possess traits associated with social dominance. Indeed, traits like aggressiveness, forcefulness, and “leadership ability” are seen as particularly desirable in men, whereas these traits are not seen as highly desirable in women. In fact, certain traits associated with dominance (e.g. arrogance, controlling behavior) are seen as particularly undesirable in women (Prentice and Carranza 2002).

Importantly, evidence suggests that these widely shared cultural beliefs become readily available to inform behaviors and expectations in workplace settings as soon as individuals cognitively “sex categorize” one another as either a man or a woman (Fiske and Neuberg 1990; Ridgeway and Correll 2004). In turn, these beliefs inform individuals’ behaviors and expectations in ways that limit women’s influence over others, not simply because they bias expectations of ability, and thus the perceived quality of an individuals’ performance or contributions (Foschi 2008), but also because they undermine the extent to which women are seen as legitimate sources of authority (Berger and Zelditch 1998; Ridgeway and Berger 1986;

Ridgeway and Bourg 2004). In other words, when women direct others, they violate the hierarchical element of gender stereotypes that attaches greater general status-worthiness to men than to women. Consistent with this argument, a recent study finds that women in positions of supervisory authority are often disliked and derogated by others because they violate the proscriptive belief that women ought not to exert dominance over others (Rudman et al. 2012).

While most research on gender stereotypes and authority comes from the United States, gender status beliefs have been shown to be similar in Latin America. Although Latin America—like the United States—is culturally diverse, researchers have consistently found that individuals across Latin America tend to view men as more competent and deserving of authority than women (Campos and Salas 2002; Tarrés 1998; Vilas 1998). In Latin American countries, men tend to occupy higher-earning positions in the workforce and command greater power and authority at home (Hoffman and Centeno 2003). Indeed, some scholars have linked women’s relatively lower status and authority to their higher incidences of poverty in Latin America (Tepichin Valle 2013). More broadly, scholars have also shown that gender-status dynamics are consistent across cultures (Glick et al. 2000, 2004; Williams and Best 1990), demonstrating that individuals tend to view men as more competent and deserving of authority.

Overall, research suggests that gender status beliefs typically lead individuals to view female managers as less legitimate sources of authority, and therefore, to be less likely to comply with women’s directives. However, there is also ample evidence that such outcomes are contingent on the extent to which the broader context or role is “gendered” (i.e. disproportionately dominated by or associated with either men or women). For example, in a meta-analysis of studies of leader effectiveness, Eagly, Karau and Makhijani (1995) found that men were considerably more likely to be viewed as effective leaders than women in contexts

where the role was defined in more masculine terms and where it was more male-dominated numerically, such as in the military. In contexts where the leadership role was viewed as congenial with feminine-typed traits and abilities and/or was female-dominated, such as education, government, and social service, women were more likely than men to be viewed as effective leaders. Notably, these relatively more feminine-typed leadership roles tended to be positions like “group facilitator,” which carry only a modest degree of directive authority.

These findings converge with those of laboratory studies demonstrating that men’s greater ability to wield influence over others is stronger in masculine-coded task settings than it is in feminine-coded task settings (Rudman and Glick 2008; Wagner and Berger 1997). Thus, the gendering of an occupational role or domain has direct implications for the extent to which others view women and men as legitimate sources of authority: men are likely to be strongly advantaged in male-typed domains and moderately advantaged in gender-balanced domains, whereas women may be moderately advantaged in female-typed domains.

But how does a relatively new or gender-balanced task domain become gendered enough to produce these divergent outcomes in the first place? As noted above, gender status beliefs become attached to a particular social context at the moment that an individual sex categorizes another person. In settings where there is ambiguity around how to coordinate behavior—such as in new or relatively gender-balanced task domains—individuals are likely to draw on the cultural schemas they already associate with men and women. As Ridgeway has argued, over time, these beliefs can become inscribed into occupational tasks and roles, effectively linking gender stereotypes to a given job or occupation, which then lead to a range of unequal outcomes (Ridgeway 1997, 2011). For instance, in addition to affecting a woman’s ability to be viewed as a legitimate source of authority, experiments have shown that simply labeling a job as feminine

causes individuals to perceive that job as requiring less ability and effort and being worth less compensation (Major and Forcey 1985; McArthur and Obrant 1986). This is consistent with evidence that the gender composition of a job and its association with stereotypically feminine tasks has an independently negative effect on wages (Baron and Newman 1990; England 1992; Kilbourne et al. 1994).

A key implication of this argument is that occupations and roles that start off as relatively gender balanced may become more gendered over time and thus produce more gender-unequal outcomes to the degree that individuals consistently interact with either a male or a female individual in that role. That is, the gender of initial, individual role incumbents may inscribe a certain set of gendered expectations onto an occupational role, which then influences how subsequent role occupants are perceived and evaluated. This initial linkage between the gender of an individual and the gender of a role may also create self-fulfilling effects over time. For instance, decision makers in organizations may then imagine a (gendered) applicant to fill a role, perceive the nature of the tasks as either male or female, and make salary and hiring decisions based on the perceived gender of the role.

Demonstrating how gender-balanced roles become gendered has proved challenging in field settings. This difficulty stems from two factors 1) the majority of task domains (e.g. occupations) are already either female or male dominated, and 2) job roles and responsibilities often change over time, thus making it difficult to isolate the effect of the gender of an individual role incumbent. As we discuss in the next section, we utilize a unique dataset to evaluate whether an individual role occupant can effectively “gender” an otherwise fairly gender-balanced role, such that it produces lasting implications for the perceived legitimacy of the next person who occupies that role. Specifically, we ask: How does the gender of an initial managerial role

incumbent affect subordinates' probability of complying with the directives of future occupants of that managerial role?

EMPIRICAL PREDICTIONS

Our study addresses this question in a novel field setting: commercial microfinance in Central America.¹ Here, we outline two key features of the setting that make it uniquely well suited to examine the effects of gendered occupational roles. (See below for a more detailed description of the research setting). First, the loan manager occupation is fairly gender balanced. There is approximate gender parity among loan managers at our focal organization: 52% of managers at “MicroBank” (a pseudonym) are women. Moreover, the loan manager role is fairly gender-ambiguous in that it is not predominantly associated with stereotypically masculine or feminine activities, traits, or characteristics. For instance, MicroBank is a financial institution, which suggests that it could be perceived as male-typed. However, it is also a *microfinance* institution, and such organizations have a legacy of social service and assistance to the poor, which are stereotypically feminine activities. Although it is impossible for occupational roles in field settings to be freed from *any* gendered expectations, we believe that the loan manager position closely approximates a gender-balanced role and thus provides a ripe context for examining occupational gendering. Nevertheless, to further help ensure that borrowers' conceptions about the loan manager role have not been shaped by the gender of a previous manager, we restrict our analysis to those individuals who have no previous experience with microfinance.

Second, we are able to obtain a clear behavioral measure of the degree to which managers assert influence over borrowers: the probability that the borrower misses a payment, net of other

¹ The confidentiality agreement with the bank prohibits publishing its name or country location.

factors affecting repayment. Making a payment on time signals that the borrower views the manager as someone whose authority is legitimate and whose directives should be followed. In contrast, missing a payment signals that the borrower feels he or she can approach his or her responsibilities to the manager more laxly. When borrowers miss payments, it suggests the manager lacks the ability to secure behavioral compliance, and therefore lacks authority. The ability (or lack thereof) to secure behavioral compliance from a borrower also makes the manager-borrower relationship analogous to more traditional manager-subordinate relationships. For instance, because loan managers monitor borrowers' behavior and discipline them if they do not abide by the terms of their contracts, loan officers effectively "manage" borrowers, even though borrowers are not employees of the bank. Nevertheless, the degree of authority that a loan manager exercises over borrowers is more restricted than that of a traditional manager. Whereas a traditional manager typically issues directives over most or all aspects of subordinates' activities, a loan manager issues directives over only one aspect of borrowers' activities: loan repayment.

As discussed above, prior studies have found that, in gender-balanced contexts, gender status beliefs typically produce moderate advantages for men. Given widely shared beliefs about their greater levels of general competence and status-worthiness, men are more likely than women to be viewed as legitimate sources of authority. Therefore, we expect to find that women loan managers experience a general disadvantage:

Hypothesis 1: Borrowers paired with female loan managers will be more likely to miss monthly payments than those paired with male loan managers.

Next, to evaluate the possibility that individuals can effectively “gender” occupational roles, we investigate repayment behavior among borrowers who are arbitrarily assigned a new manager *after* they have developed a relationship with an initial loan manager. These new assignments are determined externally by branch managers and are discussed in detail below. We refer to managers who work with borrowers initially as “original managers” and those who inherit borrowers later as “subsequent managers.” Subsequent managers have no previous relationships with borrowers they inherit. As a result, borrowers may experience less personal commitment to or rapport with subsequent managers, and may view subsequent managers as less legitimate sources of authority than original managers. As such, borrowers should be more likely to miss payments with subsequent managers than original managers.

Nevertheless, we suspect that the relative tendency for borrowers to shirk payments to subsequent managers will be highly dependent on the gender of the initial manager. As discussed above, it is possible that a borrower’s experience with a single manager may effectively “gender” the occupational role, thereby influencing borrowers’ tendency to rely on gender status beliefs when interacting with a subsequent manager. In other words, we anticipate that a borrower’s initial experience with a (male or female) manager can effectively attach a “gender frame” (Ridgeway 2011) to that occupation. In turn, this frame will affect how the borrower organizes interactions with subsequent managers. In other words, the gender frame attached to a manager’s position should affect the degree to which his or her subordinates view him or her as a legitimate source of authority and thus comply with the manager’s directives. Empirically, this suggests that the gender of the original loan manager will continue to affect a borrower’s propensity to miss payments, even after the borrower has transferred to a new manager.

Hypothesis 2: Borrowers who were initially paired with a female loan manager will be more likely to miss monthly payments to their subsequent manager than will those who were initially paired with male loan managers, net of their subsequent manager's gender.

Finally, consistent with previous research detailing the relative size of authority advantages (or disadvantages) that men and women experience in gendered domains, it is possible that the disadvantage associated with an initial female loan manager may also differ depending on the gender of the subsequent manager. Specifically, men tend to have a larger advantage in domains that are male-dominated, and therefore associated with men, than in domains that are female-dominated. Furthermore, there is evidence that women may be moderately advantaged in female-dominated domains as long as the position is associated with a relatively modest degree of directive authority (Eagly, et al. 1995). As discussed above, loan managers have considerably less authority over their subordinates as compared to traditional managers. Therefore, we expect to find a significant interaction effect between the gender of the original manager and the gender of the subsequent manager, such that:

Hypothesis 3: Borrowers who were initially paired with a male loan manager will be more likely to miss payments to a female subsequent manager than to a male subsequent manager, whereas borrowers who were initially paired with a female loan manager will be less likely to miss monthly payments to a female subsequent manager than to a male subsequent manager.

RESEARCH SETTING

Manager Transfers at MicroBank

We evaluate our hypotheses in a microfinance setting that allows for unique observations of gendered occupational roles. Specifically, we rely on data about borrower transfers among loan managers to measure changes in borrower compliance when transferred between managers

of different genders. Importantly for our study, such transfers occur through a quasi-random redistribution process triggered by manager turnover.

The exit of one manager prompts a domino effect of borrower redistribution across the branch. This redistribution process unfolds as follows. Approximately 10% of managers exit the bank each year. When a manager exits, the branch administrator re-assigns the exiting manager's borrowers to one or more remaining managers. Managers also work in defined geographic zones. Branch administrators reassign the borrowers of exiting managers to managers who work in neighboring geographic zones. Yet administrators also work to ensure that managers are not burdened with unduly large caseloads. To achieve caseload balance, managers may transfer some borrowers from a receiving manager's portfolio to a third manager whose geographic zone borders that of the receiving manager, but not the exiting manager. In the words of one senior loan manager,

[When the branch administrator] divides up the old portfolio, [he or she] doesn't say, "Oh, these are good borrowers so I'm going give them to this loan manager." No. It's divided equally. They try to ensure that the portfolios are balanced.

The resulting distribution of managers and borrowers resembles a randomized distribution. As Table 1 demonstrates, borrowers paired with male and female managers do not differ significantly on key characteristics that might affect repayment. The similarity among borrowers paired with male and female managers offers evidence of the quasi-random nature of borrower reassignment, and further suggests that this setting provides a close proxy to experimental conditions.

Insert Table 1 about here.

Despite the consistency among borrower characteristics, male and female managers differ on measures of human capital. Female managers have significantly longer tenures and larger caseloads than male managers. Since differences in human capital may suggest the existence of other, unobservable differences between male and female managers, we present a supplemental analysis in which borrowers are matched on manager tenure and caseload size. The results are unchanged in significance and directionality in the matched analysis, which is presented in the Robustness Checks section.²

Borrower transfers are particularly useful for highlighting the effects of gendered occupational roles because managers' tasks and borrowers' responsibilities remain constant during transfers. When transfers take place, subsequent managers must execute the same set of tasks as the original managers. Similarly, borrowers have the same financial responsibilities to the bank when they work with original and subsequent managers. Thus, from the borrowers' perspective, transfers can catalyze a change in manager gender while all other aspects of managers' work and borrowers' obligations remain unchanged. This unique arrangement allows us to isolate the effects of gendered authority in occupational roles in a way that only laboratory experiments have achieved previously.

Original and subsequent managers are responsible for ensuring the borrowers in their portfolios make payments on time. They receive a commission based on the proportion of

² We also ran a supplemental analysis that excludes borrowers whose original managers exited the bank. Since we do not know if manager exits are voluntary or involuntary, borrowers paired with exiting managers may have uniquely positive or negative experiences that may affect repayment. To ensure these effects were not driving our results, we tested the hypotheses on those borrowers whose original managers did not exit. We found the results robust to this specification.

successful repayments in their portfolios, as well as the number of new borrowers they recruit each month. When a borrower misses a payment, the manager first calls the borrower to inquire about the missed payment and reminds the borrower of his or her responsibilities. If the borrower continues to miss payments, the manager takes more aggressive, engaged steps to encourage repayment, such as visiting the borrower at home, calling his or her co-signers, or sending a strongly-worded letter from MicroBank's legal department.

Data

We analyze MicroBank's proprietary, longitudinal database of lending history.³ The database is uniquely well suited to examine the hypotheses, as it allows us to establish repayment trends when the same borrowers are paired with original versus subsequent managers, and male versus female managers. The database contains borrower demographics and financial information about loans. Additionally, it provides a code identifying which loans were in managers' portfolios each month. The manager responsible for the loan in the first month of the borrower's repayment history is the "original" manager. If the loan is transferred, the manager who assumes responsibility is the "subsequent" manager. For ease of discussion, we refer to the period when borrowers work with original managers as "pre-transfer" and the period when borrowers work with subsequent managers as "post-transfer."

The MicroBank database contains 114,711 loan-month observations from 6,804 borrowers who started and completed loans between April 2009 and September 2012. We focus on complete loans to avoid censoring the data and observe borrowers' full repayment outcomes. To examine the effects of manager transfers on repayment, we turn to the 1,285 borrowers (with

³ These data were provided to the first author during an ethnographic study of MicroBank that spanned three years.

7,988 monthly observations) who experience transfers. Because we focus on this subset of borrowers, our interpretations are limited to those who undergo such transfers. Moreover, to ensure that borrowers have limited preconceptions of the loan manager occupation as male- or female-typed, we analyze only those borrowers who have no previous experience with microfinance institutions, including MicroBank.

ANALYSIS

We employ logistic regression to predict borrowers' odds of missed payments. In certain models, we include interaction effects for original and subsequent manager genders. Interaction effects for binary outcomes vary based on the specified values of the predictor variables (Ai and Norton 2003; Norton, Wang, and Ai 2004). For the predicted values associated with each interaction, we specify that control variables are held constant at their means. In all models, we cluster standard errors by borrower.

Dependent variable. Our hypotheses revolve around borrowers' tendencies to shirk on their loan payments. To that end, our dependent variable measures whether borrowers missed their payment in a given month. We use a binary variable where 0 reflects on-time payment and 1 reflects a missed payment.

Independent variables. We employ three independent variables across our models. When testing Hypothesis 1—which anticipates that all borrowers are more likely to miss payments when paired with female managers—our independent variable “Female Manager” measures whether the manager is male or female (1=female). Information about manager demographics comes from MicroBank's human resource records. We use modified independent variables to test Hypothesis 2, which anticipates that borrowers will miss more payments in the post-transfer

period when their original manager was female, and Hypothesis 3, which anticipates that borrowers will be more likely to miss payments when their subsequent manager is of a different gender than their original manager. In these models, we include “Female Original Manager” and “Female Subsequent Manager” as predictor variables. In testing Hypothesis 3, we interact these variables to determine the how different combinations of manager gender in the pre- and post-transfer periods affect borrower missed payments.

Control variables. We include a variety of manager-, borrower-, and loan-specific controls. Since managers’ attention is limited, we control for the size of managers’ *caseloads*. Descriptive analyses suggest there is a curvilinear relationship between caseload size and missed payments. To capture this effect, we included *a squared term of caseload size*. We also include manager tenure with MicroBank, as their level of experience may affect borrower repayment. We calculated *manager tenure* by subtracting the first date of an manager’s appearance in the dataset from the date of the focal monthly observation.⁴ When testing Hypothesis 1, we control for whether the manager is the *subsequent manager*. Subsequent managers have less familiarity and rapport with borrowers than original managers, which may influence borrowers’ likelihood of repayment.

We also controlled for whether a loan was an *automobile or working capital loan*, as the lending standards for auto loans are often stricter. We accounted for the *loan month*, or the number of months the borrower held the loan at the time of the focal observation. Since the size of the loan may affect repayment, we controlled for the *logged value of the loan* including interest.

⁴ Although the loan-month observations begin in 2009, the dataset contains cross-sectional loan observations from the bank’s inception. Such pre-2009 data allow us to accurately measure manager tenure.

Finally, we controlled for financial and demographic characteristics that might influence repayment: a borrower's *logged household income*, the *logged household debt* that he or she carried at the time of loan approval, and whether he or she had *previous borrowing experience* with a financial institution. When testing Hypotheses 2 and 3 we exclude borrowers who have experience with microfinance institutions to ensure that borrowers have no strong prior beliefs about the loan manager role as male- or female-typed. Thus, in these models, the previous borrowing experience variable captures whether borrowers have previous experience with *non-microfinance* financial institutions. Finally, since previous research has demonstrated that women miss fewer microfinance loan payments than men (D'Espallier, Guerin, and Mersland 2013), we control for *borrower gender* (1=female).

In Table 2 below, we present the means, standard deviations, and correlations among the variables from the full sample of 114,711 loan-month observations. We find relatively high correlations between auto loan and logged loan size, as well as manager tenure and caseload size. To ensure that multicollinearity did not bias the results, we ran a test of the variance inflation factor and found values between 1.04 and 2.69.⁵ These values are well below 10, the point after which results may be affected by multicollinearity (Neter, Wasserman, and Kutner 1989).

[Insert Table 2 about here.]

RESULTS

In Hypothesis 1, we draw on existing literature documenting greater compliance to men's authority to anticipate that borrowers will miss more payments when paired with female

⁵ Note that these values exclude the squared caseload term since this variable, naturally, is highly correlated with the caseload variable.

managers. The results from the logistic regression model, shown in Table 3, support this hypothesis: borrowers miss significantly more payments when paired with female than male managers. Specifically, borrowers have 1.44 times greater odds of missed payments when paired with a woman. For ease of interpretation, we generated the predicted probabilities of missed payments, holding all other variables constant at their means. As shown in Figure 1, borrowers have a 13.6% probability of missing a payment when paired with a man and an 18.5% probability when paired with a woman. These findings strongly support the hypothesis that borrowers have a greater propensity to shirk loan payments to female managers, whom they are more likely to view as lacking in authority.

[Insert Figure 1 and Table 3 about here.]

The control variables in this model also reveal noteworthy trends. As expected, borrowers have higher odds of missed payments during the post-transfer period when they are paired with subsequent managers. As compared to original managers, subsequent managers have weaker interpersonal ties with borrowers. Subsequent managers may have less capacity to exert authority and borrowers may feel reduced obligations to make payments on time. Additionally, the size of managers' caseload has a curvilinear effect on the odds of missed payments, with the likelihood of missed payments increasing among managers with the smallest and largest caseloads. Borrowers' odds of missed payments also increase with managers' tenure, suggesting potential fatigue effects among managers. Borrowers are also more likely to miss payments when they have auto rather than working capital loans, when they are more advanced in their loan terms, and when they have larger incomes. Additionally, borrowers are less likely to miss payments

when they have larger loans, more debt, and previous borrowing experience. Finally, borrower gender has no significant effect on the odds of missed payments.

We next consider how the initial gendering of the loan manager role may affect borrowers' tendency to miss payments to subsequent loan managers. Before presenting the results of these analyses, however, it is important to note that borrowers who experience transfers behave much like the larger borrower population. For instance, when paired with their original managers, they are more likely to miss payments if the manager is female. Specifically, when we employ the same analysis presented in Table 3 and focus on borrower repayment during the pre-transfer period, we find that borrowers' odds of missing payments are 1.52 times greater ($p < .01$) when paired with a female versus male original manager (results not presented).

Hypothesis 2 predicts that borrowers originally paired with female managers will be more likely to miss payments in the post-transfer period. Model 1 in Table 4 presents the results of the analysis testing this hypothesis. Consistent with our hypothesis, we find that borrowers miss significantly more payments in the post-transfer period if they were originally paired with female managers. Specifically, borrowers have 1.26 times greater odds of missing a payment if they originally worked with a woman, net of the subsequent manager's gender and a variety of other controls. During the post-transfer period, borrowers originally paired with a female manager have a 26% predicted probability of missed payments, while borrowers originally paired with male managers have a 22% probability of the same. These findings suggest that interacting with a single (gendered) individual in an otherwise gender-balanced role has lasting effects on subordinates' behavior with future role occupants.

[Insert Table 4 about here.]

We now turn to Model 2 in Table 4, which evaluates Hypothesis 3. Hypothesis 3 proposes that borrowers initially paired with a male manager will miss more payments when transferred to a female manager than a male manager, whereas borrowers initially paired with a female manager will miss fewer payments when transferred to a female manager than a male manager. Similar to Model 1, Model 2 predicts the odds of missed payments among borrowers paired with subsequent managers. However, this model introduces an interaction effect between female original manager and female subsequent manager. The interaction is significant and negative, suggesting that the negative effect of having a female original manager on the odds of missed payments to a subsequent manager is muted among those assigned to a female, rather than male, subsequent manager.

To ease interpretation of this interaction effect, we present the predicted probabilities of missed payments for each group, holding all variables constant at their means. Figure 2 presents these values, which support Hypothesis 3: borrowers originally paired with male managers are predicted to miss more payments with female subsequent managers (23.9%) than male subsequent managers (19.4%), whereas borrowers originally paired with female managers are predicted to miss more payments with male subsequent managers (28.1%) than female subsequent managers (24.1%).

[Insert Figure 2 about here.]

Interestingly, female subsequent managers have similar predicted probabilities of missed payments, independent of whether they fill a male-typed or female-typed role. In both cases, borrowers of female managers have about a 24% probability of missed payments. However,

borrowers have considerably different missed payment probabilities when their subsequent manager is male. Borrowers miss fewer payments when their male subsequent manager inherits a male-typed role than a female-typed role. Male managers are advantaged with fewer missed payments when they inherit a male-typed role, but disadvantaged with more missed payments when they inherit a female-typed role. Thus, it appears that the gendered effects of role incumbency are more pronounced for men than for women when they inherit occupational positions. We consider the theoretical implications of this finding further in the Discussion Section.

ROBUSTNESS CHECKS

Coarsened Exact Matching Analysis

In an ideal experiment, borrowers and managers would be randomly assigned such that both groups would be statistically similar on key characteristics affecting repayment. As discussed above, borrowers paired with male and female managers show no significant differences on important characteristics. However, female managers have significantly longer tenures and larger caseloads than male managers. This difference suggests that male and female managers may differ on other, unobservable characteristics, as well. To address this potential bias, we ran an additional analysis using coarsened exact matching (CEM) (Blackwell et al. 2009). CEM is a non-parametric method of controlling for group differences (for recent examples, see Leung and Sharkey (2013) and Ioannou (2013)). This approach matches comparable sets of borrowers and prunes unmatched observations. Matching reduces endogeneity concerns and limits the sensitivity of the estimates to functional form assumptions

(Iacus, King, and Porro 2011). Importantly, matching allows us to compare borrowers whose original managers had similar levels of human capital at the time they approved the loans.

We first grouped borrowers in two categories: those originally paired with women and those originally paired with men. To match on manager tenure, we created three “bins”: managers with less than one year experience, those with between one and two years experience, and those with more than two years experience. Since caseload cut-points are less self-evident, we used Stata’s automated matching algorithm to match on caseload size. We also experimented with alternative matching specifications and found the results robust. Forty borrowers could not be matched and were pruned from the sample. After matching, borrowers originally paired with male and female managers had no significant differences on manager tenure or caseload size.

We re-ran Models 1 and 2 on the set of matched set borrowers and found the results (not reported) to be robust. Consistent with Hypothesis 2, borrowers originally paired with female managers have 1.42 times greater odds ($p < .01$) of missed payments in the post-transfer period than borrower originally paired with men. Also consistent with Hypothesis 3, we found a significant ($p < .05$), negative interaction of original and subsequent female manager, such that borrowers initially paired with female managers miss fewer payments when transferred to a woman and borrowers initially paired with male managers miss more payments when transferred to a woman. Thus, the results of the more stringent matched analysis provide additional evidence that the gender of an original role occupant can significantly shapes subordinates’ compliance with the men and women who subsequently fill that role.

DISCUSSION AND CONCLUSIONS

This study suggests that social interactions with a single individual may gender an occupational role enough to produce divergent outcomes for the men and women who subsequently occupy that role. Drawing on a unique dataset of microfinance loan managers and their borrowers, we first show that borrowers are less compliant (i.e. more likely to miss payments) when paired with female managers. Then, we exploit quasi-random borrower transfers to examine how borrowers' compliance changes when they are transferred to new managers. We find that the gender of the original manager has lasting effects on borrowers' compliance: when borrowers are initially paired with female managers, they are significantly less compliant with their subsequent managers than when they are initially paired with men. Furthermore, we find that the effect of the gender of the original manager differs depending on the gender of the subsequent manager. Whereas borrowers who were originally paired with male officers demonstrate more compliance when transferred to another male officer than when transferred to a female officer, borrowers who were originally paired with female managers demonstrate more compliance when transferred to another female officer, as compared to being transferred to a male officer.

Overall, these findings reveal how a single individual can effectively link gender to an occupational role, thereby affecting the level of compliance that subsequent male and female role occupants experience. These findings confirm and extend existing research on occupational gendering in three ways. First, contemporary theories of occupational gendering rest on the notion that relatively gender-balanced roles can become more male- or female-typed following occupancy by a single (gendered) individual (Ridgeway 1997, 2011). However, evidence for such ideas comes primarily from laboratory studies based on highly controlled experiments (e.g. Major and Forcey 1985; McArthur and Obrant 1986). Our study, which relies on data from a

unique field setting, builds on these important insights empirically by suggesting that such findings are generalizable beyond the lab. By confirming such effects in a quasi-experimental field setting, this study provides greater confidence in both the effects of gender on occupational authority as well as the empirical validity of influential gender theories.

Second, our study uniquely demonstrates the important theoretical insight that gender can become a property of a *role* in addition to being a property of individuals. Recall that, in general, borrowers are more likely to miss payments when working with subsequent—as compared to original—managers, and that borrowers are more likely to miss payments when paired with female managers. If borrowers' missed payments to subsequent managers reflected the additive impact of a) a new (and therefore less legitimate) manager and b) the individual gender status of that new manager (which advantages men), we would expect borrowers to miss more payments with female subsequent managers *regardless* of the gender of their original manager. However, we find that borrowers originally paired with female managers are relatively *more* compliant when they work with female subsequent managers than male subsequent managers. This finding suggests that borrower noncompliance with subsequent managers does not merely result from the perceived illegitimacy of an individual (indexed here by the subsequent manager's newness and gender status), but also reflects the gendered (dis)continuity of the managerial role itself. Indeed, the highest levels of noncompliance result from both a disruption in the managerial relationship and a disruption in the gender-type attached to the role.

Third, our findings reveal that the gendering of an occupational role can generate considerable variability in men's ability to obtain compliance in positions of authority. In particular, they underscore the idea that men's authority advantage is conditional upon the extent to which the role is male-typed in the eyes of a borrower. Indeed, the results suggest that men are

not universally advantaged across all authority positions—at least not across positions that carry relatively modest scopes of influence (as is the case for the loan managers in our study). When female managers inherit new borrowers, they experience similar levels of compliance when borrowers worked initially with male or female managers (24% probability of missed payments for either gender). However, male managers experience highly divergent outcomes when they inherit borrowers initially paired with women (28% probability) and men (19% probability). Thus, in contrast to most studies, which typically document how gender stereotypes generate advantages for men, this study highlights how men’s advantages are contextually determined. Specifically, it demonstrates how men can be advantaged and *disadvantaged* by the gender stereotypes associated with occupational roles, thereby adding nuance to our understanding of gender and authority in the workplace.

Beyond the gender literature, this paper also makes important contributions to research on relational lending. Relational lending refers to a style of financial intermediation that encourages the development of personal ties between lenders and borrowers. Lenders who take a relational approach gain proprietary, customer-specific information about borrowers through personal relationships (Boot 2000). Relational practices allow lenders to overcome information asymmetries (Berger, Klapper, and Udell 2001; Berger and Udell 1995), work collaboratively with borrowers (Uzzi and Lancaster 2003), and secure more favorable repayment rates (Karlan, Morten, and Zinman 2013). Furthermore, borrowers show greater contract compliance when their original and subsequent lenders possess similar “relational styles” (Canales and Greenberg 2015).

While this literature has established many advantages of relational lending,⁶ it has yet to consider how demographic factors influence the success of relational approaches. The present paper demonstrates one way that lenders' demographic characteristics shape relational outcomes. Although male and female loan managers are required by bank policy to adopt a relational approach, male managers nevertheless experience greater overall contract compliance. This study demonstrates that the positive outcomes associated with relational lending are not universal, but vary with individual lenders' personal characteristics.

While this study offers important theoretical and empirical insights, it nevertheless has limitations that create avenues for future research. First, this research comes from a unique Central American setting. Although a variety of research demonstrates that gendered beliefs about competency and authority are relatively consistent across cultures (Glick et al. 2000, 2004; Williams and Best 1990), it is possible that individuals' beliefs about men's authority may be somewhat stronger in the Central American context as a result of *machismo* culture (Lambert and Giménez 2004; Pena 1991). Future research should examine if gendered authority in occupational roles differs across international settings, thereby exploring the contingencies of location. Second, due to data limitations, we examine how borrowers' compliance shifts when they are transferred from a first manager to a second. Future researchers should examine how subordinates' behavior changes as they work with third, fourth, and fifth managers. Research that utilizes such long-term observations could speak more closely to the literature on occupational imprinting (Burton and Beckman 2007; Phillips 2005; Tilcsik 2014) and explain how gendered effects are amplified or dulled with multiple changes in manager gender. Third, our study assumes—but does not directly measure—borrowers' cultural beliefs about gender. Such

⁶ For work examining the “darker side” of relational lending, see Canales and Nanda (2012).

observations would allow us to establish that borrowers' compliance patterns align with their cultural beliefs about the gender-appropriateness of their loan managers. Future research should combine survey data on subordinates' gendered beliefs with observational data about subordinates' actions. Fourth and finally, this study exploits quasi-random variation in manager transfers; however, the ideal design would include randomized reassignment of loan managers and clients. Indeed, research that includes natural (Canales and Greenberg 2015) or purposeful (Ranganathan 2015) random assignment in field settings offers strong generalizability, while limiting concerns about unobservable biases. Future researchers should seek out (or create) opportunities to measure the effects of occupational gendering in a setting with perfectly random reallocation of managers and subordinates.

The present study is, to our knowledge, the first to isolate the effects of gendered role-occupancy in a field setting and to demonstrate how a single individual can inscribe gendered expectations onto an occupational role. Demonstrating such effects in a natural setting is particularly important since contemporary theories of occupational gendering suggest that new or relatively gender-balanced roles may become gendered with a single role occupant. This study lends greater confidence to our understanding of how quickly and easily occupational roles become gendered, and how such gendered expectations spill over onto the subsequent individuals—both male and female—who fill those roles.

References

- Ai, Chunrong and Edward C. Norton. 2003. "Interaction Terms in Logit and Probit Models." *Economics Letters* 80(1):123–29.
- Baron, James N. and Andrew E. Newman. 1990. "For What It's Worth - Organizations, Occupations, and the Value of Work Done by Women and Nonwhites." *American Sociological Review* 55(2):155–75.
- Berger, Allen, Leora F. Klapper, and Gregory F. Udell. 2001. "The Ability of Banks to Lend to Informationally Opaque Small Businesses." *Journal of Banking and Finance* 25:2127–67.
- Berger, Allen and Gregory F. Udell. 1995. "Relationship Lending and Lines of Credit in Small Firm Finance." *The Journal of Business* 68(3):351–81.
- Berger, Joseph and Morris Zelditch. 1998. *Status, Power, and Legitimacy: Strategies & Theories*. Transaction.
- Blackwell, Matthew, Stefano Iacus, Gary King, and Giuseppe Porro. 2009. "Cem: Coarsened Exact Matching in Stata." *The Stata Journal* 9(4):524–46.
- Boot, Arnoud W. A. 2000. "Relationship Banking: What Do We Know?" *Journal of Financial Intermediation* 9(1):7–25.
- Burton, M. Diane and Christine M. Beckman. 2007. "Leaving a Legacy: Position Imprints and Successor Turnover in Young Firms." *American Sociological Review* 72(2):239–66.
- Campos, Alvaro and José Manuel Salas. 2002. "Aspectos Teórico Conceptuales de La Masculinidad: Retos En La Sigla XXI." Pp. 17–52 in *Masculinidades en Centro América*. San José, Costa Rica: Fondo para la Igualdad de Género de la Embajada de Canadá.
- Canales, Rodrigo and Jason Greenberg. 2015. "A Matter of (Relational) Style: Loan Officer Consistency and Exchange Continuity in Microfinance." *Management Science Articles in Advance*.
- Canales, Rodrigo and Ramana Nanda. 2012. "A Darker Side to Decentralized Banks: Market Power and Credit Rationing in SME Lending." *Journal of Financial Economics* 105(2):353–66.
- Eagly, Alice H., Steven J. Karau, and Mona G. Makhijani. 1995. "Gender and the Effectiveness of Leaders: A Meta-Analysis." *Psychological Bulletin* 117(1):125–45.
- England, Paula. 1992. "From Status Attainment to Segregation and Devaluation." *Contemporary Sociology* 21(5):643–47.
- England, Paula. 2010. "The Gender Revolution Uneven and Stalled." *Gender & Society* 24(2):149–66.

- D'Espallier, Bert, Isabelle Guerin, and Roy Mersland. 2013. "Focus on Women in Microfinance Institutions." *Journal of Development Studies* 49(5):589–608.
- Fiske, Susan and S. L. Neuberg. 1990. "A Continuum of Impression Formation, from Category-Based to Individuating Processes: Influences of Information and Motivation on Attention and Interpretation." in *Advances in experimental social psychology*, edited by M. P. Zanna.
- Fiske, Susan T., Amy J. C. Cuddy, Peter Glick, and Jun Xu. 2002. "A Model of (often Mixed) Stereotype Content: Competence and Warmth Respectively Follow from Perceived Status and Competition." *Journal of Personality and Social Psychology* 82(6):878–902.
- Foschi, M. 2008. "Selecting Job Applicants: Effects from Gender, Self-Presentation, and Decision Type." *Social Science Research* 37(3):1022–38.
- Glick, Peter et al. 2000. "Beyond Prejudice as Simple Antipathy: Hostile and Benevolent Sexism across Cultures." *Journal of Personality and Social Psychology* 79(5):763–75.
- Glick, Peter et al. 2004. "Bad but Bold: Ambivalent Attitudes Toward Men Predict Gender Inequality in 16 Nations." *Journal of Personality and Social Psychology* 86(5):713–28.
- Heilman, Madeline E. 2001. "Description and Prescription: How Gender Stereotypes Prevent Women's Ascent Up the Organizational Ladder." *Journal of Social Issues* 57(4):657–74.
- Hoffman, Kelly and Miguel Angel Centeno. 2003. "The Lopsided Continent: Inequality in Latin America." *Annual Review of Sociology* 29:363–90.
- Iacus, Stefano M., Gary King, and Giuseppe Porro. 2011. "Causal Inference without Balance Checking: Coarsened Exact Matching." *Political Analysis* 20:1–24.
- Ioannou, Ioannis. 2013. "When Do Spinouts Enhance Parent Firm Performance? Evidence from the U.S. Automobile Industry, 1890–1986." *Organization Science* 25(2):529–51.
- Jacobs, Jerry A. 1989. *Revolving Doors: Sex Segregation and Women's Careers*. Stanford, Calif.: Stanford University Press.
- Kanter, Rosabeth Moss. 1977. *Men and Women of the Corporation*. New York: Basic Books.
- Karlan, Dean, Melanie Morten, and Jonathan Zinman. 2013. "A Personal Touch: Text Messaging for Loan Repayment." *NBER Working Paper* No. 17952.
- Kilbourne, Barbara Stanek, Paula England, George Farkas, Kurt Beron, and Dorothea Weir. 1994. "Returns to Skill, Compensating Differentials, and Gender Bias: Effects of Occupational Characteristics on the Wages of White Women and Men." *American Journal of Sociology* 100(3):689–719.

- Koenig, Anne M. and Alice H. Eagly. 2014. "Evidence for the Social Role Theory of Stereotype Content: Observations of Groups' Roles Shape Stereotypes." *Journal of Personality and Social Psychology* 107(3):371–92.
- Lambert, Catherine Héau and Gilberto Giménez. 2004. "La Representación Social de La Violencia En La Trova Popular Mexicana." *Revista Mexicana de Sociología* 66(4):627–59.
- Leung, Ming D. and Amanda J. Sharkey. 2013. "Out of Sight, Out of Mind? Evidence of Perceptual Factors in the Multiple-Category Discount." *Organization Science* 25(1):171–84.
- Lueptow, Lloyd B., Lori Garovich-Szabo, and Margaret B. Lueptow. 2001. "Social Change and the Persistence of Sex Typing: 1974-1997." *Social Forces* 80(1):1–36.
- Major, Brenda and B. Forcey. 1985. "Social Comparisons and Pay Evaluations: Preferences for Same-Sex and Same-Job Wage Comparisons." *Journal of Experimental Social Psychology* 21(4):393–405.
- McArthur, Leslie Zebrowitz and Sarah W. Obrant. 1986. "Sex Biases in Comparable Worth Analyses." *Journal of Applied Social Psychology* 16(9):757–70.
- Neter, John, William Wasserman, and Michael H. Kutner. 1989. *Applied Linear Regression Models*. Homewood, Ill.: Irwin.
- Norton, E. C., H. Wang, and C. Ai. 2004. "Computing Interaction Effects and Standard Errors in Logit and Probit Models." *Stata Journal* 4(2):154–67.
- Pena, Manuel. 1991. "Class, Gender, and Machismo: The 'Traacherous-Woman' Folklore of Mexican Male Workers." *Gender and Society* 5(1):30–46.
- Phillips, Damon J. 2005. "Organizational Genealogies and the Persistence of Gender Inequality: The Case of Silicon Valley Law Firms." *Administrative Science Quarterly* 50:440–72.
- Prentice, Deborah A. and Erica Carranza. 2002. "What Women and Men Should Be, Shouldn't Be, Are Allowed to Be, and Don't Have to Be: The Contents of Prescriptive Gender Stereotypes." *Psychology of Women Quarterly* 26(4):269–81.
- Ranganathan, Aruna. 2015. "The Price Is Right? Product Attachment and Price-Setting in the Sale of Handicraft Products in Southern India." *Stanford Working Paper*.
- Reskin, Barbara F. and Patricia A. Roos. 1990. *Job Queues, Gender Queues: Explaining Women's Inroads into Male Occupations*. Philadelphia: Temple University Press.
- Ridgeway, Cecilia and Chris Bourg. 2004. "Gender as Status: An Expectation States Approach." in *Psychology of Gender*, edited by A. Eagly, A. Beall, and R. Sternberg. New York: Guilford Press.

- Ridgeway, Cecilia L. 1997. "Interaction and the Conservation of Gender Inequality: Considering Employment." *American Sociological Review* 62(2):218–35.
- Ridgeway, Cecilia L. 2011. *Framed by Gender: How Gender Inequality Persists in the Modern World*. New York: Oxford University Press.
- Ridgeway, Cecilia L. and Joseph Berger. 1986. "Expectations, Legitimation, and Dominance Behavior in Task Groups." *American Sociological Review* 51(5):603–17.
- Ridgeway, Cecilia L. and Shelley J. Correll. 2004. "Unpacking the Gender System: A Theoretical Perspective on Gender Beliefs and Social Relations." *Gender and Society* 18(4):510–31.
- Ridgeway, Cl. 2001. "Gender, Status, and Leadership." *Journal of Social Issues* 57(4):637–55.
- Rudman, Laurie A. and Peter. Glick. 2008. *The Social Psychology of Gender: How Power and Intimacy Shape Gender Relations*. New York: Guilford Press.
- Rudman, Laurie A., Corinne A. Moss-Racusin, Julie E. Phelan, and Sanne Nauts. 2012. "Status Incongruity and Backlash Effects: Defending the Gender Hierarchy Motivates Prejudice against Female Leaders." *Journal of Experimental Social Psychology* 48(1):165–79.
- Spence, Janet T. and Camille E. Buckner. 2000. "Instrumental and Expressive Traits, Trait Stereotypes, and Sexist Attitudes." *Psychology of Women Quarterly* 24(1):44.
- Tarrés, María Luisa. 1998. "¿Importa El Género En La Polítca?" Pp. 13–32 in *Género y cultura en América Latina: cultura y participación política*. México, D.F.: Colegio de México.
- Tepichin Valle, Ana María. 2013. "La Actividad Económica de Las Mujeres: Espacio Por Excelencia Para Explorar El Vínculo Entre Género Y Pobreza." *Estudios Sociológicos* 31:143–66.
- Tilcsik, András. 2014. "Imprint–environment Fit and Performance: How Organizational Munificence at the Time of Hire Affects Subsequent Job Performance." *Administrative Science Quarterly* 59(4):639–68.
- Uzzi, Brian and Ryon Lancaster. 2003. "Relational Embeddedness and Learning: The Case of Bank Loan Managers and Their Clients." *Management Science* 49(4):383–99.
- Vilas, Carlos. 1998. "Lo Político Y Lo Privado: Redes de Familia En La Política Centroamericana." Pp. 35–60 in *Género y cultura en América Latina: cultura y participación política*. México, D.F.: Colegio de México.
- Wagner, David G. and Joseph Berger. 1997. "Gender and Interpersonal Task Behaviors: Status Expectation Accounts." *Sociological Perspectives* 40(1):1–32.
- Williams, John E. and Deborah L. Best. 1990. *Measuring Sex Stereotypes: A Multination Study*. Newbury Park, Calif.: Sage.

Figure 1: Predicted Probabilities of Missed Payments by Manager Gender across Borrower Population (N=114,711)



Figure 2: Predicted Probabilities of Missed Payments by Original and Subsequent Manager Gender (N=7,988)

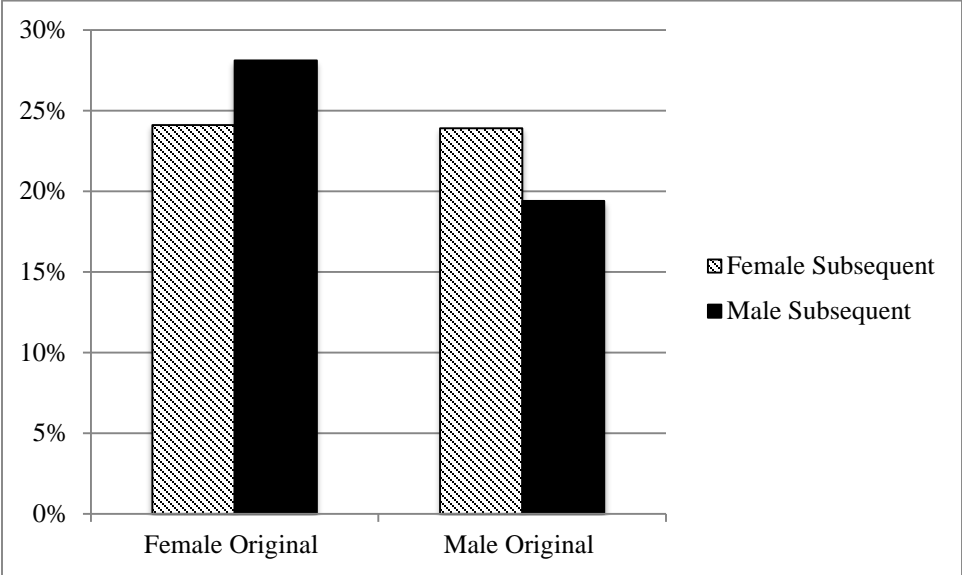


Table 1: Mean Borrower Characteristics by Manager Gender in Pre-Transfer and Post-Transfer Periods

	Pre-Transfer			Post-Transfer		
	Male Officer (N=594)	Female Officer (N=691)	<i>p</i> -value	Male Officer (N=609)	Female Officer (N=676)	<i>p</i> -value
Household Income (monthly)	1,570.74	1,596.71	NS	1,556.86	1,609.79	NS
Household Debt	3,836.04	4,179.72	NS	4,931.89	3,200.11	NS
Loan Size	1,389.47	1,527.25	NS	1,510.18	1,421.55	NS
Loan Type (Automobile=1)	0.02	0.02	NS	0.02	0.02	NS
Previous Borrowing Experience (non-microfinance)	0.04	0.05	NS	0.05	0.03	NS
Client Gender (Female=1)	0.44	0.48	NS	0.46	0.46	NS

Table 2: Means, Standard Deviations, and Correlations⁷

Variable	N	Means	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Missed Payment	114,711	0.19	0.39	1.00											
2. Female Manager	114,711	0.59	0.49	0.06	1.00										
3. Post-Transfer Period	114,711	0.22	0.41	0.10	-0.07	1.00									
4. Manager Tenure (months)	114,711	29.27	18.63	0.10	0.15	-0.24	1.00								
5. Caseload	114,711	112.64	58.40	0.02	0.06	-0.12	0.52	1.00							
6. Automobile Loan	114,711	0.08	0.27	0.02	0.04	-0.12	0.13	0.06	1.00						
7. Loan Month	114,711	8.99	6.21	0.24	0.01	0.33	0.27	0.30	0.15	1.00					
8. Loan Amount (logged)	114,711	7.21	0.96	-0.04	0.06	-0.05	0.17	0.07	0.71	0.25	1.00				
9. Household Income (logged)	114,711	7.06	0.90	-0.01	-0.02	-0.06	0.13	0.07	0.25	0.08	0.45	1.00			
10. Household Debt (logged)	114,711	2.60	3.86	-0.08	-0.02	0.00	0.00	0.10	0.03	-0.02	0.13	0.05	1.00		
11. Previous Borrowing Experience (microfinance or other)	114,711	0.40	0.49	-0.04	-0.01	0.03	0.11	0.07	-0.10	0.07	0.09	-0.01	0.20	1.00	
12. Female Borrower	114,711	0.46	0.50	0.02	0.06	0.00	-0.01	-0.03	-0.09	-0.02	-0.14	-0.11	-0.02	0.03	1.00

⁷ Note that the female manager mean value reflects the proportion of monthly loan observations in female managers' portfolios, not the proportion of individual female managers at MicroBank. As discussed above, female managers have slightly larger caseloads than men on average.

Table 3: Logistic Regression Predicting Odds of Missed Payments for Borrower Population

	Model 1
Female Manager	1.44*** (0.06)
<i>Control Variables</i>	
Subsequent Manager	1.21*** (0.06)
Manager Caseload	0.99*** (0.00)
Manager Caseload ²	1.00* (0.00)
Manager Tenure	1.01*** (0.00)
Automobile Loan	3.17*** (0.42)
Loan Month	1.11*** (0.00)
Loan Amount (ln)	0.54*** (0.02)
Household Income (ln)	1.09** (0.03)
Household Debt (ln)	0.97*** (0.01)
Previous Borrowing Experience (microfinance or other)	0.87** (0.04)
Female Borrower	1.05 (0.05)
N	114,711

Coefficients are exponentiated. Standard errors are clustered by 6,804 borrowers.

* p < .05; ** p < .01; ***p < .001

Table 4: Logistic Regression Predicting Odds of Missed Payments during Post-Transfer Period

	Model 1	Model 2
Female Original Officer	1.26* (0.14)	1.63** (0.28)
Female Subsequent Officer	0.99 (0.11)	1.31 (0.24)
Female Original X Female Subsequent Officer		0.62* (0.14)
<i>Control Variables</i>		
Officer Caseload	0.99*** (0.00)	0.99*** (0.00)
Officer Caseload ²	1.00 (0.00)	1.00* (0.00)
Officer Tenure	1.02*** (0.00)	1.02*** (0.00)
Automobile Loan	5.24*** (2.53)	5.22*** (2.59)
Loan Month	1.06*** (0.01)	1.06*** (0.01)
Loan Amount (ln)	0.61*** (0.06)	0.61*** (0.06)
Household Income (ln)	1.11 (0.08)	1.12 (0.08)
Household Debt (ln)	0.96* (0.02)	0.96* (0.02)
Previous Borrowing Experience (non-microfinance only)	0.53 (0.18)	0.52 (0.19)
Female Borrower	0.97 (0.10)	0.96 (0.10)
N	7988	7988

Coefficients are exponentiated. Standard errors are clustered by 1,285 borrowers.

* p < .05; ** p < .01; ***p < .001