



WIDER Working Paper 2017/117

**Career dynamics and gender gaps among  
employees in the microfinance sector**

Ina Ganguli,<sup>1</sup> Ricardo Hausmann,<sup>2</sup> and Martina Viarengo<sup>3</sup>

May 2017

**Abstract:** While microfinance institutions (MFIs) are increasingly important as employers in the developing world, there is little micro-level evidence on gender differences among MFI employees and MFIs' relation to economic development. We use a unique panel dataset of employees from Latin America's largest MFI to show that gender gaps favouring men for promotion exist primarily in the sales division, while there is a significant gender wage gap in the administrative division. Among loan officers in the sales division, the gender gap in promotion and wages reverses. Finally, female employees tend to work with clients with better loan terms and a history of loans with the institution.

**Keywords:** gender gaps, job mobility, promotion, microfinance, economic development, panel data analysis

**JEL classification:** J16, J62, M51, O1

**Acknowledgements:** We would like to thank the editors Siwan Anderson and Jean-Philippe Platteau; the Scientific Committee of the UNU-WIDER 'Gender and Development' project as well as an anonymous referee; and Iris Bohnet, Richard B. Freeman, and Lant Pritchett, for helpful discussions and comments on an earlier draft of this paper. We thank Catalina Martinez for research assistance. We would like to thank the MFI for sharing the data for the analysis.

---

<sup>1</sup> University of Massachusetts, Amherst, MA, USA; <sup>2</sup> Harvard Kennedy School and Harvard University, Center for International Development, Cambridge, MA, USA, and Santa Fe Institute, Santa Fe, NM, USA; <sup>3</sup> The Graduate Institute, Geneva, Switzerland and Harvard University, Center for International Development, Cambridge, MA, USA; corresponding author: [martina.viarengo@graduateinstitute.ch](mailto:martina.viarengo@graduateinstitute.ch).

This study has been prepared within the UNU-WIDER project on '[Gender and development](#)'.

Copyright © UNU-WIDER 2017

Information and requests: [publications@wider.unu.edu](mailto:publications@wider.unu.edu)

ISSN 1798-7237 ISBN 978-92-9256-341-7 <https://doi.org/10.35188/UNU-WIDER/2017/341-7>

Typescript prepared by Luke Finley.

The United Nations University World Institute for Development Economics Research provides economic analysis and policy advice with the aim of promoting sustainable and equitable development. The Institute began operations in 1985 in Helsinki, Finland, as the first research and training centre of the United Nations University. Today it is a unique blend of think tank, research institute, and UN agency—providing a range of services from policy advice to governments as well as freely available original research.

The Institute is funded through income from an endowment fund with additional contributions to its work programme from Denmark, Finland, Sweden, and the United Kingdom.

Katajanokanlaituri 6 B, 00160 Helsinki, Finland

The views expressed in this paper are those of the author(s), and do not necessarily reflect the views of the Institute or the United Nations University, nor the programme/project donors.

## 1 Introduction

Microfinance institutions (MFIs) are commonly identified as empowering women and making them key actors in generating social change and economic development. Yet little is known about the gender parity among employees within the lending institutions themselves and how this can impact development. In this project, we use rich data covering all employees working in the largest MFI in Latin America from 2004 to 2012 to document and understand gender differences in the career paths of MFI employees. Are there gender gaps in promotion and earnings? How large are they? Are there differences in the main career paths within the microfinance institution (in sales vs. administration)? We also link data on the gender and loan information of clients to data on the employees working with them to understand whether gender differences are related to the types and outcomes of the clients themselves, providing broader insights into the ways in which the gender of employees can impact the performance of MFIs and the development process.

While MFIs are an increasingly important employer of individuals in the developing world, and many of the commercially successful microfinance institutions employ thousands of individuals<sup>1</sup> (e.g., Roodman and Qureshi 2006: 39), there is very little evidence on the state of gender differences in employment and career dynamics in the MFI sector. In fact, while ‘breaking the glass ceiling’ has become an important corporate objective in many economic sectors, there appears to exist an opposite trend in the MFI sector, where female leadership has diminished in recent years (Iskenderian 2011).

The case for gender equality in the context of new business models that pursue both social impact and financial returns, which characterize MFIs, is based on two main explanations. First, women tend to have a comparative advantage in the specific skills of the non-profit sector (Lansford et al. 2010), so they help to maintain the balance between the business and the development objectives of new business models. Second, generating deep social change and gender empowerment requires women to be seen as leaders and active drivers of development (WWB 2010). Moreover, as microfinance expands in Latin America and other emerging economies, it is rapidly becoming part of the mainstream financial landscape. A fundamental and neglected question, which our study will shed light on, is whether gender gaps in career dynamics in MFIs operate in a similar way to those in the financial sector.

In the case of MFIs, we might expect them to be more gender-friendly employers, given their documented important role in increasing financial access for women in particular, which has been shown to play a powerful role in development. It has been shown that income and assets in the hands of women are associated with larger improvements in child health, and with larger expenditure shares of household nutrients, health, and housing (Thomas 1990, 1994, and Duflo 2003, 2012, among others). Female employees may understand better how to pursue these goals if women understand the female market segment better and clients tend to feel more comfortable with female staff (WWB 2012).

Some of the most compelling relevant analysis to date comes from Strøm et al. (2014), who use a global panel of 329 microfinance institutions in 73 countries covering the years 1998–2008, and find a relationship between female leadership and the performance of MFIs, which is mainly driven

---

<sup>1</sup> For example, the Grameen Bank employs 22,924 individuals in 2,422 branches in Bangladesh ([www.grameen-info.org/grameen-bank-at-a-glance/](http://www.grameen-info.org/grameen-bank-at-a-glance/), accessed 17 April 2017) whereas Bancosol employs 2,740 staff members in 313 offices in Bolivia (<https://reports.mixmarket.org/mfi/bancosol>, accessed 17 April 2017).

by the female market orientation of MFIs and not by better governance. However, to date, there is very little evidence in the existing literature that has examined the micro-foundations of gender gaps in the microfinance sector.

In this regard, our paper takes a micro-level approach by using rich information on all employees in one MFI to look at the dynamics within a firm that operates in many different regions of the same country. Specifically, we document the nature of gender gaps in career dynamics in the microfinance sector, focusing on differences in the administrative career path and the sales career path within the firm. We document differences in these career paths between male and female employees in terms of promotion, exit, and wages. We then examine how the characteristics of employees in the sales career path of the firm are related to the characteristics and outcomes of clients, including patterns of assortative matching, and the number and terms of loans clients receive.

Our main results are as follows. First, we show in the raw data that in both the administrative and the sales career paths there is close to gender parity at the entry level, but gender gaps emerge at the higher ranks, particularly for the administrative career path. However, when we look at the hierarchy within the lowest rank of the sales division—the loan officers—who make up the lion's share of the employees working within the MFI, a different pattern emerges. Here, the gender gap essentially reverses, so that women become the greater share of the loan officers at the higher ranks.

Second, we investigate these differences further in a regression framework. We show that in the administrative career path, the overall differences by gender in the probability of promotion disappear after controlling for area of practice and rank, as well as individual characteristics. However, at the intermediate level of 'Líder',<sup>2</sup> a significant gap in the probability of promotion favouring men persists.

In contrast, within the sales division, we find that the gender gap in promotion is small (around 2 per cent) but significant even after including controls. The gap is highest at the most highly ranked position ('Gerente'<sup>3</sup> to 'Gerente Regional'<sup>4</sup>). There is also some evidence that family factors play a role in the sales division regarding promotion, with women who are married being more likely to be promoted compared to unmarried women.

When we focus on the loan officers ('Promotor' and 'Asesor'<sup>5</sup>), we find that, as the raw data suggest, women are more likely to advance through the ranks within these levels. Even after controlling for individual and other covariates, the probability of promotion is higher for women than for men. We also find some evidence that if a woman's immediate supervisor is also a woman, she is even more likely to be promoted than if the supervisor is a man.

In terms of exit, we show that within the administrative division there does not appear to be differential exit by gender, while in the sales division women are about 4 per cent less likely to exit after controlling for covariates. Turning to wages, we show a striking result: while there are not significant gender differences in promotion overall in the administrative path, there is a significant

---

<sup>2</sup> This corresponds to the position of 'head'.

<sup>3</sup> This corresponds to the position of 'manager'.

<sup>4</sup> This corresponds to the position of 'regional manager'.

<sup>5</sup> Both of these job titles correspond to the position of 'loan officer'. The difference between a 'Promotor' and an 'Asesor' is outlined in Section 3.

gender wage gap, even after controlling for covariates, and this gap appears to be largest at the highest ranks. Meanwhile, in sales, where there are significant differences in promotion by gender, the wage differences disappear after including controls. In contrast, among loan officers the wage gap reverses, so that women earn higher wages on average than men.

Third, we turn to an analysis of client data matched to loan officers. We find that female Promotores are no more likely to work with female clients than with male clients (for non-female-only loan products) after controlling for covariates, which suggests that assortative matching by gender is not occurring. However, we do find that female Asesores are 1.8 per cent more likely than male Asesores to work with female clients. We also find some evidence of differences in the types of clients that male and female officers work with, such as female Promotores appearing to work with clients who receive better terms (lower interest rates) and who have had previous loans with the MFI, compared to those with whom male Promotores work (for female-only products).

Overall, this analysis shows that the dynamics of gender gaps are complex and vary within the largest MFI in Latin America. The empirical findings also suggest that different factors have an impact on the dynamics of gender gaps at different stages of the career path. There is heterogeneity across the different divisions. Gender gaps in the administrative division seem to be more similar to the dynamics in career paths observed in the financial sector, whereas in the division that is core to the microfinance sector, a reversal of the gender gap is observed. In terms of the loan officer matching process, we document that female employees tend to be associated with those loans that have better conditions and consequently a higher expected probability of repayment.

Our study makes three main contributions. First, this is the first study that examines gender gaps in wages and career trajectories in the microfinance sector. While the existing research has highlighted the fact that gender gaps are larger at the higher ranks of microfinance institutions, our analysis provides evidence on the micro-foundations of gender gaps in career dynamics within the microfinance sector by relying on a unique panel dataset that allows us to examine how gender gaps emerge and evolve.

Second, our study shows the complexity of the dynamics of gender gaps within MFIs. We document to what extent gender gaps differ along the career trajectories of the administrative and the sales divisions. Specifically, our analysis shows that gender gaps increase with seniority in the administrative division, whereas there is a reversed gender gap in the lower ranks of the division that characterizes the microfinance sector, the sales of microcredit products. This is an important result because it shows the extent to which, in the administrative division—the ‘back office’ of the organization, where employees do not have interaction with the clients of the MFI—the dynamics of gender gaps are similar to those observed for professionals in the traditional financial and corporate sectors. On the other hand, in the sales division, the ‘front office’ of the organization, where employees are in contact with the core clients of the microfinance sector (i.e. women), the gender gap is reversed, although only at the lower ranks of the division.

Third, our study also provides some evidence on how the gender of employees can impact the outcomes of clients. It documents that women employees tend to have clients with better terms and clients who have previously received loans. This finding is consistent with the existing evidence which suggests that employees may be better positioned to work with clients of the same gender (Beck et al. 2014).

Finally, our study also contributes to defining the agenda for future research in this area. Specifically, more research is needed in order to understand how organizations in the microfinance sector change with development. A reversal of the gender gap was observed at the lower ranks of the division that operates in close contact with the microfinance clients—that is, women. Will this

shift gradually affect the higher ranks of the sales division and then the ‘back office’ of the organization? How long will this take? Or will the reversal be limited within those positions where women have a comparative advantage in interacting with female clients? Answers to these questions have important implications for the evolution of the sector, and at the micro level for understanding how women’s empowerment on the employer side of the microfinance sector is shaped.

The rest of the paper is structured as follows. Section 2 presents the relevant literature on gender gaps in the professional sectors, and specifically in the financial and microfinance sectors, and possible explanations for these gender gaps. Existing studies on loan officer–client gender matching and the relationship between gender and client outcomes are also briefly reviewed. Section 3 describes the institutional background, Section 4 presents data, empirical strategy, and descriptive statistics. Section 5 presents the main findings. Section 6 provides concluding remarks.

## **2 Literature review**

### **2.1 Gender gaps in career dynamics among professionals**

Women’s underperformance in the corporate and financial sectors has been widely documented in the existing literature (e.g., Babcock and Laschever 2003; Bertrand et al. 2010). Most of the existing studies have examined gender differences in compensation, while only a few more recent ones have examined career trajectories (e.g., Ganguli et al., 2016). However, there is no study at present that has documented gender gaps among employees in the microfinance sector. The rapid expansion of the microfinance industry in recent decades, the fact that the size of the microfinance organizations themselves often increases at a very fast pace (World Bank 2000), and the fact that in several countries women represent a significant share of both clients and the workforce of MFIs,<sup>6</sup> all call for an understanding as to whether men and women in the microfinance sector follow similar career paths.

In this context, the theoretical framework that seems to best characterize the pattern of compensations and promotions in the MFI institution examined is the one related to ‘tournament theory’, pioneered by Lazear and Rosen (1981). They first observed that the remuneration received by employees depends on their rank within the organization, and their relative performance with respect to their peers. This framework has been found to have significant empirical support in several professional occupations, ranging from modern corporate law firms (Gilson and Mnookin 1989) to academia (Lazear and Shaw 2007). Among the factors that contribute to explaining gender gaps in labour market outcomes, existing studies have identified both supply-side (e.g., work experience, preferences, aspirations) and demand-side (e.g., system of selection, implicit barriers) factors.

### **2.2 Assortative matching: client and loan officer**

The economic literature related to the process of assortative matching goes back to Becker (1973). In his pioneering analysis, Becker examined the pattern of sorting along individual-level traits and characteristics between spouses in the marriage market. In the context of our study, gender can be

---

<sup>6</sup> See MIX Market: <http://www.themix.org/mixmarket> (accessed 17 April 2017).

regarded as a characteristic that defines a group identity (e.g., Akerlof and Kranton 2000) which has an impact on the matching process between clients and officers, and ultimately on credit outcomes given the role played by loan officers in credit distribution (Brau and Woller 2004). In the existing literature the gender aspect has mainly been examined in terms of female participation at the aggregate level (e.g. Boehe and Cruz 2013; D'Espallier et al. 2011; Hartaska et al. 2014). The assortative matching pattern at the micro level has only been examined in a few recent studies. For example, Beck et al. (2013) and Beck et al. (2014) rely on a dataset provided by a commercial lender serving microenterprises and small–medium-sized enterprises in Albania and examine the pattern of gender matching between loan officers and clients.

### **2.3 Client–loan officer matching**

Existing studies that have examined the impact of the individual-level gender matching between client and loan officer have found mixed results that vary according to the credit outcome examined. On the one hand, Beck et al. (2013), examining the matching pattern within a large Albanian commercial firm, find that loans managed by female officers are less likely to become problematic loans, but female officers experience an advantage over their male counterparts only with experience. On the other hand, Beck et al. (2014) find that borrowers matched to loan officers of the opposite gender experience less advantageous loan conditions. Agier and Szafarz (2013) examine a large sample of loan applications from a Brazilian microfinance institution and find a significant gender gap among clients in terms of loan size, which is not related to the loan officer's gender.

## **3 Institutional background**

The microfinance sector is expanding at a very fast pace in developing countries. According to Microfinance Information Exchange (MIX) estimates, there were approximately 100 million borrowers from MFIs in 2011 (Di Benedetto et al. 2015). The largest MFIs are located in different regions of the world, and they vary in terms of governance structure. Examples include Bandhan in India, Bank Rakyat in Indonesia, BancoSol in Bolivia, Grameen Bank in Bangladesh, and Compartamos Banco in Mexico.

In this context, we focus on the largest microfinance institution in Latin America. We position this leading Latin American institution within the MFI sector by relying on the MIX Market database, the largest database on the global microfinance industry, which provides background and balance sheet information for over 1,800 microfinance institutions worldwide. The MFI examined is among the top ten worldwide in terms of personnel employed and number of active borrowers, with an average of 201 borrowers per staff member. It also ranks in the top ten with respect to the number of women borrowers. On the other hand, it is included in about the top 5 per cent in terms of yield on gross portfolio (nominal).<sup>7</sup>

The microfinance institution we study shares many characteristics with big players in the financial world. It can be compared to other world-leading MFIs along several dimensions. First, many of them have experienced the transition from socially oriented non-profit microfinance to for-profit microfinance (Cull et al. 2009). Second, they are regulated deposit-taking institutions. Third, they

---

<sup>7</sup> This information was extracted from the MIX Market database and refers to the most recent data available ([www.mixmarket.org](http://www.mixmarket.org), accessed 17 April 2017). A more precise URL cannot be provided without disclosing the name of the MFI we are studying, but more information is available from the authors upon request.

target low-income women with both individual and solidarity-group lending methods and have a low share of non-performing loans.

The MFI is divided into two main divisions: administrative (headquarters and non-headquarters) and sales. In 2012, the sales division employed 79 per cent of all employees, while 21 per cent were employed in administration (headquarters).

In the empirical analysis, we pool the headquarters and non-headquarters administrative division employees. There are 28 areas of practice in the most recent year for which the data are available. The administrative division includes areas of practice such as accounting, internal audit, marketing, control management, corporate strategy, external relations, finance, legal, operations management, risk management, innovation, and human resources.

There is a well-defined hierarchy within each area of practice in the administrative division. The lowest-ranked positions are 'Auxiliar' and 'Analista', followed by an intermediate position ('Coordinador'), two middle-management positions ('Líder', and 'Gerente'), and the two top ranks of the division ('Subdirector', and 'Director'). Associated with each position is a job description which provides a list of tasks and activities that employees are expected to carry out, and objectives they should meet.

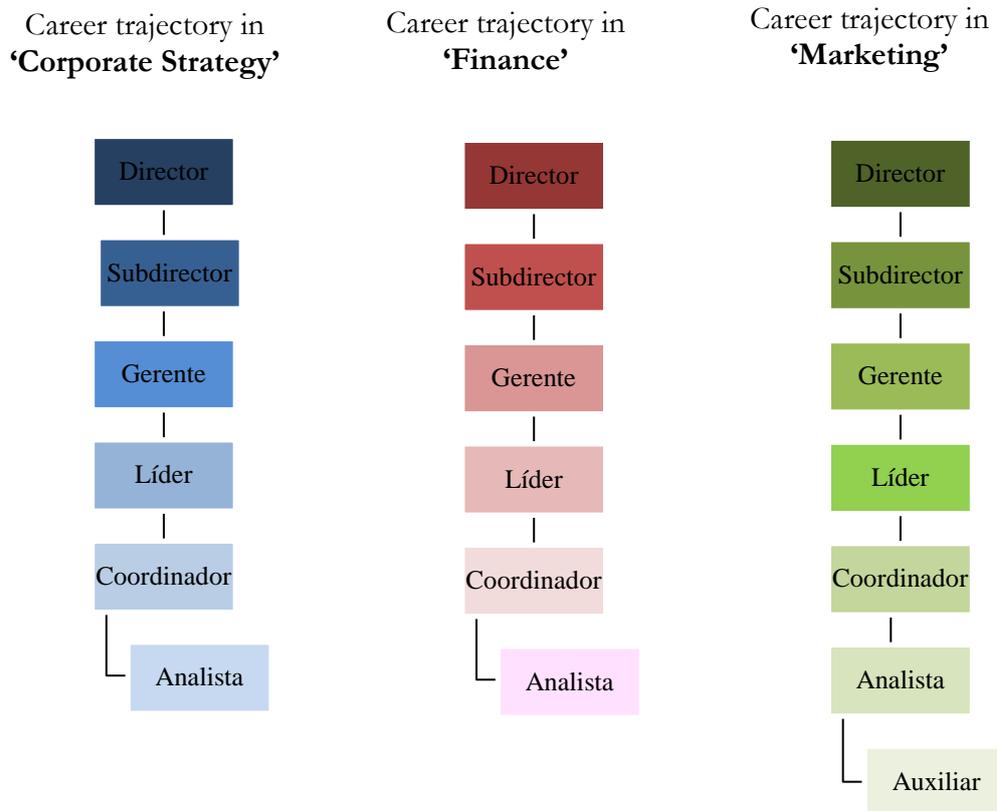
The sales division follows a different hierarchy, and therefore will be considered separately in the empirical analysis. Entry-level positions ('Promotor', and 'Asesor de Crédito') are followed by three middle-management positions ('Coordinador de Unidad', 'Coordinador de Crédito', and 'Subgerente de Oficina'), and two upper-management positions ('Gerente de Oficina de Servicios Regional' followed by 'Gerente Regional').

The loan officer, as in the majority of MFIs, plays a key role in terms of providing clients with assistance in their loan application, defining conditions of the loan, and monitoring its repayment. Also, this is reinforced by the nature of the MFI's operations, wherein the majority of transactions are decentralized and loan officers go to meet potential clients in the field (Roodman and Qureshi 2006).

There are two positions equivalent to 'loan officer' in the MFI: 'Promotor', and 'Asesor de Crédito'. Loan officers in each category are expected to perform specific tasks. 'Promotores' are expected to identify possible clients among individuals with a productive activity, to supervise the creation of lending groups according to the guidelines of the MFI, and to develop the other products of the MFI. Meanwhile, 'Asesores de Crédito' are expected to deliver the financial resources related to the loan to individuals and groups and to collect repayment in instalments according to the guidelines and method approved by the MFI. There are four different ranks that relate to the level of seniority of the loan officer: 'Nuevo', 'Junior', 'Senior', and 'Maestro'. Figure 1 shows the career trajectories in three selected areas of practice of the administrative division and Figure 2 the trajectories in sales.

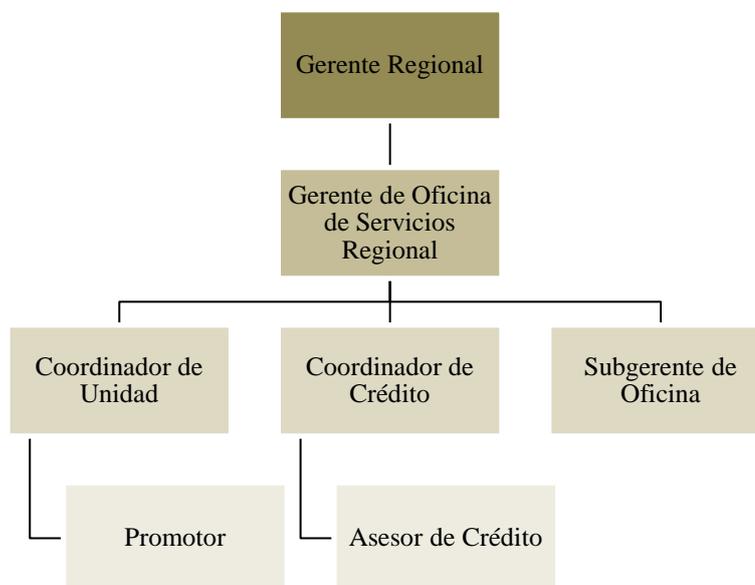
When a new position becomes available within the MFI both internal and external candidates are considered, following a formal selection procedure. First, the new vacancy is advertised with a detailed job description and information about the selection process; then employees interested in the position submit their application. In some cases employees may also be invited to apply by senior colleagues. Then, after an initial screening is carried out by the human resources department, a short-list of candidates is created. Finally, selected candidates are individually interviewed by the selection committee along with a representative of the human resources department. The selection committee deliberates and selects the most qualified candidate for the position.

Figure 1: Career trajectories in selected areas of practice, administrative division



Source: Authors' representation based on MFI human resources information.

Figure 2: Career trajectories, sales division



Source: Authors' representation based on MFI human resources information.

## 4 Data and empirical approach

### 4.1 Data

We have compiled a rich individual-year-level panel dataset based on human resource records of the firm that includes all employees working in the MFI from 2004 to 2012. This unique dataset allows us to address research questions related to the micro-foundations of gender gaps in career dynamics in the MFI that have not been addressed before. Our analytical sample includes annual data on almost 30,000 employees working in the MFI from 2004 to 2012. We have linked these employees in 2012 to 336,000 clients and 341,000 loans.

The year-level employee data include information such as age, gender, education, position, wage, social benefits, division, and location; gender of the immediate and the superior supervisor; domicile, civil status, and children; entry date; and maternity leave. We linked this information at the employee level to information on the clients themselves for the year 2012 (age, gender, highest level of education completed), including performance measures such as loan characteristics (credit products granted, loan delivery timeline, loan repayment instalments, and prior credit products received).

Much of our analysis examines differences for the main career paths in the firm (administrative and sales) as well as for loan officers (within the sales division) separately. Table 1 shows some descriptive statistics for the main employee data sample for each of these groups (administrative, sales, and loan officers) by gender for the first and last year in our sample (2004 and 2012). As Table 1 shows, most of the employees working for the MFI are in fact loan officers, and thus they make up the largest share of our sample. Table 2 shows some descriptive statistics for the client sample, which we matched to employee data for 2012.

Table 1: Employee summary statistics by career path and gender, 2004 and 2012

Administrative	2004	2004	2012	2012
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
Age (years)	28.91	27.10	32.14	29.15
Tenure (years)	1.88	1.31	2.15	2.25
Bachelor (%)	0.79	0.67	0.83	0.76
Above bachelor* (%)	0.19	0.13	0.63	0.58
Evaluation (ave. score)	N/A	N/A	94.31	95.30
Married (%)	0.38	0.23	0.40	0.21
Children* (ave. no.)	N/A	N/A	0.14	0.07
N	118	216	1,069	2,049
Sales				
	2004		2012	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
Age (years)	27.16	27.67	28.30	29.24
Tenure (years)	0.97	1.25	1.10	1.43
Bachelor (%)	0.67	0.55	0.50	0.44
Above bachelor* (%)	0.07	0.06	0.31	0.27
Urban (%)	0.19	0.24	0.34	0.39
Married (%)	0.43	0.29	0.43	0.30
Children* (ave. no.)	N/A	N/A	0.70	0.87
N	595	656	6,430	5,525
Sales - Promotor/Asesor levels				
	2004		2012	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
Age (years)	25.90	27.06	27.64	28.64
Tenure (years)	0.55	0.85	0.66	0.90
Bachelor (%)	0.57	0.47	0.46	0.41
Above bachelor* (%)	0.06	0.05	0.27	0.24
Urban (%)	0.18	0.24	0.34	0.40
Married (%)	0.40	0.28	0.41	0.28
Children* (ave. no.)	N/A	N/A	1.31	1.42
N	416	513	4,996	4,367

Note: \* Information on average number of children and educational level attained is only available for a subset of employees.

Source: Authors' calculations based on data described in Section 4.

Table 2: Client summary statistics, 2012

Client/loan characteristics	Gender of employee assigned to client	
	Female employee	Male employee
Female clients (%)	0.954	0.941
Female-only product (%)	0.855	0.822
Age of clients	39.013	39.090
Number of previous loans	8.056	7.838
Amount of loan (Mexican peso)	9120.82	8850.52
Payment amount (Mexican peso)	804.88	796.72
Loan length (weeks)	20.48	20.83
Urban (%)	0.407	0.341
N	163,232	178,004

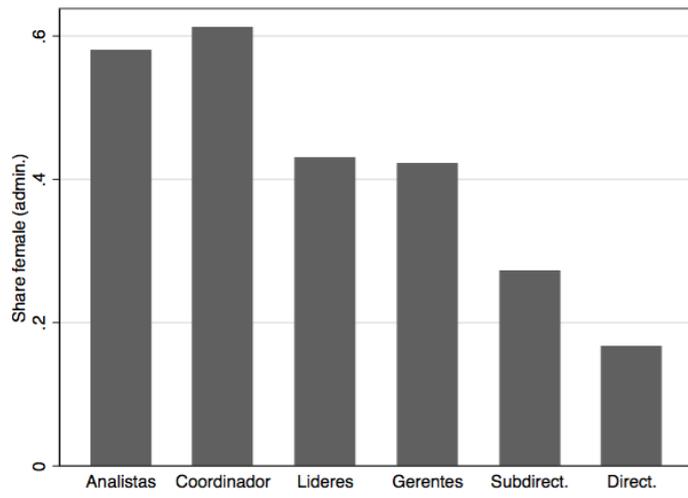
Source: Authors' calculations based on data described in Section 4.

First, we note the dramatic growth in the MFI over this period, during which the number of employees increased close to tenfold. Second, the share of employees with education above college level increased dramatically in both divisions. In terms of differences in characteristics by gender, we see that in the administrative path women tend to be slightly younger than men, while in sales women are older on average. Women are less likely to be married in both divisions. For the subsample for which information is available about children, we see that in the administrative path women tend to have fewer children than men, while in sales women have more children than men. The loan officers have more children on average than the employees in the sales or administrative paths as a whole.

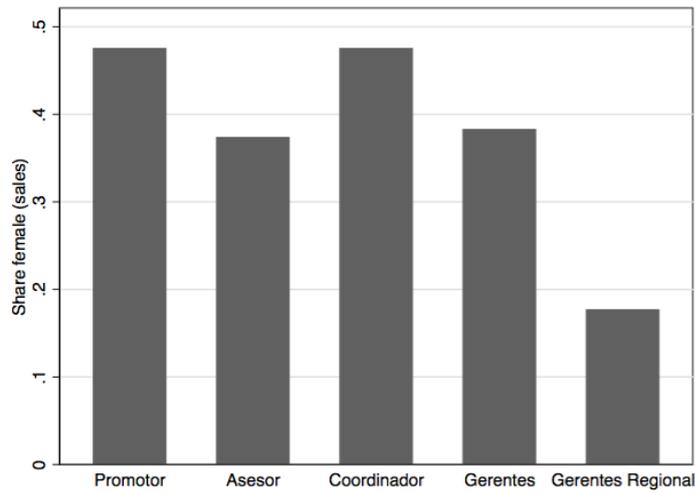
Figure 3 shows the share of women by career path at each rank. In the administrative career path (Figure 3a), the gender gap favours women at the 'Analista' and 'Coordinador' levels but then begins to favour men at the higher ranks, beginning at the 'Líder' level. In the sales division (Figure 3b), 'Promotores' and 'Coordinadores' are close to gender equality, while for 'Asesores' and the highest ranks there are shares of women similar to those in the higher ranks of the administrative path. In Figure 3c, we look at the ranks within the loan officer positions, and we see that here the gender gap is reversed—that women make up a greater share of the loan officers at the higher ranks, with 60 per cent of the 'Maestro' rank women. Trends in the share of women by rank for each division are shown in Figures 4a–4c. These figures show that there have not been notable changes over the period of 2004–2012, but there are upward trends in the share of women at the 'Líder' and 'Director' levels in the administrative career paths.

Figure 3: Share of women by rank, 2012

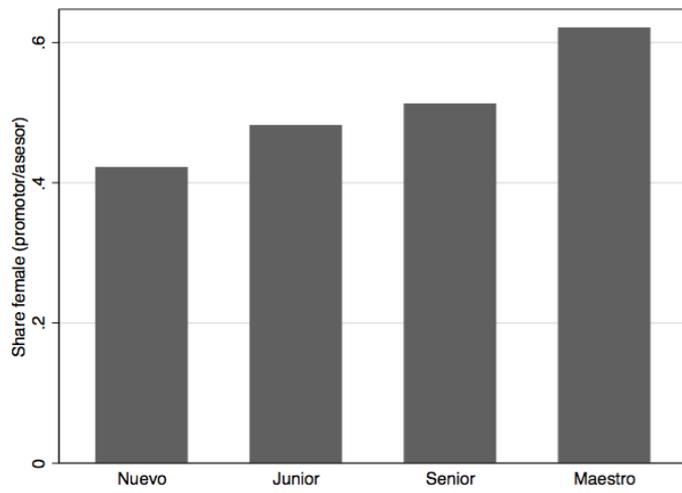
3a: Administrative



3b: Sales



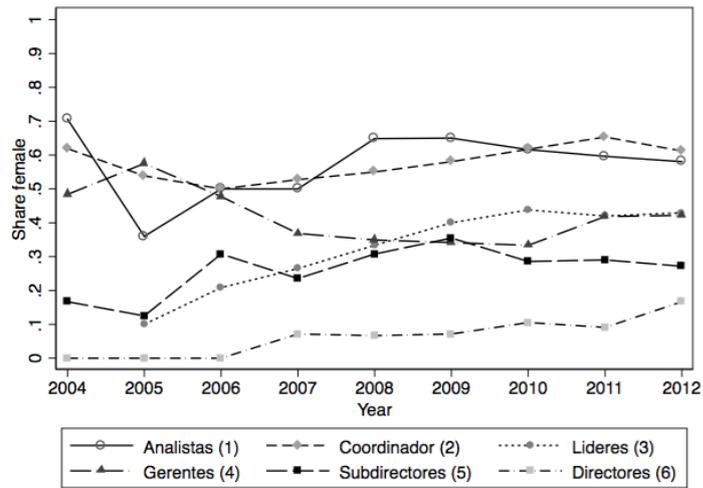
3c: Sales – Loan officers (Promotor/Asesor)



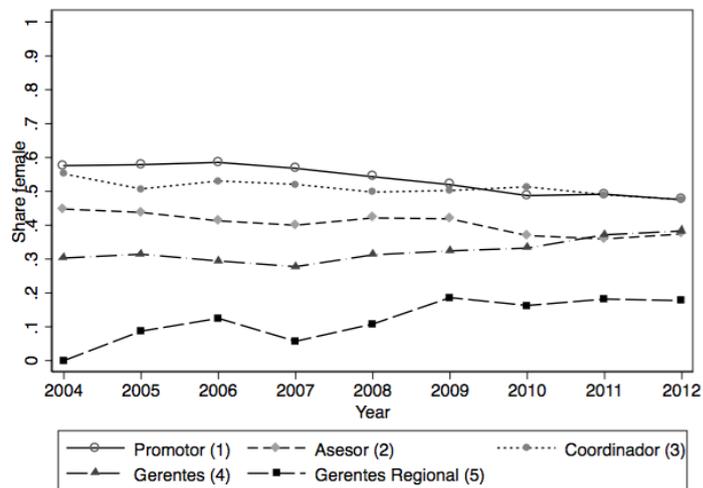
Source: Authors' calculations based on data described in Section 4.

Figure 4: Share of women by rank, 2004–2012

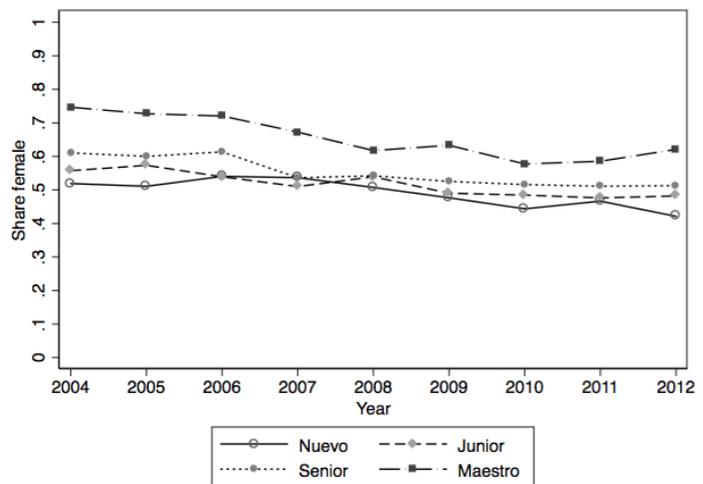
4a: Administrative



4b: Sales



4c: Sales – loan officers (Promotor/Asesor)



Source: Authors' calculations based on data described in Section 4.

## 4.2 Empirical approach

### *Gender gaps in employee promotion, exit, and wages*

Given the panel nature of our data, which provides us with annual observations for the same employees for every year they are working in the firm, we follow other studies examining promotion and exit probabilities and estimate probit models, where we define promotion as a binary variable equal to 1 if an employee moved to a higher rank (position) the next year and 0 otherwise (e.g. Blau and DeVaro, 2007). Exit is defined as a binary variable equal to 1 if an employee was no longer in the firm the next year and 0 otherwise.

We estimate the models separately for each career path (administrative or sales) and also for loan officers separately to account for the differences in the nature of the gender gap documented in the previous sections. For promotion, we first run the model on a female dummy only, to estimate the raw gender differential in promotion probability. We then include rank dummies, area of practice, year dummies, and additional variables for worker and job characteristics (age, tenure in the firm) to estimate whether the differential remains after accounting for these observable characteristics. The full specification of the probit model is as follows for individual  $i$  in year  $t$ :

$$Pr(\text{Promoted}_{it+1}) = \Phi(\beta_0 + \beta_1 \text{Female}_i + \beta_2 \text{Age}_{it} + \beta_3 \text{Age}_{it}^2 + \beta_4 \text{Tenure}_{it} + \beta_5 \text{Tenure}_{it}^2 + \beta_7 X_i + \gamma_t)$$

where for employee  $i$  working in year  $t$ , *Female* is a dummy for a female employee, *Age* is measured in years (precise, from human resources records), and *Tenure* is defined as years in the firm.  $X$  indicates a vector of other variables we include in different specifications, including highest degree obtained and the gender of the employee's supervisor. We have two measures of the gender of the employee's supervisor: 'immediate supervisor', which is the direct supervisor of the employee, and 'superior supervisor', which is the supervisor of the entire division in which the employee works.

We are primarily interested in the coefficient on the female dummy, which will be a measure of the differential likelihood of promotion for women compared to men. All models for the sales sample include an urban dummy. All models include a full set of time dummies using the year of the observation to account for time trends in terms of promotion probabilities within the firm, and dummies for which area within the institution the employee works in ('Dirección'). We also use robust standard errors clustered at the employee level. All probit results presented are the marginal effects at the means of continuous variables, while for binary independent variables they reflect predicted probabilities when the variable increases from 0 to 1.

We run the same regressions to predict exit. For wage gaps, we run an ordinary least squares (OLS) regression, where now our dependent variable is log of wages, and we are again interested in the coefficient on the female dummy:

$$\ln(\text{wage})_{it} = \beta_0 + \beta_1 \text{Female}_i + \beta_2 \text{Age}_{it} + \beta_3 \text{Age}_{it}^2 + \beta_4 \text{Tenure}_{it} + \beta_5 \text{Tenure}_{it}^2 + \beta_7 X_i + \gamma_t$$

For these regressions, we include the same control variables as in the promotion and exit regressions, as indicated in Tables 3–6.

In the next part of the analysis, we examine the patterns of matching between clients and loan officers by gender. We then examine whether the gender of the loan officer appears to impact credit outcomes. For these specifications, we closely follow the approach in Beck et al. (2013).

First, we examine whether clients are more likely to be matched with female loan officers after controlling for observable covariates and fixed effects. We run the following regression for loan officer ('Promotor' or 'Asesor')  $i$  and client  $j$ :

$$Female\ officer_i = \beta_0 + \beta_1 Female\ client_j + \beta_2 X_{ij} + \epsilon_{ij}$$

where  $X$  is a vector of covariates including sales level ('Nuevo', 'Junior', 'Senior', 'Maestro'), state dummies, an urban dummy, and product dummies.

As Beck et al. (2013) describe, the coefficient on *Female client* shows whether client gender is related to loan officer gender conditional on covariates. If we can reject the null hypothesis that this coefficient is 0, then this would suggest that there is effectively random matching of loan officers to clients. If we cannot reject the null, then this suggests assortative matching with regard to gender. Note the lion's share of the MFI's loan products are for women only; for this specification, as we want to compare matching of female vs. male clients to officers, we restrict the sample to only clients with non-female-only products.

In the next part of the analysis with the client data, we estimate whether the gender of the loan officer appears to impact credit outcomes, including loan terms. We run the following regression for loan officer  $i$  and client  $j$ :

$$\begin{aligned} Loan\ outcome_{ij} = & \beta_0 + \beta_1 Female\ officer_i * Female\ client_j \\ & + \beta_2 Female\ officer_i * Male\ client_j + \beta_3 Male\ officer_i \\ & * Male\ client_j + \beta_4 X_{ij} + \epsilon_{ij} \end{aligned}$$

where *Loan outcome* includes a proxy for the interest rate (calculated as the difference between the payback amount and loan amount divided by the loan amount) and how many previous loans the client has received.  $X$  is a vector of covariates including sales level ('Nuevo', 'Junior', 'Senior', 'Maestro'), state dummies, an urban dummy, and product dummies. The key coefficients of interest are the gender pairs between loan officers and clients, with the omitted category being *Male officer–Female client*. We run the analysis separately for 'Promotor' and 'Asesor' positions and also for female-only products (only relevant for 'Promotor') and non-female-only products.

## 5 Results

We next present results from our regression analysis to examine the determinants of the probability of promotion and exit by gender. First, we estimate probit models for the probability of promotion and of exit separately by career path (administrative or sales) and for loan officers. In these specifications, we are interested first in estimating the magnitude of the difference in the probability of promotion for men and women by looking at the female coefficient. Then we add controls to see how the coefficient changes, to see whether the differences in promotion can be explained by these variables.

In Table 3 we present the promotion probability results for the administrative career path, and in Table 4 we present the results for the sales career path. In Table 3, Column 1, we see that that the raw gap (no controls) favours women, with women being 1.7 per cent more likely to be promoted. However, the overall differences by gender in the probability of promotion disappear after controlling for individual characteristics, area of practice, rank, and time trends. But a significant gap in the probability of promotion favouring men persists at the intermediate level of 'Líder'.

Table 3: Promotion regressions, administrative division

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Promote</u>							
Female	0.0177* (0.00906)	-0.0107 (0.0134)	-0.0125 (0.0131)	0.0558** (0.0279)	-0.0197 (0.0192)	-0.0162 (0.0226)	-0.0229 (0.0155)
Age			-0.0109 (0.0107)	0.0151 (0.00951)	-0.0141 (0.0114)	-0.0170 (0.0167)	-0.0111 (0.0107)
Age2			0.000151 (0.000159)	-0.000150 (0.000136)	0.000198 (0.000168)	0.000278 (0.000244)	0.000155 (0.000158)
Tenure			0.0202*** (0.00741)	-0.0172*** (0.00504)	0.0180** (0.00780)	0.0300** (0.0131)	0.0199*** (0.00746)
Tenure2			-0.00103 (0.000863)	0.000871* (0.000464)	-0.000774 (0.000902)	-0.00220 (0.00175)	-0.000986 (0.000870)
Headquarters			0.135*** (0.0391)	-0.0769*** (0.0271)	0.121*** (0.0414)	0.212 (0.144)	0.134*** (0.0391)
Female x Coordinador				-0.0503 (0.0348)			
Female x Líder				-0.111*** (0.0389)			
Female x Gerente				-0.0583 (0.0382)			
Female x Subdirector				-0.0452 (0.0560)			
Female immediate supervisor					-0.0122 (0.0231)		
Female x female immediate supervisor					0.0323 (0.0305)		
Female superior supervisor					0.0128 (0.0280)		
Female x female superior supervisor					-0.0361 (0.0348)		
Number of children						-0.0268 (0.0202)	
Female x no. children						-0.00968 (0.0512)	
Married							-0.0172 (0.0205)
Female x married							0.0344 (0.0281)
Rank dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Direction (area) dummies	Yes						
Year dummies	Yes						
Observations	3,950	2,751	2,735	2,745	2,470	1,176	2,735

Notes: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Robust standard errors clustered by individual are in parentheses. Estimation is by probit. Dependent variable is promotion, which is defined as a binary variable equal to 1 if an employee moved to a higher rank the next year and 0 otherwise. Marginal effects presented at the means of continuous variables. For binary independent variables, marginal effects reflect predicted probabilities when the variable increases from 0 to 1. For more information and a more detailed description of the variables, see Section 4.2.

Source: Authors' own analysis as described in Section 4.

In contrast, within the sales division (Table 4), we find that a gender gap in promotion favouring men persists even after including controls. Column 3, with all controls, shows that the gap is small (around 2 per cent) but significant. In Column 4 we see that the gap is highest at the most highly ranked position ('Gerente' to 'Gerente Regional'). In the last column we include an interaction of the female dummy with a married dummy. The estimates provide some evidence that family factors play a role in the sales division regarding promotion, with women who are married being more likely to be promoted compared to unmarried women. We find some evidence of interaction effects of the female dummy and tenure within the firm (not presented here) in the sales division, but not in the administrative.

Table 4: Promotion regressions, sales division

	(1)	(2)	(3)	(4)	(5)	(7)	(8)
<u>Promote</u>							
Female	-0.00966*** (0.00222)	-0.0188*** (0.00307)	-0.0237*** (0.00317)	-0.0220*** (0.00368)	-0.0247*** (0.00432)	-0.0238*** (0.00500)	-0.0298*** (0.00409)
Urban		0.0114*** (0.00396)	0.0149*** (0.00400)	0.0148*** (0.00400)	0.0141*** (0.00519)	0.0150*** (0.00427)	0.0146*** (0.00401)
Age			0.0229*** (0.00279)	0.0229*** (0.00280)	0.0218*** (0.00380)	0.0247*** (0.00313)	0.0236*** (0.00282)
Age2			-0.000357*** (4.62e-05)	-0.000358*** (4.64e-05)	-0.000344*** (6.29e-05)	-0.000383*** (5.19e-05)	-0.000365*** (4.65e-05)
Tenure			0.0453*** (0.00419)	0.0452*** (0.00414)	0.0611*** (0.00455)	0.0487*** (0.00453)	0.0452*** (0.00420)
Tenure2			-0.00539*** (0.000905)	-0.00532*** (0.000895)	-0.00728*** (0.00110)	-0.00561*** (0.000992)	-0.00540*** (0.000908)
Female x Asesor				0.00493 (0.0105)			
Female x Coordinador				-0.00326 (0.0112)			
Female x Gerente				-0.0585*** (0.0182)			
Female immediate supervisor						-0.0107** (0.00477)	
Female x female immediate supervisor						0.000459 (0.00679)	
Female superior supervisor						0.000146 (0.00520)	
Female x female superior supervisor						0.00465 (0.00739)	
Married							-0.0111** (0.00446)
Female x married							0.0139** (0.00641)
Highest degree dummies	No	No	No	No	Yes	No	No
Rank dummies	No	Yes	Yes	Yes	Yes	Yes	Yes
Direction dummies	No	Yes	Yes	Yes	Yes	Yes	Yes
Yr dummies	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	49,001	37,048	37,048	37,048	20,963	32,941	37,028

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Robust standard errors clustered by individual are in parentheses. Estimation is by probit. Dependent variable is promotion, which is defined as a binary variable equal to 1 if an employee moved to a higher rank the next year and 0 otherwise. Marginal effects presented at the means of continuous variables. For binary independent variables, marginal effects reflect predicted probabilities when the variable increases from 0 to 1. For more information and a more detailed description of the variables, see Section 4.2.

Source: Authors' own analysis as described in Section 4.

Turning to the separate promotion regressions for loan officers ('Promotor' and 'Asesor') in Table 5, we find that, as the raw data suggests, women are more likely to advance through the ranks within these levels. Even after controlling for individual and other covariates, women are approximately 4–5 per cent more likely to be promoted than men (Columns 3 and 4). In Column 5, we find some evidence that if a woman's immediate supervisor is also a woman, she is even more likely to be promoted than if the supervisor is a man.

Table 5: Promotion regressions, Promotor/Asesor

	(1)	(2)	(3)	(4)	(5)	(6)
<u>Promote</u>						
Female	0.0362*** (0.00384)	0.0307*** (0.00506)	0.0443*** (0.00534)	0.0467*** (0.00702)	0.0279*** (0.00880)	0.0448*** (0.00682)
Urban		-0.000710 (0.00670)	-0.0143** (0.00703)	-0.00492 (0.00893)	-0.0120 (0.00741)	-0.0140** (0.00704)
Age			-0.000911 (0.00407)	-0.00553 (0.00544)	-3.22e-05 (0.00425)	-0.000897 (0.00409)
Age2			1.30e-05 (6.72e-05)	7.57e-05 (8.97e-05)	-5.53e-06 (7.01e-05)	1.33e-05 (6.73e-05)
Tenure			-0.0562*** (0.0112)	-0.0482*** (0.0183)	-0.0578*** (0.0125)	-0.0564*** (0.0112)
Tenure2			-0.0119*** (0.00437)	-0.0202** (0.00894)	-0.0121** (0.00496)	-0.0119*** (0.00436)
Female immediate supervisor					-0.00749 (0.00817)	
Female x female immediate supervisor					0.0327*** (0.0114)	
Female superior supervisor					0.00661 (0.00878)	
Female x female superior supervisor					-0.00691 (0.0122)	
Married						4.91e-05 (0.00793)
Female x married						-0.00102 (0.0110)
Highest degree dummies	No	No	No	Yes	No	No
Rank dummies	No	Yes	Yes	Yes	Yes	Yes
Direction (area) dummies	No	Yes	Yes	Yes	Yes	Yes
Year dummies	No	Yes	Yes	Yes	Yes	Yes
Observations	39,009	29,638	29,638	17,614	26,714	29,622

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Robust standard errors clustered by individual are in parentheses. Estimation is by probit. Dependent variable is promotion, which is defined as a binary variable equal to 1 if an employee moved to a higher rank the next year and 0 otherwise. Marginal effects presented at the means of continuous variables. For binary independent variables, marginal effects reflect predicted probabilities when the variable increases from 0 to 1. For more information and a more detailed description of the variables, see Section 4.2.

Source: Authors' own analysis as described in Section 4.

Next, we turn to the exit regressions in Table 6. Here, we see that within the administrative division there does not appear to be differential exit by gender, while in the sales division women are about 4 per cent less likely to exit, after controlling for covariates. There is a similar estimate for loan officers alone.

Table 6: Exit regressions

Exit	<u>Administrative</u>		<u>Sales</u>		<u>Promotor/Asesor</u>	
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.00263 (0.0118)	0.0558** (0.0279)	-0.0418*** (0.00490)	-0.0442*** (0.00574)	-0.0421*** (0.00554)	-0.0435*** (0.00586)
Headquarters	-0.0760*** (0.0268)	-0.0769*** (0.0271)				
Age	0.0150 (0.00959)	0.0151 (0.00951)	-0.00993*** (0.00359)	-0.0101*** (0.00360)	-0.0109*** (0.00408)	-0.0110*** (0.00408)
Age2	-0.000149 (0.000137)	-0.000150 (0.000136)	0.000140** (5.83e-05)	0.000143** (5.84e-05)	0.000140** (6.72e-05)	0.000142** (6.73e-05)
Tenure	-0.0175*** (0.00505)	-0.0172*** (0.00504)	-0.0521*** (0.00367)	-0.0521*** (0.00364)	-0.0627*** (0.00478)	-0.0627*** (0.00478)
Tenure2	0.000883* (0.000466)	0.000871* (0.000464)	0.00353*** (0.000575)	0.00349*** (0.000569)	0.00482*** (0.00100)	0.00482*** (0.00100)
Female x Coordinador		-0.0503 (0.0348)				
Female x Líder		-0.111*** (0.0389)				
Female x Gerente		-0.0583 (0.0382)				
Female x Subdirector		-0.0452 (0.0560)				
Urban			0.00382 (0.00635)	0.00380 (0.00635)	0.00328 (0.00724)	0.00326 (0.00724)
Female x Asesor				0.0137 (0.0175)		0.0128 (0.0178)
Female x Coordinador				-0.00406 (0.0138)		
Female x Gerente				0.0303 (0.0235)		
Female x Gerente Reg.				0.148 (0.0957)		
Rank dummies	Yes	Yes	Yes	Yes	Yes	Yes
Direction (area) dummies	No	Yes	No	Yes	No	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,752	2,745	37,335	37,335	29,646	29,646

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Robust standard errors clustered by individual are in parentheses. Estimation is by probit. Dependent variable is exit, which is defined as a binary variable equal to 1 if an employee was no longer in the firm the next year and 0 otherwise. Marginal effects presented at the means of continuous variables. For binary independent variables, marginal effects reflect predicted probabilities when the variable increases from 0 to 1. For more information and a more detailed description of the variables, see Section 4.2.

Source: Authors' own analysis as described in Section 4.

In Table 7, we estimate the gender wage gap for each career division. Here, we see a striking result across the career path types. While there were no significant gender differences in promotion in the administrative path after including controls, we see in Column 2 that women earn about 3 per cent lower wages after controlling for covariates. While this estimate is small in magnitude, Column 3 shows that the gap is much larger and mainly coming from the highest ranks. Meanwhile, in sales, where there were significant differences in promotion by gender, the wage differences disappear after including controls (Column 5). However, at the intermediate ranks ('Coordinador' and 'Gerente'), there are wage gaps. In Column 8, we see a different result for loan officers. Here, the wage gap reverses, with women earning about 0.5 per cent more than men on average, even after including controls.

Table 7: Wage regressions

<u>ln(wage)</u>	<u>Administrative</u>			<u>Sales</u>			<u>Promotor/Asesor</u>		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female	-0.405*** (0.0322)	-0.0280*** (0.00745)	-0.0153 (0.0123)	-0.0609*** (0.00736)	-0.00203 (0.00184)	0.00827*** (0.00157)	0.00628* (0.00321)	0.00432*** (0.00158)	0.00457*** (0.00154)
Headquarters		0.111*** (0.0172)	0.111*** (0.0171)						
Age		0.0132** (0.00612)	0.0127** (0.00577)		0.0105*** (0.00131)	0.0106*** (0.00130)		0.00749*** (0.00113)	0.00750*** (0.00113)
Age2		-8.37e-05 (8.97e-05)	-7.52e-05 (8.41e-05)		-0.000126*** (2.18e-05)	-0.000127*** (2.16e-05)		-9.17e-05*** (1.90e-05)	-9.19e-05*** (1.90e-05)
Tenure		0.00994** (0.00438)	0.0108** (0.00436)		0.105*** (0.00335)	0.105*** (0.00324)		0.137*** (0.00405)	0.137*** (0.00405)
Tenure2		7.53e-05 (0.000473)	2.89e-05 (0.000472)		-0.00776*** (0.000620)	-0.00765*** (0.000604)		-0.0113*** (0.00104)	-0.0113*** (0.00104)
Female x Coordinador			-0.0127 (0.0179)						
Female x Líder			-0.00335 (0.0177)						
Female x Gerente			0.00361 (0.0232)						
Female x Subdirector			-0.111*** (0.0375)						
Female x Director			-0.277*** (0.0684)						
Urban					0.151*** (0.00225)	0.151*** (0.00225)		0.162*** (0.00201)	0.162*** (0.00202)
Female x Asesor						-0.00265 (0.00694)			-0.00232 (0.00694)
Female x Coordinador						-0.0546*** (0.00772)			

Female x Gerente						-0.0462***			
						(0.0124)			
Female x Gerente Reg.						-0.0277			
						(0.0329)			
Constant	7.327***	6.547***	6.518***	6.462***	5.404***	5.422***	6.262***	5.720***	5.720***
	(0.0303)	(0.109)	(0.106)	(0.00574)	(0.0203)	(0.0212)	(0.00227)	(0.0300)	(0.0300)
Rank dummies	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Direction (area) dummies	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Year dummies	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Observations	12,833	3,950	3,950	49,707	49,001	49,001	39,009	39,009	39,009

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Robust standard errors clustered by individual are in parentheses. Estimation is by OLS. Dependent variable is log wages. For more information and a more detailed description of the variables, see Section 4.2.

Source: Authors' own analysis as described in Section 4.

Finally, we turn to the analysis of client data matched to loan officers. We examine matching among loan offers and clients by gender in Table 8. Here, Column 1 shows that female ‘Promotores’ are more likely to work with female clients, but, similarly to Beck et al. (2013), after controlling for covariates, we show in Column 2 that women ‘Promotores’ are no more likely to work with female clients than male clients (for non-female-only loan products). This suggests that assortative matching by gender is not occurring. In Column 4, however, we do find that female ‘Asesores’ are 1.8 per cent more likely to work with female clients.

Table 8: Matching of loan officers and clients

	<u>Promotor</u>		<u>Asesor</u>	
	(1)	(2)	(3)	(4)
<u>Female officer</u>				
Female client	0.0149*** (0.00727)	0.00471 (0.00664)	0.0218** (0.00885)	0.0179* (0.0101)
Urban		-0.0184 (0.0413)		0.0611 (0.0613)
Constant	0.432*** (0.0144)	0.753*** (0.134)	0.366*** (0.00695)	1.018*** (0.249)
Sales-level dummies	No	Yes	No	Yes
State dummies	No	Yes	No	Yes
Product dummies	No	Yes	No	Yes
Observations	43,926	43,926	12,745	11,071

Notes: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Robust standard errors clustered by loan officer are in parentheses. Estimation is by OLS. Dependent variable is a dummy for whether a loan officer is female. For more information and a more detailed description of the variables, see Section 4.2.

Source: Authors’ own analysis as described in Section 4.

In Table 9, we examine whether there are differences in the loan terms and in whether the client is a return borrower depending on the officer–client match by gender. In Columns 1 and 2, we restrict the sample to ‘Promotores’ working with female clients who borrowed through female-only products. The results show that female ‘Promotores’ appear to work with clients who receive slightly better terms (lower interest rates) and have had previous loans with the MFI, compared to male ‘Promotores’. Meanwhile, for the mixed gender products, male ‘Promotores’ appear to work with male clients receiving lower interest rates than those working with female clients. Male clients working with either male or female ‘Promotores’ have had fewer previous loans than female clients have had (Column 4). The last two columns show the results for ‘Asesores’ (who do not work with female-only product clients in our sample). Here, again, male clients working with either male or female ‘Asesores’ have had fewer previous loans. In terms of interest rates, female ‘Asesores’ work with women with lower rates, while male ‘Asesores’ work with men with higher rates, compared to male ‘Asesores’ working with female clients.

Table 9: Loan officer–client gender and loans

	<u>Promotor</u>		<u>Asesor</u>			
	<u>Female-only products</u>		<u>Mixed-gender products</u>		<u>Mixed-gender products</u>	
	(1)	(2)	(3)	(4)	(5)	(6)
	Interest (inferred)	Previous loans	Interest (inferred)	Previous loans	Interest (inferred)	Previous loans
Female officer ( <i>male officer</i> )	-0.00761*** (0.00295)	0.220*** (0.0591)				
Female officer–female client ( <i>Male officer–female client</i> )			-0.000518 (0.00131)	0.109 (0.0666)	-0.0797 (0.0824)	0.0388 (0.170)
Female officer–male client			-0.000513 (0.00139)	-2.036*** (0.0580)	0.00208 (0.0799)	-2.831*** (0.126)
Male officer–male client			-0.00185*** (0.000702)	-2.096*** (0.0557)	0.126*** (0.0355)	-2.855*** (0.120)
Urban	0.00372 (0.00448)	-1.130*** (0.0920)	0.00258 (0.00165)	0.109* (0.0649)	0.0188 (0.143)	-0.315* (0.161)
Constant	0.0514*** (0.0133)	11.27*** (0.236)	1.442*** (0.00292)	3.208*** (0.185)	1.940*** (0.168)	3.649*** (0.539)
Sales-level dummies	Yes	Yes	Yes	Yes	Yes	Yes
State dummies	Yes	Yes	Yes	Yes	Yes	Yes
Product dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	284,561	284,561	43,926	43,926	11,071	11,071

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Robust standard errors clustered by loan officer are in parentheses. Estimation is by OLS. Dependent variable is interest rate (inferred) or number of previous loans. For more information and a more detailed description of the variables, see Section 4.2.

Source: Authors' own analysis as described in Section 4.

## 6 Discussion and concluding remarks

In this paper, we have used rich data from the largest MFI in Latin America to document and understand gender differences in the career paths of MFI employees. While MFIs are increasingly important as employers of individuals in the developing world, there is very little evidence on the state of gender differences in employment and career dynamics in the MFI sector. Our analysis contributes to develop an understanding of gender gaps in career dynamics in this key sector in the development process.

We document important differences within the MFI by career path in the nature of gender gaps and their dynamics. First, we show in the raw data that the MFI exhibits a similar pattern to that found in other professional sectors, where there is close to gender parity at the entry level but gender gaps favouring men emerge at the higher ranks, and this is particularly true in the administrative career path. However, within the lowest ranks of the sales division—the loan officers, who work directly with clients and make up the largest share of the institution’s employees—there is a strikingly different pattern. At this level the gender gap is reversed, so that women are represented more than men at the higher ranks within these positions.

Our regression analysis highlights the clear differences in gender gaps by career path. While there are no significant gender differences in promotion in the administrative path, there is a significant gender wage gap, even after controlling for covariates, and this gap appears to be largest at the highest ranks. Meanwhile, in sales, there are significant differences in promotion by gender, but wage differences disappear after including controls. However, among loan officers the wage gap reverses, so that women earn higher wages on average than men. Our analysis of the loan officer and client data indicates that matching of clients and loan officers in terms of gender may be influencing loan terms and outcomes, with female loan officers more likely to be working with clients who have had previous loans, and better terms.

Our analysis points to the important role that the gender dynamics within MFIs can potentially play in the development process. Our results suggest that the MFI is a gender-friendly employer when it comes to the loan officers—those at the front line of the MFI—as promotion and wage gaps here actually favour women. However, within the rest of the organization, the gender gaps are of a similar nature to those in other professional sectors, where women earn lower wages and are less likely to reach the highest ranks.

Our study makes several contributions and points to several important areas of future research. As the first study to document gender gaps in wages and career trajectories in the microfinance sector, it shows that the dynamics of gender gaps within MFIs are complex. We show that gender gaps increase with seniority in the administrative division while a reversed gender gap is found at the lower ranks in the division that characterizes the microfinance sector—those responsible for the sale of microcredit products. This is important, as it shows the extent to which, in the ‘back office’ of the organization where employees do not interact directly with the clients of the MFI, the dynamics of gender gaps are similar to those observed for professionals in the traditional financial and corporate sectors. On the other hand, in the ‘front office’ of the organization, where employees are client-facing and deal primarily with female clients, the gender gap is reversed, although only at the lower ranks of the division.

This study suggests that more research is needed in order to understand how organizations in the microfinance sector change with development. A reversal of the gender gap was observed at the lower ranks of the division that operates in close contact with the primarily female microfinance

clients. This leads to several questions defining the agenda for future research, such as: will this shift gradually affect the higher ranks of the sales division and then the ‘back office’ of the organization? How long will this take? Or will the reversal be limited within those positions where women have a comparative advantage in interacting with female clients? Answers to these questions have important implications for the evolution of the sector, and at the micro level for understanding how women’s empowerment on the employer side of the microfinance sector is shaped.

## References

- Agier, I., and A. Szafarz, (2013). ‘Microfinance and Gender: Is There a Glass Ceiling on Loan Size?’ *World Development*, 42: 165–81.
- Akerlof, G.A., and R.E. Kranton (2000). ‘Economics and Identity’. *Quarterly Journal of Economics*, 115: 715–53.
- Babcock L., and S. Laschever (2003). *Women Don’t Ask: Negotiation and the Gender Divide*. Princeton, NJ: Princeton University Press.
- Beck, T., P. Behr, and A. Guettler (2013). ‘Gender and Banking: Are Women Better Loan Officers?’ *Review of Finance*, 17: 1279–321.
- Beck, T., P. Behr, and A. Madestam (2014). ‘Sex and Credit: Is There a Gender Bias in Lending?’ Working Paper 29. London: Faculty of Finance, Cass Business School.
- Becker, G.S. (1973). ‘A Theory of Marriage: Part I’. *Journal of Political Economy*, 81(4): 813–46.
- Bertrand M., C. Goldin, and L. Katz (2010). ‘Dynamics of the Gender Gap for Young Professionals in the Financial and Corporate Sectors’. *American Economic Journal: Applied Economics*, 2: 228–55.
- Blau, F.D., and J. DeVaro, 2007. ‘New Evidence on Gender Differences in Promotion Rates: An Empirical Analysis of a Sample of New Hires’. *Industrial Relations: A Journal of Economy and Society*, 46(3): 511–50.
- Boehe, D.M., and L.B. Cruz (2013). ‘Gender and Microfinance Performance: Why Does the Institutional Context Matter?’ *World Development*, 47: 121–35.
- Brau, J., and G. Woller (2004). ‘Microfinance: A Comprehensive Review of the Existing Literature’. *Journal of Entrepreneurial Finance*, 9(1): 1–27.
- Cull, R., A. Demirgüç-Kunt, and J. Morduch (2009). ‘Microfinance Meets the Market’. *Journal of Economic Perspectives*, 23(1): 167–92.
- D’Espallier, B., I. Guérin, and R. Mersland (2011). ‘Women and Repayment in Microfinance: A Global Analysis’. *World Development*, 39(5): 758–72.
- Di Benedetto, P., I.W. Lieberman, and L. Ard (2015). ‘Corporate Governance in Microfinance Institutions’. Washington, DC: World Bank. Available at: <https://openknowledge.worldbank.org/handle/10986/22059> (accessed 17 April 2017).
- Duflo, E. (2003). ‘Grandmothers and Granddaughters: Old-Age Pensions and Intrahousehold Allocation in South Africa’. *World Bank Economic Review*, 17(1): 1–25.
- Duflo, E. (2012). ‘Women’s Empowerment and Economic Development’. *Journal of Economic Literature*, 50(4): 1051–79.

- Ganguli, I., R. Hausmann, and M. Viarengo (2016). 'Gender Differences in Professional Career Dynamics: New Evidence from a Global Law Firm'. Mimeo. Cambridge, MA: Harvard University.
- Gilson, R.J., and R.H. Mnookin (1989). 'Coming of Age in a Corporate Law Firm: The Economics of Associate Career Patterns'. *Stanford Law Review*, 41(3): 567–95.
- Hartarska, V., D. Nadolnyak, and R. Mersland (2014). 'Are Women Better Bankers to the Poor? Evidence from Rural Microfinance Institutions'. *American Journal of Agricultural Economics*, 96(5): 1291–306.
- Iskenderian, M.E. (2011). 'Women as Microfinance Leaders, Not Just Clients'. *Harvard Business Review*, 16 March.
- Lansford, M., V. Clements, T. Falzon, D. Aish, and R. Rogers (2010). 'Essential Leadership Traits of Female Executives in the Non-Profit Sector'. *Journal of Human Resource and Adult Learning*, 6(1): 51–62.
- Lazear, E., and S. Rosen (1981). 'Rank-Order Tournaments as Optimum Labor Contracts'. *Journal of Political Economy*, 89(5): 841–64.
- Lazear E., and K. Shaw (2007). 'Personnel Economics: The Economist's View of Human Resources'. *Journal of Economic Perspectives*, 21(4): 91–114.
- Roodman, D., and U. Qureshi (2006). *Microfinance as Business*. Washington, DC: Center for Global Development.
- Strøm, R.Ø., B. D'Espallier, and R. Mersland (2014). 'Female Leadership, Performance, and Governance in Microfinance Institutions'. *Journal of Banking and Finance*, 42: 60–75.
- Thomas, D. (1990). 'Intra-Household Resource Allocation: An Inferential Approach'. *Journal of Human Resources*, 25: 635–64.
- Thomas, D. (1994). 'Like Father, Like Son: Like Mother, Like Daughter. Parental Resources and Child Height'. *Journal of Human Resources*, 24: 950–88.
- WWB (2009). *Where did All the Women Go?* New York: Women's World Banking.
- WWB (2010). *Transforming the Landscape of Leadership in Microfinance: Maintaining the Focus on Women*. New York: Women's World Banking .
- WWB (2012). *Annual Report*. New York: Women's World Banking.
- World Bank (2000). *Microfinance Handbook: An Institutional and Financial Perspective*. Washington, DC: World Bank.