

# Career Dynamics and Gender Gaps among Employees in the Microfinance Sector

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# Outline

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- I. Motivation
  - II. Background
  - III. Data
  - IV. Descriptive Statistics
  - V. Career Dynamics Analysis
  - VI. Loan Officers – Clients Analysis
  - VII. Concluding Remarks
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# I. Motivation

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- MFI are commonly identified with the idea of empowering women not as passive recipients but as active leaders and key actors in generating social change
  - Nevertheless, there is no clear evidence supporting the gender parity in the career paths of the employees of microfinance institutions (MFIs)
  - This study is aimed at filling this gap, providing empirical evidence from the largest MFI in Latin America
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# Stylized Facts

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- Significant expansion of the microfinance sector in several developing countries in the past decades
  - MFIs are an increasingly important employer and many of the commercially successful MFIs employ hundred of thousands of individuals (e.g., Grameen Bank employs 22,924 staff members, Bancosol employs 2,740 staff members)
  - In several countries women represent a significant share of both clients and the workforce of MFIs (Mix Market 2016)
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# Research Questions

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- Are there gender gaps in the career paths within the MFI?
  - Are there differences in earnings, promotion and exit across the divisions of the MFI (i.e., administrative vs. sales division)?
  - How can we explain the observed gender differences?
  - Are gender differences related to the types and outcomes of the clients themselves?
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# Preview of Findings

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- The dynamics of gender gaps are complex and vary within the largest MFI in Latin America
  - Different factors have an impact on the dynamics of gender gaps at different stages of the career path
  - We document the heterogeneity in gender gaps across the divisions of the MFI: in the administrative division gender gaps are more similar to the ones observed in the financial sector whereas in the division core to the microfinance sector a reversal of the gender gap is observed
  - In terms of loan officers matching, we document that female employees tend to be associated with those loans that have better conditions and consequently a higher expected probability of repayment
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## II. Background

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# I] MFIs and Women's Employment

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- Most of the studies on gender employment in MFI come from the business literature and from NGOs and other organizations promoting female empowerment and leadership
  - 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 (HBR, 2011)
  - Nevertheless, Strøm, D’Espallier and Mersland (2014) find a causal relation between female leadership and performance of MFIs, which is mainly driven by the female market orientation of MFIs and not by better governance
  - There is no paper to our knowledge that provides an explanation for this trend and examines its micro-foundations
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# Why should new business models be gender-friendly employers?

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- The business case for gender equality is widely documented by both academic research and corporate studies (e.g., Catalyst, 2007; McKenzie, 2007; Dezso and Ross, 2008; Adams and Ferreira, 2009)
- For the case of new business models that pursue both social impact and financial returns, the case is based on the fact that:
  - Women tend to have a comparative advantage in the specific skills of the non-profit sector (Lanslord et al., 2010)
  - Generating deep social change and gender empowerment requires women to be seen as leaders and active drivers of development (WWB, 2010)
- MFI female staff may understand better how to pursue this goal forward:
  - Women understand better the female market segment and clients tend to feel more comfortable with female staff (WWB, 2012)
  - Market recognition as a gender diverse organization attracts new clients, as it serves as a differentiation tool (WWB, 2010)

## II] Gender Gaps in Career Dynamics

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- Women's underperformance in the corporate and financial sectors has been widely documented in the existing literature (e.g., Babcock and Laschever, 2003; Bertrand, Chugh and Mullainathan, 2005; 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
  - However, there is no study at present that has documented gender gaps among employees in the microfinance sector
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# III] Clients – Loan Officers and Loan Outcomes

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- Gender differences have been examined in various fields in financial economics (e.g., investment decisions, equity analyst performance, corporate financial decisions, corporate boards, and mutual fund management) with mixed evidence on performance and behavioral differences between men and women
  - Beck et al. (2013) examine gender-dependent loan officers performance by relying on a dataset of a commercial bank in Albania over 1996 – 2006 to assess the relationship between borrowers' and loan officers' gender and loan performance
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## III. Data

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# The Microfinance Institution

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- It is the largest MFI in Mexico, the largest in Latin America and is ranked among the top global leaders (IDB, 2012; Devex, 2012; Mix Market, 2016).
    - Serves 3.2 million clients (88% are women)
    - Has a gross loan portfolio of USD 1.3 billion
    - Average loan balance per borrower of USD 500
    - Share of Non Performing Loans (NPL) of 2.96%
  - It has 16,972 employees (among these, 9,423 loan officers) working in 667 offices nationwide
  - It started as an NGO in 1990, issued debt in the capital markets for the first time in 2001 and became a commercial bank in 2006
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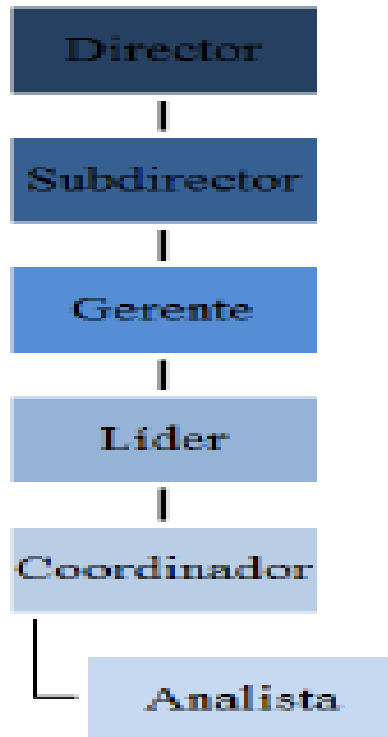
# Dataset

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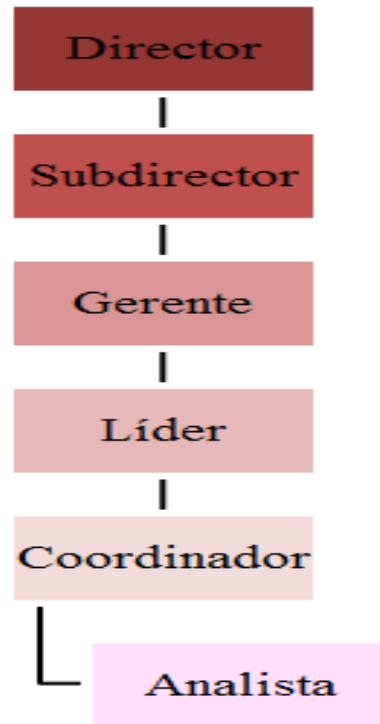
- Individual-year-level panel dataset based on human resource records of the bank that includes the universe of employees working in the MFI from 2004-2012
  - Our analytical sample includes individual-level annual data on almost 30,000 employees
  - The employee-year-level data include information such as age, gender, education, position, wage, social benefits, division and location; gender of the immediate supervisor and head of division; domicile, civil status and children; entry date and maternity leave
  - We linked these employees in 2012 to 336,000 clients and 341,000 loans
  - We examine the career dynamics in the 28 areas of practice in the administrative and sales divisions within the MFI, as well as the career paths of loan officers within the sales division
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# Career Trajectory in Selected Areas of Practice

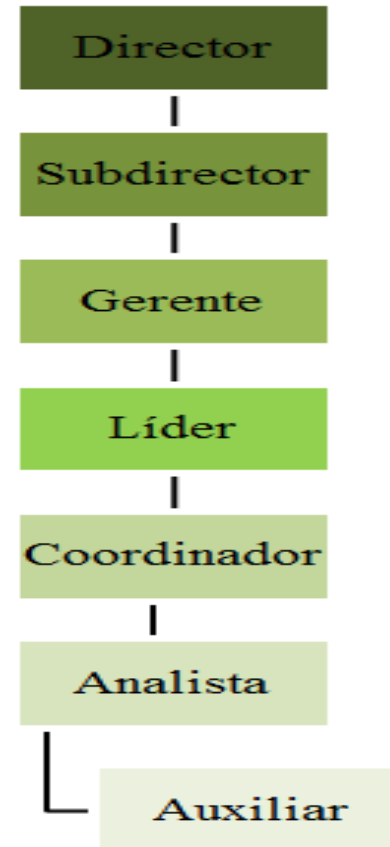
## Corporate Strategy



## Finance



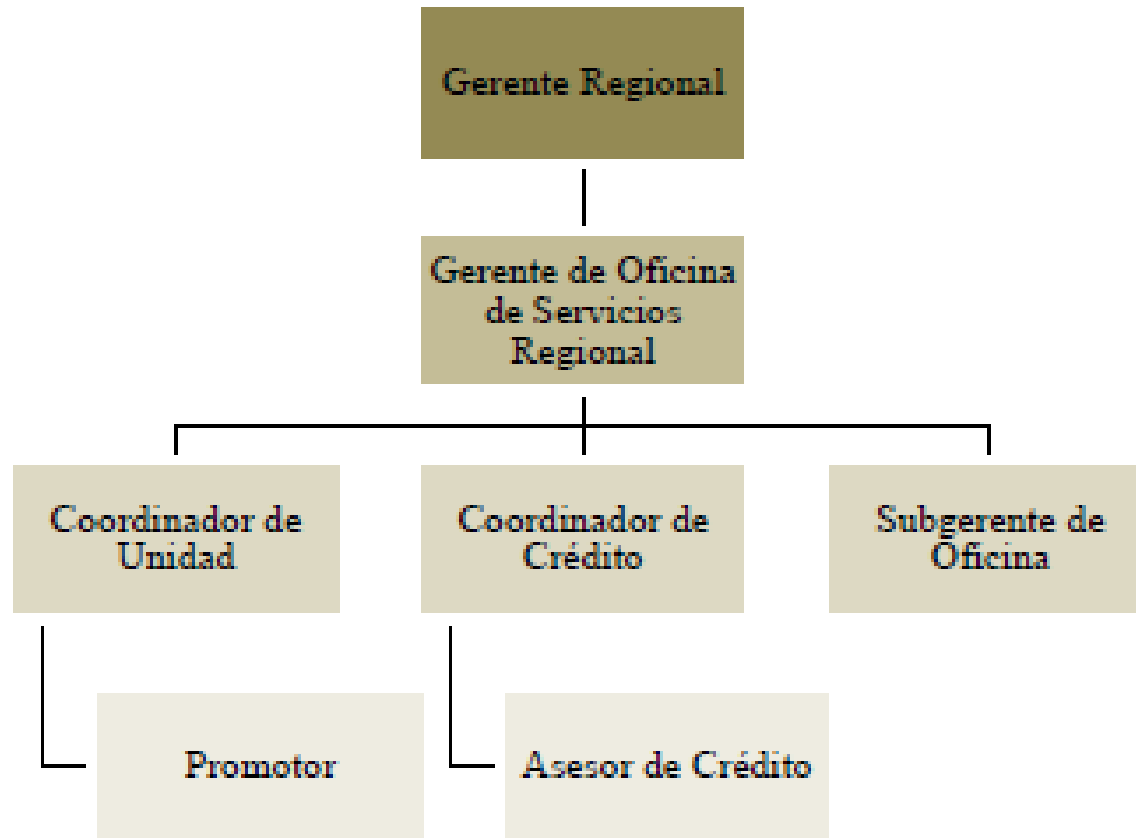
## Marketing



Note: 'Director'= director; 'Subdirector'= deputy director; 'Gerente'= manager; 'Líder'= head; 'Coordinador'= coordinator; 'Analista'= analyst; 'Auxiliar'= assistant



# Career Trajectory in Sales

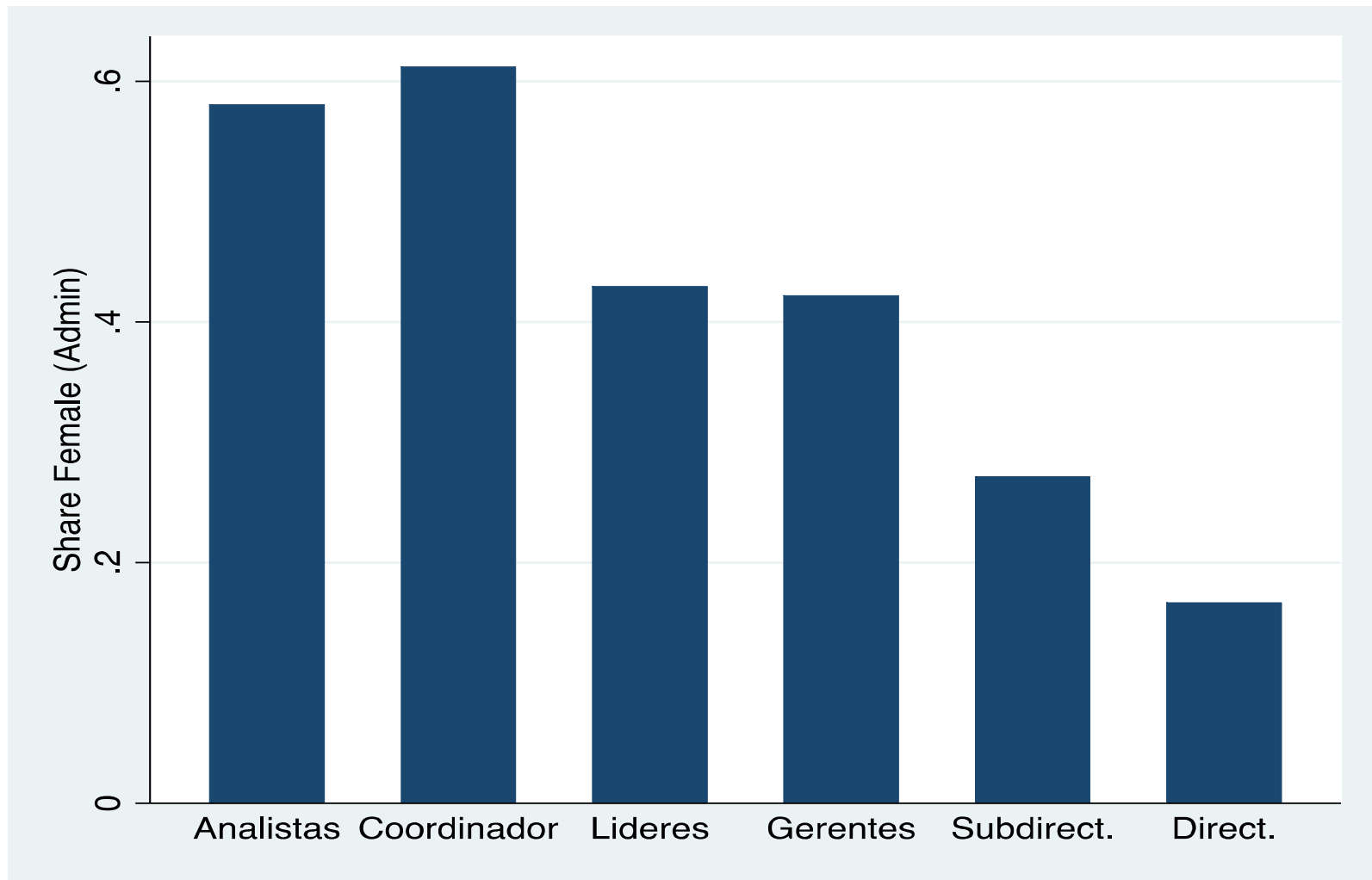


Note: 'Gerente regional'= regional manager; 'Gerente de oficina de servicios regional'= manager of the branches that provide services at the regional level; Coordinador'= coordinator; 'Subgerente de oficina'= deputy manager; 'Promotor/Asesor'= loan officer

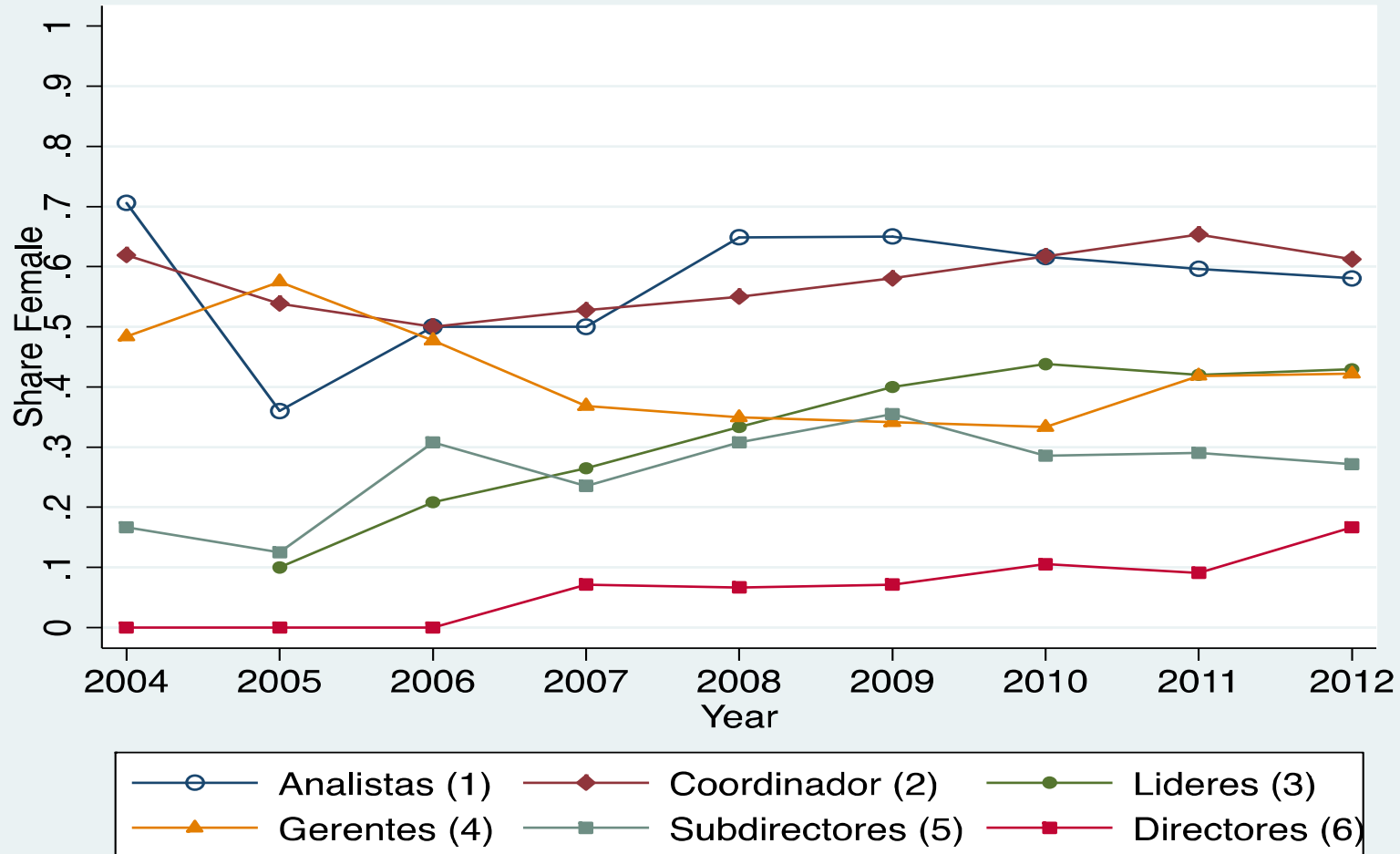
# IV. Descriptive Statistics

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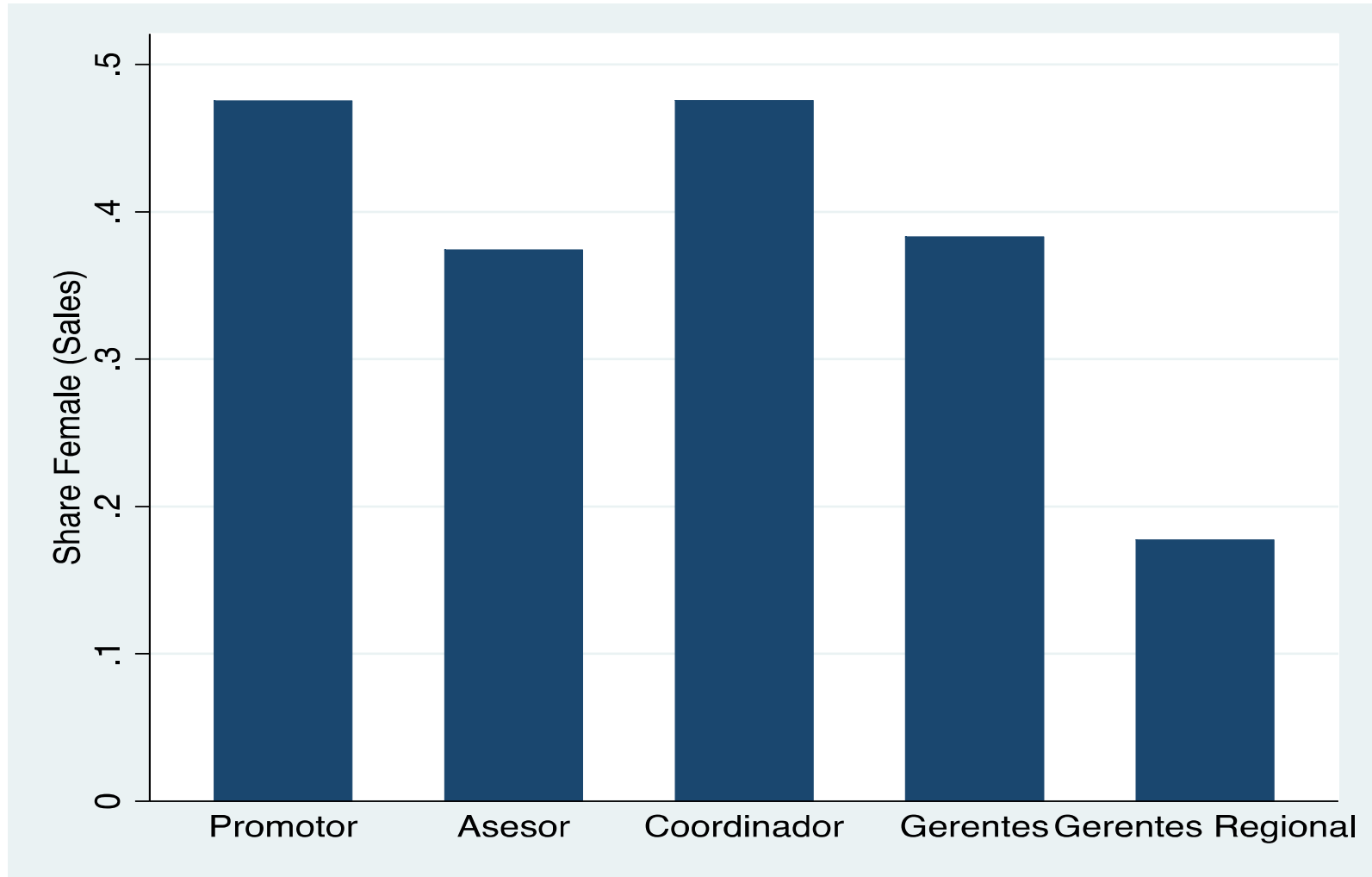
# Share Female by Position (*Administrative*), 2012



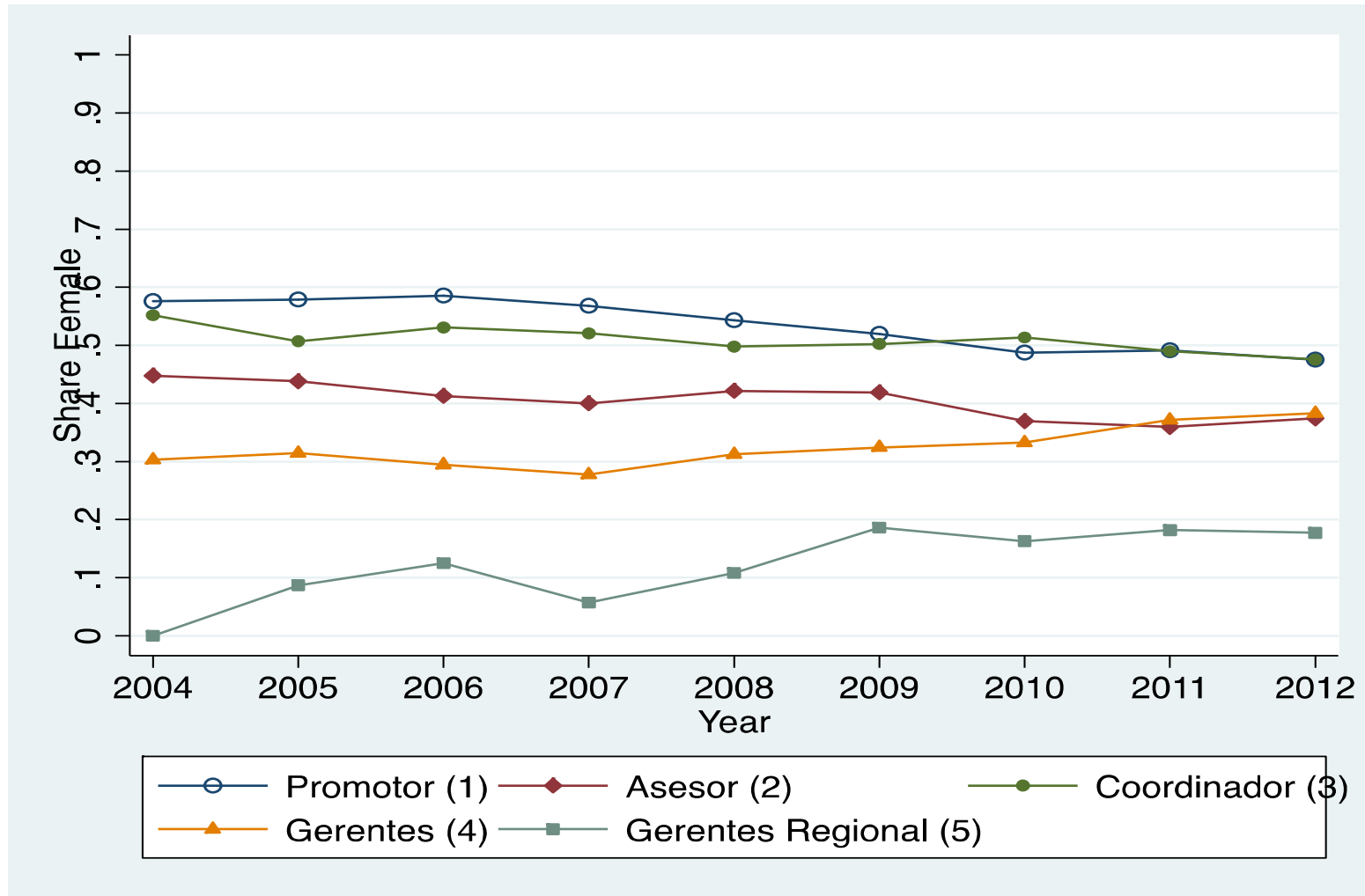
# Share Female by Position (*Administrative*), 2004-2012



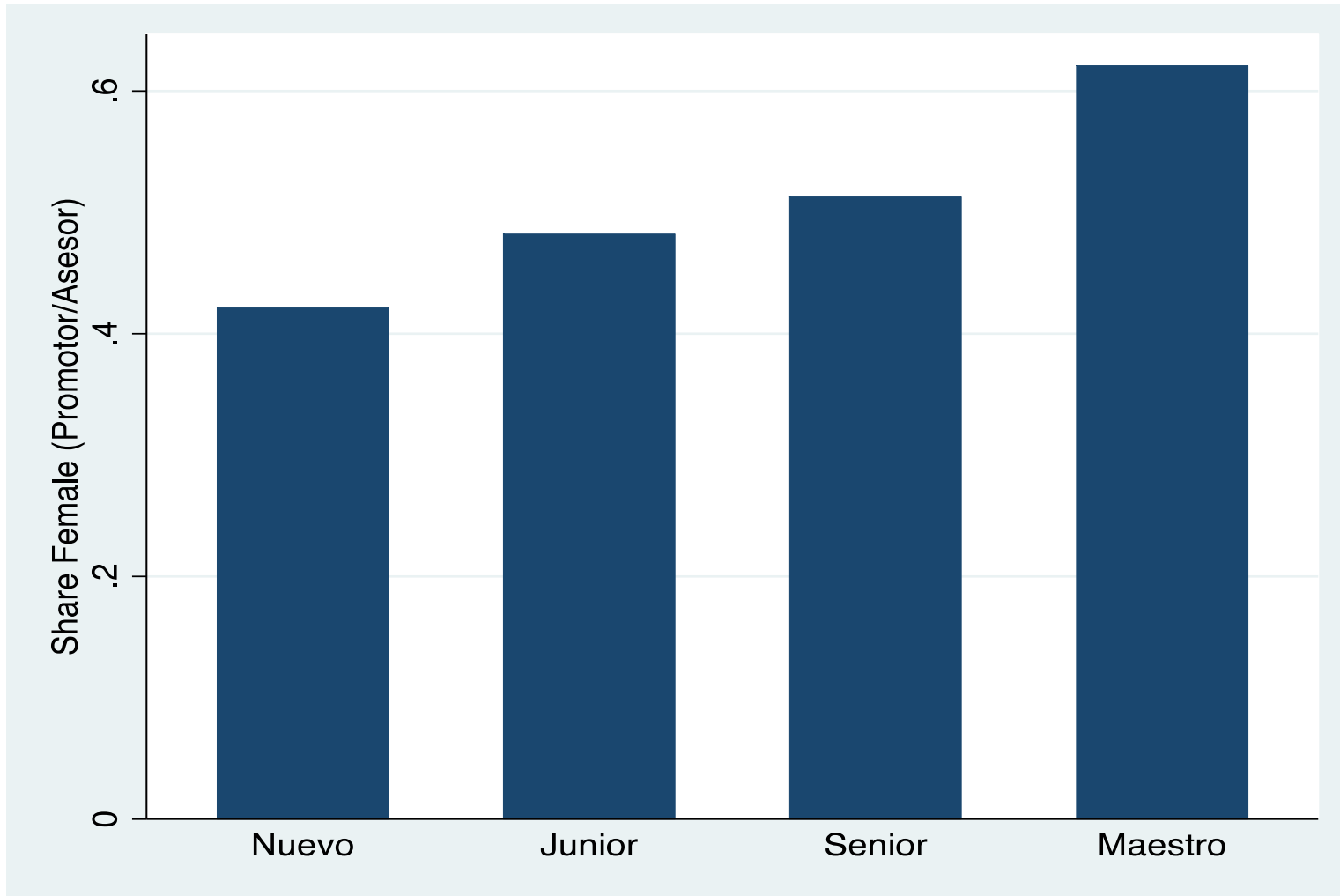
# Share Female by Position (*Sales*), 2012



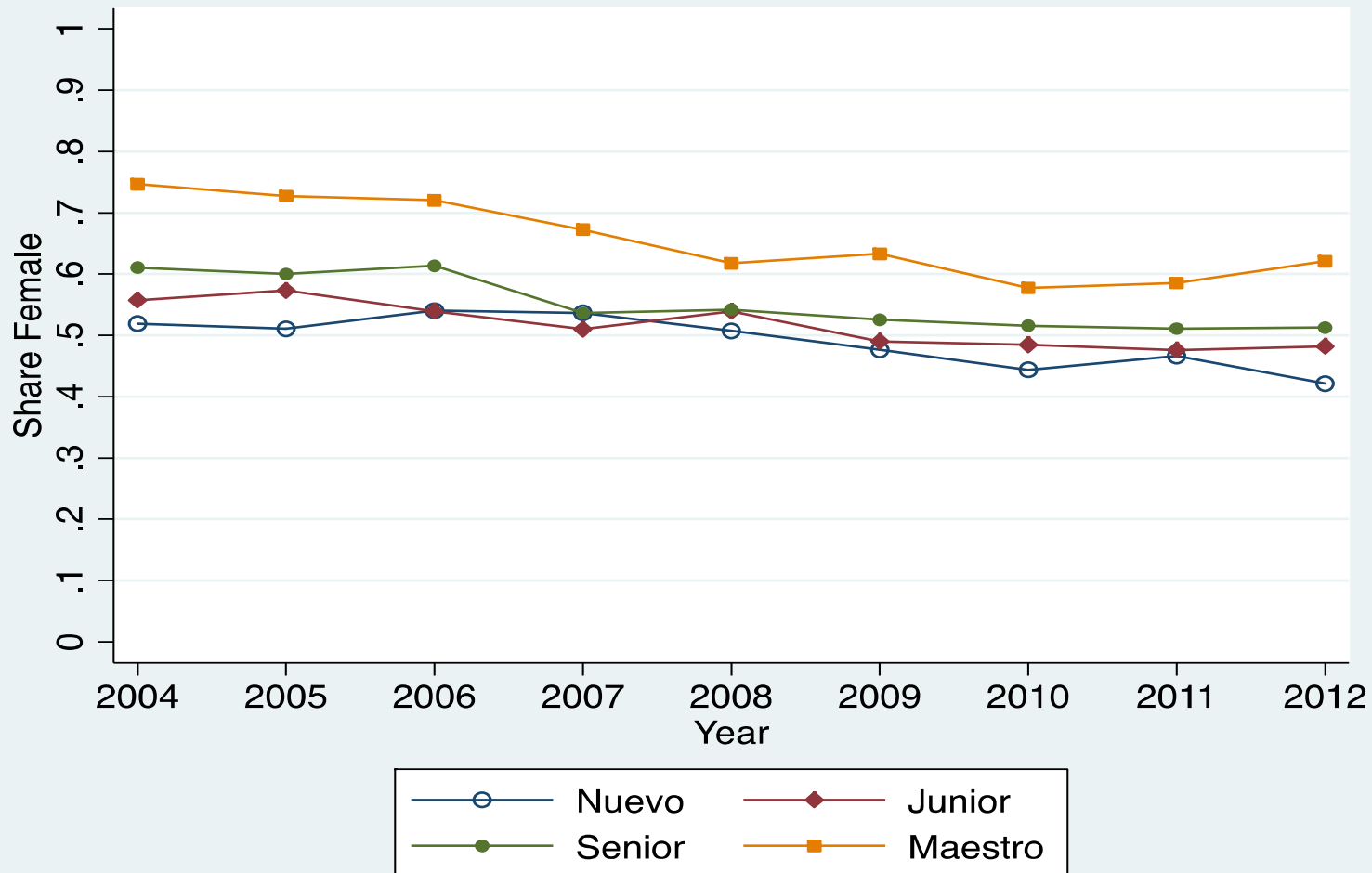
# Share Female by Position (*Sales*), 2004-2012



# Share Female by Position (*Sales – Loan Officers (Promotor, Asesor)*), 2012



# Share Female by Position (*Sales – Loan Officers (Promotor, Aesor)*), 2004-2012





# V. Career Dynamics Analysis

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# Promotion, Exit

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We estimate the following probit model 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:

Female = dummy for a female employee

Age = measured in years

Tenure = years in the firm

$X$  = vector of other variables included in different specifications  
(e.g., highest degree obtained, gender of the employee's boss)

$\gamma$  = time dummies

Note: robust standard errors clustered at the person-level; urban dummy and areas of practice dummies

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## Transition matrices

- For *administrative*:
    - More women promoted to next level from Analista, Lider, Gerente and Subdirector
    - More women exit at Analista, Gerente, fewer at Lider
  - For *sales*:
    - Fewer women promoted to Coordinador, Gerente, Gerente Regional
    - High rates of exit at all levels, slightly higher among men
  - For *sales – Promotor/Asesor levels*:
    - Similar pattern, more women promoted to top rank
    - High rates of exit at all levels, slightly higher among men
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# Promotion, Exit: Transition Matrices

## *Administrative*

### **Men**

|            | Analistas | Coord. | Lideres | Gerentes | Subdirect. | Direct. | Exit | N    |
|------------|-----------|--------|---------|----------|------------|---------|------|------|
| Analistas  | 68.23     | 27.60  | 0.00    | 0.52     | 0.00       | 0       | 3.65 | 192  |
| Coord.     | 0.00      | 66.67  | 15.60   | 10.74    | 0.00       | 0.19    | 7.03 | 327  |
| Lideres    | 0.00      | 0.36   | 75.09   | 16.97    | 0.36       | 0       | 7.22 | 277  |
| Gerentes   | 0.00      | 0.00   | 1.32    | 84.82    | 7.26       | 0.3     | 6.6  | 303  |
| Subdirect. | 0.00      | 0.93   | 0.00    | 0.00     | 87.97      | 5.26    | 6.77 | 133  |
| Direct.    | 0.00      | 0.00   | 0.00    | 0.00     | 0.00       | 98.99   | 1.01 | 99   |
| N          | 131       | 272    | 263     | 340      | 140        | 105     | 80   | 1331 |

### **Women**

|            | Analistas | Coord. | Lideres | Gerentes | Subdirect. | Direct. | Exit | N    |
|------------|-----------|--------|---------|----------|------------|---------|------|------|
| Analistas  | 63.08     | 28.32  | 0.36    | 1.08     | 0.00       | 0.00    | 7.17 | 279  |
| Coord.     | 0.44      | 72.55  | 5.03    | 4.14     | 0.00       | 0.00    | 7.84 | 459  |
| Lideres    | 0.00      | 0.54   | 76.88   | 17.20    | 0.00       | 0.00    | 5.38 | 186  |
| Gerentes   | 0.00      | 5.00   | 0.00    | 82.41    | 9.05       | 0.49    | 8.04 | 199  |
| Subdirect. | 0.00      | 0.00   | 0.00    | 0.00     | 86.79      | 7.55    | 5.66 | 53   |
| Direct.    | 0.00      | 0.00   | 0.00    | 0.00     | 0.00       | 100.00  | 0.00 | 7    |
| N          | 178       | 609    | 213     | 218      | 64         | 11      | 85   | 1183 |

# Promotion, Exit: Transition Matrices

## Sales

### Men

|               | Promotor | Asesor | Coord. | Gerentes | Gerentes<br>Reg. | Exit  | N         |
|---------------|----------|--------|--------|----------|------------------|-------|-----------|
| Promotor      | 60.88    | 2.78   | 14.02  | 0.13     | 0.00             | 22.19 | 7630      |
| Asesor        | 5.15     | 57.22  | 15.38  | 1.07     | 0.00             | 21.17 | 1398      |
| Coordinador   | 1.51     | 0.97   | 66.41  | 8.20     | 0.00             | 22.92 | 1658      |
| Gerentes      | 0.00     | 0.00   | 0.19   | 69.55    | 10.51            | 19.75 | 1028      |
| Gerentes Reg. | 0.00     | 0.00   | 0.00   | 5.49     | 79.12            | 15.38 | 182       |
| N             | 4742     | 1028   | 2388   | 886      | 252              | 2600  | 1189<br>6 |

### Women

|               | Promotor | Asesor | Coord. | Gerentes | Gerentes<br>Reg. | Exit  | N         |
|---------------|----------|--------|--------|----------|------------------|-------|-----------|
| Promotor      | 66.61    | 1.64   | 12.02  | 0.04     | 0.00             | 19.69 | 8913      |
| Asesor        | 6.94     | 58.25  | 13.88  | 0.91     | 0.00             | 20.02 | 994       |
| Coordinador   | 1.94     | 0.32   | 72.25  | 5.95     | 0.00             | 19.51 | 1881      |
| Gerentes      | 0.00     | 0.19   | 0.39   | 77.46    | 4.24             | 17.73 | 519       |
| Gerentes Reg. | 0.00     | 0.00   | 0.00   | 7.41     | 77.78            | 14.81 | 27        |
| N             | 6043     | 732    | 2570   | 529      | 43               | 2417  | 1233<br>4 |

# Promotion, Exit: Transition Matrices

## *Sales: Promotor/Asesor Levels*

| <b>Men</b>   |       |        |        |         |       |      |
|--------------|-------|--------|--------|---------|-------|------|
|              | Nuevo | Junior | Senior | Maestro | Exit  | N    |
| New          | 16.06 | 39.38  | 19.58  | 0.22    | 24.75 | 5110 |
| Junior       | 3.33  | 17.68  | 39.79  | 18.09   | 21.12 | 2456 |
| Senior       | 2.97  | 0.52   | 18.97  | 57.81   | 19.74 | 1234 |
| Master       | 2.81  | 1.93   | 0.53   | 75.40   | 19.33 | 836  |
| N            | 680   | 1750   | 1544   | 1195    | 1525  | 6694 |
| <b>Women</b> |       |        |        |         |       |      |
|              | Nuevo | Junior | Senior | Maestro | Exit  | N    |
| New          | 15.69 | 40.00  | 21.96  | 0.32    | 22.03 | 3785 |
| Junior       | 0.29  | 14.92  | 39.31  | 22.86   | 20.62 | 1964 |
| Senior       | 1.73  | 0.91   | 16.16  | 63.62   | 17.58 | 984  |
| Master       | 1.70  | 1.04   | 0.95   | 78.07   | 18.24 | 1058 |
| N            | 674   | 1827   | 1772   | 1913    | 1605  | 7791 |

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## Probability of Promotion

- For *administrative*: no gender difference after controlling for individual characteristics, area of practice, rank and time trends
- For *sales*: gap favoring men of 2% persists after including controls
- For *sales – promotor/asesor levels*: gap favoring women of 4-5% persists after including controls

## Probability of Exit

- For *administrative*: no significant difference by gender
  - For *sales*: women are about 4% less likely to leave after controlling for covariates
  - For *sales – promotor/asesor levels*: women are about 4% less likely to leave after controlling for covariates
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Table 5. Promotion Regressions, Administrative Division

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



Table 6. Promotion Regressions, Sales Division

|                                | (1)                      | (2)                     | (3)                        | (4)                        | (5)                        | (7)                        | (8)                        |
|--------------------------------|--------------------------|-------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <u>Promote</u>                 |                          |                         |                            |                            |                            |                            |                            |
| Female                         | -0.00966***<br>(0.00222) | -0.0188***<br>(0.00307) | -0.0237***<br>(0.00317)    | -0.0220***<br>(0.00368)    | -0.0247***<br>(0.00432)    | -0.0238***<br>(0.00500)    | -0.0298***<br>(0.00409)    |
| Urban                          |                          | 0.0114***<br>(0.00396)  | 0.0149***<br>(0.00400)     | 0.0148***<br>(0.00400)     | 0.0141***<br>(0.00519)     | 0.0150***<br>(0.00427)     | 0.0146***<br>(0.00401)     |
| Age                            |                          |                         | 0.0229***<br>(0.00279)     | 0.0229***<br>(0.00280)     | 0.0218***<br>(0.00380)     | 0.0247***<br>(0.00313)     | 0.0236***<br>(0.00282)     |
| Age2                           |                          |                         | -0.000357***<br>(4.62e-05) | -0.000358***<br>(4.64e-05) | -0.000344***<br>(6.29e-05) | -0.000383***<br>(5.19e-05) | -0.000365***<br>(4.65e-05) |
| Tenure                         |                          |                         | 0.0453***<br>(0.00419)     | 0.0452***<br>(0.00414)     | 0.0611***<br>(0.00455)     | 0.0487***<br>(0.00453)     | 0.0452***<br>(0.00420)     |
| Tenure2                        |                          |                         | -0.00539***<br>(0.000905)  | -0.00532***<br>(0.000895)  | -0.00728***<br>(0.00110)   | -0.00561***<br>(0.000992)  | -0.00540***<br>(0.000908)  |
| Female x Asesor                |                          |                         |                            | 0.00493<br>(0.0105)        |                            |                            |                            |
| Female x Coordinador           |                          |                         |                            | -0.00326<br>(0.0112)       |                            |                            |                            |
| Female x Gerentes              |                          |                         |                            | -0.0585***<br>(0.0182)     |                            |                            |                            |
| Female Immediate Boss          |                          |                         |                            |                            |                            | -0.0107**<br>(0.00477)     |                            |
| Female x Female Immediate Boss |                          |                         |                            |                            |                            | 0.000459<br>(0.00679)      |                            |
| Female Superior Boss           |                          |                         |                            |                            |                            | 0.000146<br>(0.00520)      |                            |
| Female x Female Superior Boss  |                          |                         |                            |                            |                            | 0.00465<br>(0.00739)       |                            |
| Married                        |                          |                         |                            |                            |                            |                            | -0.0111**<br>(0.00446)     |
| Female x Married               |                          |                         |                            |                            |                            |                            | 0.0139**<br>(0.00641)      |
| Highest Degree Dummies         | No                       | No                      | No                         | No                         | Yes                        | No                         | No                         |
| Rank 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.

Table 7. Promotion Regressions, Promotor/Asesor

|                                | (1)                    | (2)                    | (3)                     | (4)                    | (5)                     | (6)                     |
|--------------------------------|------------------------|------------------------|-------------------------|------------------------|-------------------------|-------------------------|
| <b>Promote</b>                 |                        |                        |                         |                        |                         |                         |
| Female                         | 0.0362***<br>(0.00384) | 0.0307***<br>(0.00506) | 0.0443***<br>(0.00534)  | 0.0467***<br>(0.00702) | 0.0279***<br>(0.00880)  | 0.0448***<br>(0.00682)  |
| Urban                          |                        | -0.000710<br>(0.00670) | -0.0143**<br>(0.00703)  | -0.00492<br>(0.00893)  | -0.0120<br>(0.00741)    | -0.0140**<br>(0.00704)  |
| Age                            |                        |                        | -0.000911<br>(0.00407)  | -0.00553<br>(0.00544)  | -3.22e-05<br>(0.00425)  | -0.000897<br>(0.00409)  |
| Age2                           |                        |                        | 1.30e-05<br>(6.72e-05)  | 7.57e-05<br>(8.97e-05) | -5.53e-06<br>(7.01e-05) | 1.33e-05<br>(6.73e-05)  |
| Tenure                         |                        |                        | -0.0562***<br>(0.0112)  | -0.0482***<br>(0.0183) | -0.0578***<br>(0.0125)  | -0.0564***<br>(0.0112)  |
| Tenure2                        |                        |                        | -0.0119***<br>(0.00437) | -0.0202**<br>(0.00894) | -0.0121**<br>(0.00496)  | -0.0119***<br>(0.00436) |
| Female Immediate Boss          |                        |                        |                         |                        | -0.00749<br>(0.00817)   |                         |
| Female x Female Immediate Boss |                        |                        |                         |                        | 0.0327***<br>(0.0114)   |                         |
| Female Superior Boss           |                        |                        |                         |                        | 0.00661<br>(0.00878)    |                         |
| Female x Female Superior Boss  |                        |                        |                         |                        | -0.00691<br>(0.0122)    |                         |
| Married                        |                        |                        |                         |                        |                         | 4.91e-05<br>(0.00793)   |
| Female x Married               |                        |                        |                         |                        |                         | -0.00102<br>(0.0110)    |
| Highest Degree<br>Dummies      | No                     | No                     | No                      | Yes                    | No                      | No                      |
| Rank Dummies                   | No                     | Yes                    | Yes                     | Yes                    | Yes                     | Yes                     |
| Direction (Area)<br>Dummies    | No                     | Yes                    | Yes                     | Yes                    | Yes                     | Yes                     |
| Year Dummies                   | Yes                    | 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.

Table 8. Exit Regressions

| Exit                     | Administrative          |                         | Sales                    |                          | Promotor/Asesor          |                          |
|--------------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                          | (1)                     | (2)                     | (3)                      | (4)                      | (5)                      | (6)                      |
| Female                   | 0.00263<br>(0.0118)     | 0.0558**<br>(0.0279)    | -0.0418***<br>(0.00490)  | -0.0442***<br>(0.00574)  | -0.0421***<br>(0.00554)  | -0.0435***<br>(0.00586)  |
| Headquarters             | -0.0760***<br>(0.0268)  | -0.0769***<br>(0.0271)  |                          |                          |                          |                          |
| Age                      | 0.0150<br>(0.00959)     | 0.0151<br>(0.00951)     | -0.00993***<br>(0.00359) | -0.0101***<br>(0.00360)  | -0.0109***<br>(0.00408)  | -0.0110***<br>(0.00408)  |
| Age2                     | -0.000149<br>(0.000137) | -0.000150<br>(0.000136) | 0.000140**<br>(5.83e-05) | 0.000143**<br>(5.84e-05) | 0.000140**<br>(6.72e-05) | 0.000142**<br>(6.73e-05) |
| Tenure                   | -0.0175***<br>(0.00505) | -0.0172***<br>(0.00504) | -0.0521***<br>(0.00367)  | -0.0521***<br>(0.00364)  | -0.0627***<br>(0.00478)  | -0.0627***<br>(0.00478)  |
| Tenure2                  | 0.000883*<br>(0.000466) | 0.000871*<br>(0.000464) | 0.00353***<br>(0.000575) | 0.00349***<br>(0.000569) | 0.00482***<br>(0.00100)  | 0.00482***<br>(0.00100)  |
| Female x Coordinador     |                         | -0.0503<br>(0.0348)     |                          |                          |                          |                          |
| Female x Lideres         |                         | -0.111***<br>(0.0389)   |                          |                          |                          |                          |
| Female x Gerentes        |                         | -0.0583<br>(0.0382)     |                          |                          |                          |                          |
| Female x Subdirectores   |                         | -0.0452<br>(0.0560)     |                          |                          |                          |                          |
| Urban                    |                         |                         | 0.00382<br>(0.00635)     | 0.00380<br>(0.00635)     | 0.00328<br>(0.00724)     | 0.00326<br>(0.00724)     |
| Female x Asesor          |                         |                         |                          | 0.0137<br>(0.0175)       |                          | 0.0128<br>(0.0178)       |
| Female x Coordinador     |                         |                         |                          | -0.00406<br>(0.0138)     |                          |                          |
| Female x Gerentes        |                         |                         |                          | 0.0303<br>(0.0235)       |                          |                          |
| Female x Gerentes Reg.   |                         |                         |                          | 0.148<br>(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.

# Earnings Analysis

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We estimate the following OLS model for individual  $i$  in year  $t$ :

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

$$\beta_7 X_i + \gamma_t$$

Where:

Female = dummy for a female employee

Age = measured in years

Tenure = years in the firm

$X$  = vector of other variables included in different specifications (e.g., highest degree obtained, gender of the employee's boss)

$\gamma$  = time dummies

Note: robust standard errors clustered at the person-level; urban dummy, areas of practice dummies

---

## Earnings

- For *administrative*: gap favoring men of 3% driven by larger differences at higher ranks
  - For *sales*: wage differences disappear after including controls
  - For *sales – promotor/asesor levels*: gap favoring women of about 5% persists after including controls
-

Table 9. Wage Regressions

| ln(wage)               | Administrative        |                         |                         |
|------------------------|-----------------------|-------------------------|-------------------------|
|                        | (1)                   | (2)                     | (3)                     |
| Female                 | -0.405***<br>(0.0322) | -0.0280***<br>(0.00745) | -0.0153<br>(0.0123)     |
| Headquarters           |                       | 0.111***<br>(0.0172)    | 0.111***<br>(0.0171)    |
| Age                    |                       | 0.0132**<br>(0.00612)   | 0.0127**<br>(0.00577)   |
| Age2                   |                       | -8.37e-05<br>(8.97e-05) | -7.52e-05<br>(8.41e-05) |
| Tenure                 |                       | 0.00994**<br>(0.00438)  | 0.0108**<br>(0.00436)   |
| Tenure2                |                       | 7.53e-05<br>(0.000473)  | 2.89e-05<br>(0.000472)  |
| Female x Coordinador   |                       |                         | -0.0127<br>(0.0179)     |
| Female x Lideres       |                       |                         | -0.00335<br>(0.0177)    |
| Female x Gerentes      |                       |                         | 0.00361<br>(0.0232)     |
| Female x Subdirectores |                       |                         | -0.111***<br>(0.0375)   |
| Female x Directores    |                       |                         | -0.277***<br>(0.0684)   |
| Constant               | 7.327***<br>(0.0303)  | 6.547***<br>(0.109)     | 6.518***<br>(0.106)     |
| Rank Dummies           | No                    | Yes                     | Yes                     |
| Area Dummies           | No                    | Yes                     | Yes                     |
| Year Dummies           | No                    | Yes                     | Yes                     |
| Observations           | 12,833                | 3,950                   | 3,950                   |

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1,  
Robust standard errors clustered by individual are in parentheses.

Table 9. Wage Regressions (cont'd)

| ln(wage)               | Sales                   |                            |                            | Promotor/Asesor       |                            |                            |
|------------------------|-------------------------|----------------------------|----------------------------|-----------------------|----------------------------|----------------------------|
|                        | (4)                     | (5)                        | (6)                        | (7)                   | (8)                        | (9)                        |
| Female                 | -0.0609***<br>(0.00736) | -0.00203<br>(0.00184)      | 0.00827***<br>(0.00157)    | 0.00628*<br>(0.00321) | 0.00432***<br>(0.00158)    | 0.00457***<br>(0.00154)    |
| Headquarters           |                         |                            |                            |                       |                            |                            |
| Age                    |                         | 0.0105***<br>(0.00131)     | 0.0106***<br>(0.00130)     |                       | 0.00749***<br>(0.00113)    | 0.00750***<br>(0.00113)    |
| Age2                   |                         | -0.000126***<br>(2.18e-05) | -0.000127***<br>(2.16e-05) |                       | -9.17e-05***<br>(1.90e-05) | -9.19e-05***<br>(1.90e-05) |
| Tenure                 |                         | 0.105***<br>(0.00335)      | 0.105***<br>(0.00324)      |                       | 0.137***<br>(0.00405)      | 0.137***<br>(0.00405)      |
| Tenure2                |                         | -0.00776***<br>(0.000620)  | -0.00765***<br>(0.000604)  |                       | -0.0113***<br>(0.00104)    | -0.0113***<br>(0.00104)    |
| Urban                  |                         | 0.151***<br>(0.00225)      | 0.151***<br>(0.00225)      |                       | 0.162***<br>(0.00201)      | 0.162***<br>(0.00202)      |
| Female x Asesor        |                         |                            | -0.00265<br>(0.00694)      |                       |                            | -0.00232<br>(0.00694)      |
| Female x Coordinador   |                         |                            | -0.0546***<br>(0.00772)    |                       |                            |                            |
| Female x Gerentes      |                         |                            | -0.0462***<br>(0.0124)     |                       |                            |                            |
| Female x Gerentes Reg. |                         |                            | -0.0277<br>(0.0329)        |                       |                            |                            |
| Constant               | 6.462***<br>(0.00574)   | 5.404***<br>(0.0203)       | 5.422***<br>(0.0212)       | 6.262***<br>(0.00227) | 5.720***<br>(0.0300)       | 5.720***<br>(0.0300)       |
| Rank Dummies           | No                      | Yes                        | Yes                        | No                    | Yes                        | Yes                        |
| Area Dummies           | No                      | Yes                        | Yes                        | No                    | Yes                        | Yes                        |
| Year Dummies           | No                      | Yes                        | Yes                        | No                    | Yes                        | Yes                        |
| Observations           | 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.

## VI. Loan Officers – Clients Analysis

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# Loan Officers and Clients Analysis

## I] Assortative Matching

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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:

Female Client = dummy for a female client

X = vector of covariates including sales level ('Nuevo', 'Junior', 'Senior', 'Maestro')

Note: urban dummy, state dummies and product dummies

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# I] Assortative Matching

Table 10. Matching of Loan Officers and Clients

| <u>Female Officer</u> | <u>Promotor</u>        |                        | <u>Asesor</u>         |                       |
|-----------------------|------------------------|------------------------|-----------------------|-----------------------|
|                       | (1)                    | (2)                    | (3)                   | (4)                   |
| Female Client         | 0.0149***<br>(0.00513) | 0.00471<br>(0.00508)   | 0.0218**<br>(0.00885) | 0.0179**<br>(0.00897) |
| Headquarters          |                        | -0.0184**<br>(0.00717) |                       | 0.0611***<br>(0.0145) |
| Constant              | 0.432***<br>(0.00427)  | 0.753***<br>(0.0244)   | 0.366***<br>(0.00695) | 1.018***<br>(0.0587)  |
| 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 are in parentheses.

Estimation is by OLS. Dependent variable is a dummy for whether a loan officer is female.

# Loan Officers and Clients Analysis

## II] Credit Outcomes

---

We run the following regression for loan officer ('Promotor' or 'Asesor')  $i$  and client  $j$ :

$$\begin{aligned} \text{Loan Outcome}_{ij} = & \beta_0 + \beta_1 \text{Female Officer}_i * \text{Female Client}_j \\ & + \beta_2 \text{Female Officer}_i * \text{Male Client}_j + \beta_3 \text{Male Officer}_i * \text{Male Client}_j \\ & + \beta_4 X_{ij} + \epsilon_{ij} \end{aligned}$$

Where:

Female (Male) Officer = dummy for a female (male) loan officer

Female (Male) Client = dummy for a female (male) client

$X$  = vector of covariates including sales level ('Nuevo', 'Junior', 'Senior', 'Maestro')

Note: urban dummy, state dummies and product dummies;  
omitted category: male officer – female client

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# II] Credit Outcomes

Table 11. Loan Officer – Client Gender and Loans

|  | <u>Promotor</u>           |                       |                              |                       | <u>Asesor</u>                |                       |
|--|---------------------------|-----------------------|------------------------------|-----------------------|------------------------------|-----------------------|
|  | <u>Female Products</u>    |                       | <u>Mixed Gender Products</u> |                       | <u>Mixed Gender Products</u> |                       |
|  | (1)                       | (2)                   | (3)                          | (4)                   | (5)                          | (6)                   |
|  | Interest<br>(Inferred)    | Previous<br>Loans     | Interest<br>(Inferred)       | Previous<br>Loans     | Interest<br>(Inferred)       | Previous<br>Loans     |
| Female Officer<br>(Male Officer)                                 | -0.00761***<br>(0.000936) | 0.220***<br>(0.0273)  |                              |                       |                              |                       |
| Female Officer - Female Client<br>(Male Officer - Female Client) |                           |                       | -0.000518<br>(0.000472)      | 0.109**<br>(0.0477)   | -0.0797**<br>(0.0393)        | 0.0388<br>(0.129)     |
| Female Officer -<br>Male Client                                  |                           |                       | -0.000513<br>(0.000611)      | -2.036***<br>(0.0390) | 0.00208<br>(0.0440)          | -2.831***<br>(0.0972) |
| Male Officer - Male<br>Client                                    |                           |                       | -0.00185***<br>(0.000572)    | -2.096***<br>(0.0378) | 0.126***<br>(0.0339)         | -2.855***<br>(0.0889) |
| Urban  | 0.00372***<br>(0.00140)   | -1.130***<br>(0.0398) | 0.00258***<br>(0.000543)     | 0.109**<br>(0.0475)   | 0.0188<br>(0.0471)           | -0.315***<br>(0.111)  |
| Constant   | 0.0514***<br>(0.00424)    | 11.27***<br>(0.149)   | 1.442***<br>(0.00210)        | 3.208***<br>(0.209)   | 1.940***<br>(0.0769)         | 3.649***<br>(0.616)   |
| 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 are in parentheses. Sales level dummies, state dummies and product dummies are included

## VII. Concluding Remarks

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# Summary of the Main Findings

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- We document important differences within the MFI by career path in the nature of gender gaps and their dynamics
  - In the ‘back-office’: similar dynamics as in the corporate and financial sectors vs. in the ‘front-office’: gender gap has reversed but only at the lower ranks of the organization
  - Analysis of client data matched to loan officers provides mixed evidence in terms of assortative matching and relationship between loan outcomes and gender pairs of borrower and loan officer
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# Contribution

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- This is the first study that examines gender gaps in earnings and career dynamics in the microfinance sector
  - We provide evidence on the micro-foundations of gender gaps in the largest MFI in Latin America
  - We document the complex dynamics of gender gaps in job mobility and earnings
  - Future agenda: more research is needed to understand the determinants of women's empowerment on the employer side of the microfinance sector and how organizations in this sector change with development
-