Managers and the Cultural Transmission of Gender Norms*

Virginia Minni† Kieu-Trang Nguyen‡ Heather Sarsons§
Carla Srebot¶

November 13, 2025

Click here for the latest version

Abstract

This paper examines the influence of managers from countries with different gender norms on workplace culture and gender disparities within organizations. Using data from a multinational firm operating in over 100 countries, we exploit cross-country manager rotations to estimate the impact of male managers' gender attitudes on gender pay gaps within a team. Managers from countries with one standard deviation more progressive gender attitudes narrow the pay gap by 5 percentage points (18%), primarily by promoting women at higher rates. The effects last beyond the manager's rotation and are concentrated in countries with more conservative gender attitudes. Managers with progressive views appear to influence the local office culture, as local managers who interact with but are not under the purview of the foreign manager begin to have smaller pay gaps in their teams. Our evidence points to individual managers as critical in shaping corporate culture.

Keywords: managers, gender gaps, corporate culture, multinationals

JEL: J16, J24, F23, M14, M5

*We are particularly grateful to the global learning team and the data analytics team at the multinational for sharing the data and invaluable context knowledge. Data access is provided through a collaboration agreement with the LSE Altruistic Capital Lab, whose support we gratefully acknowledge. We thank Jamie Arellano-Bover, Daniel Da Mata, Rocco Macchiavello, and Paola Sapienza for discussing our paper as well as participants at numerous seminars and conferences, including NBER Organizational Economics, NBER SI Gender, Empirical Management Conference, and BSE Development Economics Workshop for very helpful feedback. We thank Wenzhi Wang for excellent research assistance. This manuscript was not subject to prior review by any party, except to verify that it does not contain any confidential data or information, as per the research collaboration contract signed at the outset of this project.

†University of Chicago, Booth School of Business, CEPR and IZA. virginia.minni@chicagobooth.edu

‡Northwestern University and University of Melbourne. kieu-trang.nguyen@kellogg.northwestern.edu

§University of Chicago Booth, CEPR, and NBER. heather.sarsons@chicagobooth.edu

¶University of British Columbia, Vancouver School of Economics. csrebot@student.ubc.ca

1 Introduction

Gender gaps within firms can arise from both managers' biases and from broader aspects of firm practices, policies, and culture.[1] While an individual manager may create or reduce gender pay gaps, a firm's overall culture can impact women's tenure and roles within it. A natural question, then, is whether and to what extent individual managers can influence the culture of the firm.

This paper addresses this question by studying the interaction between managers' gender attitudes and worker outcomes, examining whether—and how— individual managers can leave a lasting imprint on the organizational practices and culture of the firm. Using 11 years of detailed personnel records from a large multinational operating in over 100 countries, we exploit quasi-exogenous cross-country manager rotations to estimate the impact of a manager's gender attitudes on the work outcomes and behaviors of employees in the destination offices. We find that expat managers impact local employees' outcomes along two dimensions. First, expat managers from countries with progressive gender attitudes narrow gender gaps in pay and promotions among their direct subordinates. Second, expat managers have a lasting influence on local managers who interact with the expat. These local managers narrow gender pay gaps among their own subordinates, over whom the expat manager has no control.

Studying this question in the context of multinationals offers four advantages. First, the multinational operates in over 100 countries that range in their degree of gender attitudes, providing sufficient variation in attitudes. Second, the multinational emphasizes foreign rotations as necessary for promotions into senior leadership positions, and the locations of rotations are determined by factors orthogonal to managers' gender views. This allows us to estimate the impact of a manager on employee outcomes in the destination offices. Third, because we have a panel of employees, we can include worker fixed effects to control for possible changes in worker composition that come with manager rotations. Finally, the structure of the company allows us to test for cultural spillovers to

[1] On the role of managers, see Ronchi and Smith (2021); Cullen and Perez-Truglia (2023); Fortin et al. (2022). On the role of policies and culture, see, for example, the role of evaluation practices (Benson et al., 2019), negotiating practices (Masso et al., 2022), and family-friendly firms (Hampole et al., 2024).

other managers and workers in the local subsidiaries within the firm, both during and after the expat manager's rotation.

We begin by assessing the expat managers' impacts on gender gaps among their direct subordinates. We measure a manager's inherited gender attitudes as the average gender attitudes among World Values Survey respondents of the same home country and birth cohort, building on the economics of inherited cultural traits that emphasize the role of cultural origin in shaping one's cultural values and preferences (Bisin and Verdier, 2001; Giuliano, 2007; Fernández and Fogli, 2009; Luttmer and Singhal, 2011).[2] We then use a triple differences strategy that compares men's and women's pay before and after they are exposed to managers from more and less progressive countries.

We find that the gender pay gap under a manager with one standard deviation more progressive gender views — a difference roughly equivalent to that between an American and a Chinese manager, or between a Chinese and an Indian manager — is 4.9 percentage points (18%) smaller than the pay gap among employees exposed to a manager with more conservative norms. This effect is larger in destination offices with more conservative gender norms. Moreover, it persists well after employees' exposure to the expat manager, and even after the expat has left the destination office. These findings align with a literature showing that exposure to a more diverse workforce, even via temporary policies, can have long-lasting effects on workplaces (Miller, 2017; Miller et al., 2022).

The gender pay gap may narrow under a progressive expat manager for a variety of reasons. We find that a substantial portion of the narrowing pay gap comes from women being promoted to higher salary grades and work levels, with results not driven by changes in the composition of employees. There is some evidence that expat managers move women to different tasks, suggesting a role for lateral reallocation, on top of promotions. Leveraging the company's annual pulse surveys, we find that expat managers with progressive gender norms positively influence employees' perceptions of managerial effectiveness and overall morale.

[2]There is a large body of literature establishing the role of cultural origin in influencing economic outcomes, such as the theoretical foundation by Bisin and Verdier (2000, 2001); Tabellini (2008); Guiso et al. (2008), and the empirical evidence in Giuliano (2007); Fernández and Fogli (2009); Algan and Cahuc (2010); Guiso et al. (2016), among others.

We then turn to estimating the impact of progressive managers on local managers' behaviors. To do so, we identify two types of managers: those who were at the same work level as the expat manager (*horizontal transmission*) and those who worked for the expat manager (*vertical transmission*). The former allows us to test whether managers who interact with but were not under the purview of the expat manager change their behavior. We look at the outcomes of these managers' subordinates both during and *after* the expat manager's exposure. Both the same-level and lower-level managers improve the pay of their own female subordinates if they interacted with a progressive expat manager relative to those who interacted with a conservative expat manager and the effects are roughly half the magnitude of the direct effects. This suggests that expat managers can influence the culture of the destination office.

In the last part of the paper, we extend our analysis beyond the MNE using Brazil's universe employer–employee data (RAIS, 2009–2021). We track quarterly establishment-level exposure of local employees to foreign managers with different gender norms. We find that exposure to foreign managers with more progressive norms is associated with higher female representation in the managerial ranks and a substantially smaller gender pay gap among high-skilled white-collars (8.4%). These findings echo the MNE results, suggesting that managers' norms shape gender outcomes even outside our multinational setting.

These results highlight the role of managers in transmitting and shaping workplace culture and practices by influencing workers' outcomes and attitudes, particularly in the context of gender norms. In this regard, the paper contributes novel evidence of how corporate culture evolves and affects performance and inequality within the firm. The results speak to a growing literature documenting the lasting impact that managers and, in turn, culture play in determining firm performance (Xu, 2018; Graham et al., 2022; Adams et al., 2021). Beyond the existing evidence on the CEOs' influence on corporate culture (e.g., Nguyen, 2025), this paper looks further down the firm's hierarchy, examining how middle managers—who operate between top management and frontline employees—transmit and reshape practices and norms within organizations.

Within the literature on the impact of managers on firm and worker outcomes, a set

of papers focus specifically on the impact that managers have on gender gaps within the firm (Ronchi and Smith, 2021; Fortin et al., 2022; Cullen and Perez-Truglia, 2023; Chen et al., 2024). We bring complementary evidence that managers can influence gender pay gaps when there is a *cultural* mismatch between managers and workers, through mechanisms that extend beyond hiring and pay adjustments. We are able to test not only managers' direct effects on their subordinates, including their *persistence*, but also their indirect influence on other local managers through *horizontal and vertical spillovers*, capturing the long-term imprint of these expat managers on the firm's internal culture.

We also contribute to a growing body of evidence that documents multinationals' role in transposing wages and practices across national borders (Hjort et al., 2022; Tang and Zhang, 2021; Alfaro-Urena et al., 2022; Minni, 2024; Boudreau, 2024). This paper highlights managers' rotations as a transmission channel for norms across establishments. This channel is likely to become increasingly important as multinationals continue to drive the globalization of labor markets and intensify cross-cultural working relations.[3]

There is well-established research on the evolution of (gender) norms and economic disparities (Giuliano, 2021; Aneja et al., 2025). Prior work has shown that inherited gender norms are a key determinant of women's labor market outcomes (Fernández et al., 2004; Bertrand, 2011; Olivetti et al., 2020) and more broadly, gender disparities (Tur-Prats, 2019; Ashraf et al., 2020). Such norms are often deeply ingrained and slow to change (Alesina et al., 2013), raising the questions of how they are transmitted across space and over time and how they can be altered. While most existing studies emphasize intergenerational transmission, only a few recent papers explore their diffusion within organizations (Miho et al., 2024; Boelmann et al., 2025; Aneja et al., 2025). Our paper adds to this emerging literature by documenting both vertical and horizontal mechanisms of gender norm transmission within the workplace, and by showing that these mechanisms have lasting effects on within-firm gender gaps and organizational culture.

[3]Globally, there are 50,000 multinational enterprises, with 450,000 subsidiaries, employing 200 million people worldwide (ILO, 2017).

2 Institutional Context and Data

2.1 Institutional Context

The multinational. Our empirical analysis uses administrative data from a global consumer goods multinational headquartered in Europe, operating in over 100 countries worldwide. The multinational has a workforce of about 155,000 people, of which roughly 60,000 are white collar workers, and turnover of well over €50 billion in 2019.[4] This setting is ideal for studying the impact of culture within firms because of its vast geographic reach, and because its business activities span a wide variety of jobs.

International assignments. Like many multinationals, the company follows a policy of international assignments for its top managers (director and vice-president levels), designed to foster global experience and build leadership capability. To progress to the upper echelon of the firm and become a global leader, a manager is typically required to do at least one international assignment, in which he works in a foreign country for a limited period of between one and three years on average.[5] Although the managers can submit their country preferences, the final placement is mostly determined based on availability within their function and the associated relocation costs. Furthermore, managers do not have any say over which team they will lead in the destination country. This institutional setting provides variation that enables us to study the impact of expat managers' gender norms on the performance of local employees who experience managerial turnover.

Since being on an international assignment is part of the career progression of managers, these individuals are considered the "most promising" managers. Our identification strategy focuses on differences in how expat managers with different gender norms affect female versus male subordinates, thereby netting out the average performance effects associated with expat managers, who tend to be more experienced and higher-performing on average. Hence, the relevant source of variation comes from differences across expat managers themselves—specifically, between more and less progressive ex-

[4] For a detailed description of the firm's structure and workforce, see Minni (2025).

[5] As we focus on male expat managers in our analyses, we will refer to a manager as he/him/his throughout this paper.

pat managers—rather than between expat and local managers. Moreover, since expat managers typically occupy relatively senior positions within the firm, their direct subordinates are middle managers who, in turn, supervise other employees, allowing us to capture both direct and cascading effects of managerial influence within the organization. We leverage this aspect to examine how the expat managers' gender norms permeate down the hierarchy.

Appendix Figure A.1 illustrates the countries of origin of the managers (Panel A) and their destination countries (Panel B).

2.2 Multinational Data

Our primary dataset comes from the personnel records of the firm between 2011 and 2021, which are monthly snapshots of employees all around the globe with detailed information on performance and pay (since 2016), as well as job rotations, promotions, and leaves. Very importantly, the data also contain information on supervisory relationships. This feature enables us to precisely reconstruct the entire managerial chain and the structure of teams, thereby observing the entire organizational hierarchy.

Employees of the firm are organized into six work levels (WL1 to WL6), with WL6 being C-suite executives. This structure allows us to identify and analyze work level promotions in our analysis. We analyze both work level and salary grade promotions in our analysis. Jobs are also organized into functions and sub-functions. Functions include typical divisions within a firm, such as Marketing, Human Resources, Sales, and Supply Chain. Sub-functions are finer job distinctions within each function. For example, within the Human Resources function, an employee can work in Data Analytics, in Rewards, or in Occupational Health, among others. While workers typically are not transferred across functions, we will analyze how expat managers allocate male and female workers across sub-functions.

We perform further analysis using individual responses from four worldwide annual surveys administered by the company between 2017 and 2021. These surveys were designed to assess the overall "pulse" of the workforce, capturing employees' perceptions

of the organization, their work environment, and overall job satisfaction. The surveys provide a rich dataset with standardized questions that track key aspects of workplace experiences, including employees' views on managerial effectiveness, opportunities for professional growth, sense of autonomy, and overall well-being.

2.3 Gender Attitudes Measures

We proxy for a manager's gender attitudes using aggregated data from the World Values Survey (WVS).[6] For each employee, we construct a proxy based on the average gender attitudes of WVS respondents from the same home country and birth cohort, thereby capturing cross-country and generational variation in gender views.[7] Although we do not observe individual employees' gender attitudes, this group-average approach does not introduce classical attenuation bias, as the measurement error is orthogonal to the regressor rather than the latent variable (see Angrist and Pischke, 2009, chapter 2). At the same time, it helps to smooth out individual-level measurement errors that are often present in survey- or game-based measures of individual's beliefs or preferences.[8] Finally, the group-average measure reflects the gender norms to which individual employees were likely exposed during their formative years; hence, throughout the paper, we use the terms gender attitudes and gender norms interchangeably.

Our main measure of gender attitudes is constructed using responses to three statements regarding women's roles in the workplace: (i) *"When jobs are scarce, men should have more of a right to a job than women,"* (ii) *"When mother works for pay, the children suffer,"* and (iii) *"On the whole, men make better business executives than women do."* These questions were asked in both early and recent WVS waves, with responses standardized as "strongly

[6] We follow a method similar to Kleven (2022), who measures state-level gender norms in the US using survey data from the US General Social Survey.

[7] Bena et al. (2025) find that improvements in gender norms across countries in recent decades are driven mostly by composition effects, while respondents from the same birth cohorts hold fairly consistent gender views over time. This motivates our gender norms measure that varies by country and birth cohort.

[8] In the classical case, measurement errors are correlated with the regressor but orthogonal to the latent variable, leading to attenuation bias. In contrast, under the group-average approach, measurement errors are orthogonal to the regressor yet correlated with the latent variable. Nguyen (2025) evaluates a similar group-average measure for trust attitude and shows that the group-average measure is about 80% as precise as an individual-level game-based measure.

agree/agree" (1 for being conservative) or "disagree/strongly disagree" (2 for being progressive). We first average the responses to each question by country and birth year, showing that the resulting measures are highly correlated with country × cohort-level female labor force participation.[9] We then compute our main gender attitudes measure as the average of these three measures and merge it into the multinational data. For context, a one standard deviation change in gender attitudes corresponds approximately to the difference between an American and a Chinese manager born in the 1980s, or between a Chinese and an Indian manager born in the 1980s.

We utilize responses from all WVS respondents to construct this measure, which may underestimate how progressive expat managers are, given that they are likely more highly educated than the general population. This is not a first-order concern if this difference is not disproportionately larger (or smaller) for more (or less) progressive country × cohort's. Indeed, Appendix Table A.2 shows that the paper's main results are unchanged when using alternative measures of gender attitudes constructed using only WVS respondents with upper- or college-level, or based on responses to individual or alternative WVS questions.

In addition, for some analyses, we examine whether the results are heterogeneous by country-level norms. A country's gender attitudes are computed as the average individual attitudes of all local managers from that country, hence a larger score reflects a more progressive culture within the firm's offices regarding women's roles in society in general and in the workplace in particular.

As described in greater detail in the next subsection, the richness of our setting—an MNE spanning more than 100 countries with expat managers from 50 home countries going to 77 destination countries—allows us to exploit substantial variation in this home country-based measure of gender attitudes. Compared with possible alternative "outcome-based" measures of gender attitudes, e.g., those inferred from gender gaps observed under the expat manager prior to his international rotation, our measure offers

[9] As there may be too few WVS respondents in each country × birth year cell, we also include same-country respondents born "around" the focal birth year in our computation, yet attributing higher weights to those born closer to the focal birth year. In addition, the specific weight kernel and bandwidth are picked to minimize the mean squared error between predicted and actual responses.

several advantages. First, as an ex-ante measure, it is not confounded by other workplace factors that may also influence workers' outcomes, such as worker selection, persistent effects of prior managers, or reflection effects (Manski, 1993), which arise when managers' behaviors and the outcomes of their teams co-determine each other.[10] Second, while both measures contain measurement errors, the home country-based group-average approach does not introduce classical attenuation bias as discussed earlier, while most outcome-based measures do. Thus, taken together, the WVS-based measure that exploits variation at the nationality-cohort level, provides a conceptually grounded and empirically appealing proxy for managers' gender attitudes.

2.4 Sample Construction

Expat managers. We leverage manager rotations across country offices to identify the impact of an expat manager's gender attitudes on the outcomes of male and female employees. As mentioned, international rotations are an important prerequisite for moving to upper-level positions within the company. Typically, at least one international rotation is required for employees to enter into WL5 positions, as such rotations are seen as crucial for understanding the firm and developing the skills necessary to lead diverse teams. As such, the managers we study in this paper are relatively senior and are identified as those in WL3 or above (directors or vice presidents). Employees in WL3 through WL6 have substantial responsibility and oversight within the company. They guide the company's strategy and set long-term goals, but also work to translate those strategic goals into actionable plans and ensure their execution within the respective departments.

We identify international rotations as cases in which managers are no longer located in their home country and spend at least three months in the foreign office location. Panel A of Table I compares the characteristics of male managers who do and do not become expat managers within a year. For each expat manager, we compare his characteristics in the year before he goes on his rotation with those of other managers in his office who have

[10] E.g., Ashraf et al. (2024) shows that female workers are more positively selected in less gender-progressive countries, implying that a naive outcome-based measure would conflate managers' gender norms with gender-biased worker selection. At the same time, controlling for this through country fixed effects risks removing meaningful cross-country variation in managers' gender norms.

not gone and do not go on rotation the next year. Managers who go on rotation within a year are younger and have a shorter tenure with the firm.

Exposed employees. To look at the impact of expat managers on employees, we focus on employees who are ever directly exposed to an expat manager. This means that we do not consider untreated employees who are never exposed to an expat manager. We focus on ever-exposed employees because not only expat managers are different from non-expat managers as aforementioned, but employees who work under expat managers are also different from never-exposed employees, even within the same office. Panel B of Table I compares the characteristics of employees who are and are not exposed to an expat worker within a given office. Characteristics are measured the year prior to the expat entering the office. Employees who work for the expat manager are younger, have been at the firm for a shorter period of time, and are therefore at a lower work level. They do, however, receive slightly higher pay, suggesting that expat managers are allocated to high-performing teams.

We make three further restrictions when constructing our main analysis sample. We first restrict to employees who are exposed to the expat manager for at least three months. This ensures that we are considering cases where the expat manager spends enough time interacting with the employees. Second, we restrict these worker-manager pairs to a worker's first exposure to an expat manager as this gives us the cleanest identification of an expat manager's impact on local employees. Finally, we restrict the sample to male expat managers. A growing literature has found a positive impact of female managers, and a negative impact of male managers, on women's outcomes (Fortin et al., 2022; Cullen and Perez-Truglia, 2023; Biasi and Sarsons, 2022). Given that most managers are men, focusing on male managers allows us to directly estimate the impact of gender attitudes on the managerial decisions of men, net of any "same gender" effect.

Baseline sample. These restrictions yield a final sample of 909 male managers from 50 home countries (0.4% of the firm's workforce) who complete an international rotation. Panel A of Appendix Figure A.2 plots the distribution of expat managers' gender atti-

tudes, which exibits substantial variation. Panel A of Figure I shows that around 25% of the managers go to countries with gender norms in a quartile below those of their home countries, while 35% travel to countries with gender norms in a quartile above. This allows us to examine the asymmetric effects of expat manager's gender norms when the expat manager, depending on whether the manager is more or less gender-progressive than the destination country. Panel B further shows expat managers' flows based on geography. Both figures reveal no systematic pattern in the matching between expat managers' home and destination countries in terms of gender norms or geographic region.

Nearly all (95%) managers are in WL3 or WL4 during their first rotation. The median time that an expat spends on an international rotation is 32 months. There are 4,873 employees working across 77 countries who are exposed for the first time to these expat managers. This corresponds to roughly 250,000 employee $\times$ month observations between 2016 and 2021.

3 Empirical Strategy

Our goal is to test whether expat managers with more or less progressive attitudes impact women's outcomes, and whether they influence the local managers they work with. To do so, we compare workers who are ever-expat-exposed and receive a manager with progressive attitudes with those who receive a manager with conservative attitudes. Specifically, we use a triple differences design in which we compare male and female workers before and after they are exposed to a progressive versus conservative manager.

Our main estimating equation is:

$$Y_{imlkt} = \sum_{k=0,1,2} \gamma_k \mathbf{1}[K_{it} = k](Norms_m \times Fem_i) + \theta_i + \theta_{mk} + \theta_{l,Year(t),Fem(i)} + \mathbf{X}_{it}\beta + \varepsilon_{imlkt} \quad (1)$$

where i indexes the worker, m the expat manager, l is worker i's contemporaneous manager at calendar month t, and k the time period relative to i's exposure to m. In our main specification, we consider three time periods: before, during, and after exposure. To test for the differential impact of expat managers on men and women, we interact our mea-

sure of the expat manager's gender attitudes, $Norms_m$, with an indicator that worker i is female, Fem_i.[11] For ease of interpretation, we standardize $Norms_m$ by its standard deviation across expat managers.

Our main coefficients of interest, $\hat{\gamma}_k$, tell us how the outcomes of women change relative to men before ($k = 0$), during ($k = 1$), and after ($k = 2$) their exposure to an expat manager with one standard deviation more progressive gender norms (relative to exposure to an expat manager with less progressive gender norms). For brevity, we will refer to these coefficients as the impact of a more progressive expat manager on gender gaps when discussing their magnitudes.

To account for changes in the composition of workers or local managers when the expat manager arrives, we include worker fixed effects θ_i and contemporaneous manager fixed effects $\theta_{l,Year(t),Fem(i)}$.[12] The contemporaneous manager fixed effects are interacted with calendar year and the worker's gender when $k \neq 1$ to allow for the fact that contemporaneous managers may have a different impact on male and female employees over time.[13] We include expat manager $\times$ exposure period fixed effects θ_{mk} to account for the expat manager's overall impact on exposed employees. In an augmented specification we further include country $\times$ exposure period $\times$ worker's gender fixed effects to ensure that we are comparing employees within the same destination country during and surrounding exposure. Other worker controls $\mathbf{X}_{it}$ include worker age, age squared, tenure, and tenure squared. Standard errors are double clustered by the level of treatment: worker and expat manager's home country $\times$ worker's gender.

The primary outcomes we consider are pay (base plus bonus pay), performance rating, promotions, lateral moves, and retention. The manager has considerable influence over these metrics. Performance assessments, which encompass the determination of pay

[11] The uninteracted $Norms_m$ and Fem_i are absorbed by worker and expat manager fixed effects.

[12] We rely on a triple difference strategy to account for level differences in gender gaps that may exist independently of expat exposure, as shown in Figure II. By including worker and contemporaneous manager fixed effects, we aim to isolate the effect of being exposed to a progressive manager from underlying differences that persist across teams or over time.

[13] These fixed effects also help account for the fact that within-team gender gaps widen as employees progress up the rank. This is particularly important as we find that promotions are a key driver of the narrowing of the gender pay gap. Hence excluding these fixed effects yields qualitatively similar results of smaller magnitudes.

and bonus, are set by the manager taking into account the views of all the colleagues that have interacted with the employee and are conducted in a standardized way across functions so that comparisons can be made between employees with different types of jobs. Similarly, promotions and lateral moves depend on the manager's recommendations.

Our main identification assumption is that more progressive managers are not systematically sent to teams with improving (or worsening) gender gaps. In our setting, managers do not get to choose their teams in the destination offices. Moreover, we directly test this assumption by examining pre-trends in gender pay gaps in Appendix Table A.1. Across all our main outcomes, we do not find evidence of differential pre-trends.

4 Direct Impacts on Exposed Employees' Outcomes

This section estimates how expat managers affect gender gaps among their direct subordinates in destination offices. We find that managers with more progressive gender attitudes narrow the gender pay gap within their immediate teams. We then explore mechanisms underlying this effect.

4.1 Raw Data

We begin by examining raw salary patterns of men and women exposed to expat managers with differing gender attitudes. Panel A of Figure II plots average log pay for male and female employees before, during, and after exposure to expat managers with either conservative or progressive gender views. The estimates are normalized to men working under conservative managers. Before receiving an expat manager, men and women assigned to conservative managers earn less, on average, than those later assigned to progressive managers. Nevertheless, a gender pay gap exists in all groups prior to exposure. Pay rises for all workers following the arrival of an expat manager, but men benefit disproportionately under conservative managers. By contrast, under progressive managers, the gender pay gap narrows—a pattern that persists even after the manager's departure.

Panel B visualizes the data a second way, plotting the difference between women's

and men's pay when they work under an expat manager with progressive (solid line) or conservative (dashed line) gender attitudes. The pay gap does not change when workers are exposed to a progressive manager but widens over time when they are exposed to a conservative manager. This is largely because the pay gap widens with worker tenure, as men are promoted and women are not, suggesting that managers with more progressive attitudes counteract the widening gap. We account for such differences next.

4.2 Gender Pay Gap

Expat manager's gender norms. We now turn to our main estimation strategy and plot the event study coefficients from an augmented version of equation (1) in Figure III. Importantly, there are no trends in the gender pay gap prior to the expat manager rotation. Expat managers with progressive norms have an immediate impact, narrowing the gender pay gap by 2-4 percentage points during the exposure period (quarters 0-6). Notably, the effect persists beyond exposure to the manager.[14]

The immediate change in the pay gap, though statistically insignificant in the first four quarters, can be attributed to two factors, supported by anecdotal evidence from HR managers. First, expat managers typically have the opportunity to gather information and learn about their new team and work context before their relocation and thus make changes as soon as they arrive in the destination country. Second, unlike local managers, they are not entrenched in the pre-existing network of workplace relationships and alliances, which allows them to approach their role with fewer social constraints (Macchiavello and Morjaria, 2022). They have greater freedom to introduce new ideas without being influenced by prior relational dynamics. With a pre-existing understanding of the team's dynamics and challenges, they can quickly implement changes.

Table II summarizes and further probes the results. The first row presents the estimates for γ_1, i.e., the impact of an expat manager's gender attitudes on the within-team gender pay gap *during* the period of exposure. The second row presents the estimates for γ_2, i.e., the expat manager's impact *after* the exposure period. The baseline is the pe-

[14]The average expat manager rotates out completely after 8-12 quarters.

riod prior to exposure ($k = 0$). We again see that expat managers with more progressive gender attitudes have a significant positive impact on the gender pay gap. Controlling for worker and manager fixed effects (column 1), a one standard deviation increase in the manager's gender attitudes is associated with a 4.9% pay increase for exposed female employees relative to exposed male employees.[15] For comparison, the overall baseline gap among countries that receive an expat manager is 28%, meaning that progressive managers close this gap by about a sixth ($\frac{4.9}{28} = 17.5\%$). After an expat manager leaves, the gender gap remains 4.9% smaller than it was before the manager's arrival.[16] This persistent effect suggests that the narrowing of the gender pay gap reflects more than a mechanical wage adjustment by the expat manager. These results are robust to including destination country $\times$ exposure period $\times$ worker's gender fixed effects (column 2) and sub-function fixed effects (column 3). When we include work level fixed effects in column (4), the size of the coefficient falls by nearly 50%. This indicates that part of the narrowing gap comes from women being promoted as opposed to just receiving higher pay relative to men.

Appendix Table A.3 shows that the main result is robust to several alternative ways of defining the sample. In the first column we limit the sample to considering only the first international rotation for the expat manager, meaning that the manager is unlikely to have been influenced by rotations in other offices. Column (2) accounts for the fact that workers who stay in the sample longer will disproportionately contribute to our estimates by reweighting workers by the inverse number of months they are in the sample. Columns (3) and (4) report results separately for employees who were already part of the expat manager's team upon his arrival in the destination country and for those who joined afterward. Column (3) shows that results remain robust when restricting the sample to workers who were already in the team at the time of the manager's arrival. Finally, column (5) shows the results are robust to including employees who are never exposed

[15] Gender attitudes' standard deviation at expat-manager level is 0.196. A one standard deviation change in gender attitudes corresponds approximately to the difference between an American and a Chinese manager born in the 1980s, or between a Chinese and an Indian manager born in the 1980s.

[16] The analogous contemporaneous and persistent effects (standard errors) of expat manager's gender norms on the gender gap in log(pay) are 0.046 (0.010) and 0.043 (0.013) respectively, and those on the gender gap in log(bonuses) are 0.167 (0.151) and 0.137 (0.172).

to an expat manager.

Other economic and cultural traits. It is possible that the results are driven by other economic or cultural traits that are correlated with gender attitudes. For example, if women are more likely to work in countries with higher GDP, it might be easier for managers from those countries, which also typically have more progressive gender attitudes, to identify female talent. To assess the extent of such concerns, we control for a range of expat manager characteristics and other cultural traits in Appendix Table A.4. In particular, in Panel A, we control for the manager's age, tenure, quadratics in age and tenure, and work level at the time of exposure in column (1), and for his performance in column (2).[17] In columns (3) and (4), we control for his home country's level of development using GDP per capita and average education attainment. In column (5), we control for his home country's average management talent score, as measured by the World Management Survey - Management.[18] In Panel B, we control for the other cultural traits that have been shown to matter to both macroeconomic and firm outcomes, including trust (e.g., Bloom et al., 2012; Nguyen, 2025), work ethic (e.g., Weber, 1905; Spenkuch, 2017), preference for redistribution (e.g., Alesina and Angeletos, 2005), and risk preference.[19] In all columns, we interact the additional controls with worker's gender and exposure period, similar to $Norms_m$. The impact of expat managers' gender norms on the within-team gender pay gap is robust to the inclusion of these controls. As such, while we cannot completely rule out managers' other characteristics and cultural traits as potential confounding factors, they are unlikely a first-order concern.

We also test whether managers affect broader patterns of inequality, which in turn means a narrowing of the gender pay gap. In Appendix Table A.6 we use as outcomes the 25^{th}-75^{th} percentile pay and bonus ratio within each team, defined by the expat manager. The results show no significant relationship between managers' gender attitudes and the

[17] Following Minni (2025), we measure performance as the age and tenure at which the expat manager progressed to WL3. High performers are more likely to progress to the next work level sooner than others.

[18] The average management talent score is based on the following questions from the WMS: (i) instilling a talent mindset, (ii) building a high-performance culture, (iii) making room for talent, (iv) developing talent, (v) creating a distinctive EVP, and (vi) retaining talent (Bloom et al., 2021).

[19] Measures of these other cultural traits are constructed analogously to those of gender norms using World Values Survey responses to the relevant questions (details in notes to Appendix Table A.4).

compression of pay or bonus distributions within teams. These null effects reinforce the interpretation that our main findings reflect gender-specific mechanisms.

Finally, the results could be driven by firm-specific policy rather than managers' attitudes. For example, the firm, in wanting to improve gender inequality, might send managers from countries with progressive attitudes to other countries with the directive of lessening inequality. Appendix Table A.7 probes this possibility by excluding managers who worked in or have ties to the headquarter office. If these are the workers most likely to transmit the MNE's goals, the results should be driven by them. In columns (1) and (2), we exclude cases where the expat manager is assigned to the headquarters country. In columns (3)-(5), we exclude managers who either originate from the headquarters country or have previously worked there. Across all specifications, the results remain robust, supporting the interpretation that it is the individual manager's norms–rather than HQ-driven directives–that drive the observed effects.

A natural question is whether women's gains under an expat manager come at the expense of men's careers. Appendix Figure A.4 replicates Figure II but includes our battery of fixed effects controlling for office and worker characteristics. It thus shows the average pay of male and female employees who are exposed to expat managers with conservative and progressive gender attitudes, where the excluded group is men exposed to conservative managers in the pre-period. Because of the inclusion of fixed effects, there is no statistically significant difference between the women who are eventually exposed to expat managers. During exposure to the expat manager, the pay of women exposed to progressive expat managers improves relative to the pay of women exposed to conservative expat managers. However, this does not come at the expense of men's pay. Men exposed to both conservative and progressive managers see an improvement in pay. A similar pattern persists beyond exposure.[20]

Destination country's gender norms. We next look at heterogeneity based on gender attitudes in the destination country. In principle, it could be easier to affect the gender pay gap in countries that are already somewhat progressive as there might be less resistance

[20]Panel B of Appendix Figure A.4 shows the same estimates using work level as the outcome.

to promoting women. On the other hand, if there is only a small gender pay gap to begin with, expat managers may have a larger impact in countries with relatively more conservative gender norms. We therefore look at both absolute gender attitudes in the destination country, as well as attitudes relative to the expat manager's home country.

Figure IV plots semi-parametric estimates of the impact of expat manager's gender norms on the gender pay gap as a function of destination country's gender attitudes in absolute terms (Panels A and B) and relative to the expat manager's attitudes (Panels C and D). In all panels, but particularly for the relative norms (i.e., when the manager's norms diverge more sharply from local norms), we find that the impact of more egalitarian expat manager norms on the gender pay gap is stronger in more gender-traditional countries.[21]

4.3 Promotions, Lateral Moves, and Retention

Having shown that expat managers with more progressive attitudes lead to a narrowing of the gender pay gap, we now turn to exploring the mechanisms behind this effect. In particular, we examine whether women's relative gains under more progressive expat managers arise from differences in promotion rates, horizontal job re-assignments, or worker turnover patterns.

In columns (1) and (2) of Table III, we test whether women do better in terms of performance under managers with more progressive gender norms. We estimate equation (1) using the ratio of bonus to pay and performance ratings as the outcomes of interest. There is a limited impact on women's bonus-to-pay ratio during the expat manager's rotation period. Additionally, women receive higher performance ratings under managers with more progressive gender norms but the estimates are noisy and insignificant. Importantly, though, we see that these women receive significantly higher performance ratings *after* an expat manager has departed.[22] These results suggest that expat managers may be

[21] On the other hand, the difference between expat manager's and destination country's gender norms does not directly impact the gender pay gap. The contemporaneous and persistent effects (standard errors) of this difference on the gender gap in log(pay + bonuses), estimated using equation (1), are 0.007 (0.010) and 0.019 (0.010) respectively.

[22] These results on performance ratings hold even when controlling for work level, indicating that within the same work level, women consistently receive higher ratings.

better at identifying and promoting talented women, a possibility that we test next.

Promotions. In columns (3) and (4) of Table III we assess the impact of managers on gender gaps in promotions. We again estimate equation (1) but use an indicator for being promoted to a higher work level (column 3) and the highest work level achieved (column 4). Under a progressive expat manager, women are 4.8 percentage points more likely to be promoted to a higher work level, an effect that persists into the post period. These effects translate into these women moving up 0.06 work levels within the firm (column 4). The fact that women exposed to a more progressive expat manager continue to be promoted even after the manager rotates out of the office suggests that there is a longer-term change in the destination office. Since the expat manager is no longer in charge of promotions, other managers are promoting women more. We study this possibility in subsection 5.

Lateral moves. We can also test whether more progressive expat managers partially improve women's earnings by changing the task allocation of their team, e.g., by better identifying and allocating female talent to tasks (Minni, 2025). Columns (5) and (6) examines whether the horizontal allocation of employees to jobs after the arrival of an expat manager varies by the manager's gender norms. Specifically, we look at whether a worker is transferred to another sub-function, both across all possible functions within the firm (column 5) and within the same function to which the worker was initially assigned (column 6). Women are more likely to be moved within the same sub-function, suggesting that managers may be reallocating women into roles that better suit their talents.

Retention. Because more progressive expat managers improve women's pay and promotions rates, it is possible that they impact the retention of female employees. We estimate the impact of a progressive expat manager on whether a worker leaves the firm within one year of exposure to the expat, and within five years. The results, estimated at the individual worker level, are reported in columns (7) and (8) of Table III. Women are less likely to leave the MNE within five years of exposure, with the impact on one-year retention rates being statistically insignificant.

Quantification. In Appendix Table A.5 we summarize the main findings regarding the contribution of each channel to the change in the gender pay gap: promotions, lateral moves, and worker retention. Column (1) reports the baseline results; column (2) adds work level fixed effects to quantify the impact of promotions; column (3) controls for cumulative function and subfunction transfers and sub-function fixed effects to net out the effect of lateral moves; column (4) estimates a two-step Heckman selection estimator to account for selective worker retention. In particular, we use the number of worker exits in the same office $\times$ function $\times$ year as the excluded variable for the exit equation, following Benson et al. (2019). Column (5) then includes all three channels.

Overall, around half of expat managers' contemporaneous effect on the gender pay gap and their entire effect post-exposure are due to promotions, while lateral moves and worker retention do not meaningfully contribute to the narrowing of the pay gap. Put differently, the primary driver behind the smaller gender pay gap induced by more progressive expat managers is a more equal representation of women in managerial positions, which likely also explains its persistence.

Parental leave. On top of pay and promotions, another dimension of workplace gender inequality is the extent to which managerial attitudes influence workers' decisions regarding parental leave. Access to parental leave, particularly for women, is closely tied to career progression, yet managerial norms and workplace culture can shape both the uptake of leave and post-leave career trajectories.

Table A.10 investigates how exposure to expat managers with progressive gender norms affects workers' pay and parental leave behavior. Columns (1) and (2) examine the impact of expat managers' gender norms on overall pay, distinguishing between workers who have taken parental leave and those who have not. The results show that female workers exposed to expat managers with more progressive gender norms experience a significant increase in pay both during and after exposure, with slightly larger effects for those who have taken parental leave compared to those who have not. These findings suggest that progressive managers may particularly help mitigate the parental leave penalty, supporting women in maintaining earnings parity after taking leave.

Columns (3) to (5) shift the focus to whether exposure to expat managers with progressive gender norms influences the likelihood of workers taking parental leave within the next year. Column (3) suggests that the female-male gap in taking parental leave is larger among those exposed to more progressive expat managers. When disaggregating by gender (columns 4 and 5), the effect remains statistically significant for women but is insignificant for men. Together, these results indicate that progressive managers both reduce the earnings costs associated with parental leave and foster a workplace culture that supports women's leave-taking (without penalty).

4.4 Employees' Perceptions from Surveys

We can test whether employees view their workplace differently under expat managers using a survey that the MNE conducted annually between 2017 and 2021. Due to the shorter time frame of these surveys, the sample includes observations from employees during and after their exposure to an expat manager, with the observation unit defined at the worker-year level. Table IV relates expat managers' gender attitudes to gender differences in employees' perceptions of managerial effectiveness and job satisfaction. We group the survey questions into two main buckets based on whether they primarily capture outcomes that managers directly influence, or that instead reflect broader organizational policies and culture.

In Panel A, the dependent variables correspond to standardized worker responses to six main survey questions related to managerial effectiveness, feedback, sense of autonomy, development opportunities, work-life balance, motivation, and overall morale. The results provide evidence of a significant and positive effect during expat managers' tenure. Appendix Table A.9 confirms that the positive coefficient on gender heterogeneity is primarily driven by improvements in outcomes for female employees, rather than declines among their male counterparts.

Panel B turns to outcomes reflecting the broader organizational environment. Here, we group the remaining survey questions into several indices capturing confidence in corporate strategy, trust in the company and senior leadership, perceived commitment

to diversity and inclusion, effectiveness of personnel management practices, and quality of team dynamics. The results in Panel B are close to zero and statistically insignificant, serving as a placebo test. This lack of effect suggests that our findings are not driven by a general "halo effect" of more progressive managers influencing how employees view the firm overall, but rather reflect genuine improvements in the aspects of work directly shaped by managerial behavior.

5 Cultural Transmission

Expat managers have a lasting impact on the gender pay and promotion gaps of their direct subordinates, suggesting possible longer-term changes in the workplace culture of the destination offices. We now investigate whether expat managers influence the behavior of local managers in the destination offices. In particular, we test for two forms of spillovers. First, we identify local peer managers who work with the expat manager but are not his subordinates or under his purview. We examine how they treat their subordinates and refer to this as the *horizontal transmission* of culture. We then look at the behavior expat managers' direct subordinates who are themselves managers, testing whether their behavior is different even after the expat manager leaves.[23] We refer to this as the *vertical transmission* of culture.

Figure V shows these two levels of possible cultural transmission. The dark blue circles are the managers who are directly impacted by the expat manager and the light blue circles are those who are indirectly affected by the exposed manager. Panel A shows the structure for horizontal transmission. We focus on other peer managers at the same level as the expat managers and who are in the same function within the establishment. These managers therefore likely have interactions with the expat manager. We can then look at how these managers' subordinates' outcomes change. Panel B shows the structure of an expat manager's subordinate employees (vertical transmission). Expat managers only directly influence the outcomes of their direct subordinates, 60% whom are themselves

[23]These managers are middle managers in WL2.

managers.[24] We analyze the impact of an expat manager on his subordinates' behavior by looking at how these direct subordinates as local managers (as labeled in the figure) in turn influence their own subordinates' outcomes.

5.1 Horizontal Transmission

To test for the horizontal transmission of culture, we identify peer managers—those who work with but not for the expat manager—and estimate:

$$\begin{aligned} Y_{jimlkt} = &\sum_{k=0,1,2} \kappa_k \mathbf{1}[K_{jt} = k](Norms_m \times Fem_j) \\ &+ \sum_{k=0,1,2} \gamma_k \mathbf{1}[K_{jt} = k](Norms_i \times Fem_j) \\ &+ \theta_j + \theta_{ik} + \theta_{l,Year(t),Fem(i)} + \mathbf{X}_{jt}\beta + \varepsilon_{jimlkt} \end{aligned} \tag{2}$$

where j indexes the worker, i the peer manager, m the expat manager, l the contemporaneous manager of worker j at calendar month t, and k the time period relative to j's exposure to i. This equation is analogous to equation (1) but with two differences. First, the perspective shifts from *i-m* being the worker-manager pair in equation (1) to *j-i* being the worker-manager pair in equation (2). As such, exposure is defined based on the worker's exposure to the local peer manager. Second, equation (2) additionally includes $Norms_m \times Fem_j$, i.e., the expat manager's gender attitudes interacted with the worker's gender, which is also the main explanatory variable. That is, we are interested in the coefficients $\hat{\kappa}_k$, which tell us the impact of a local peer manager's exposure to a more progressive expat manager, relative to one exposed to a conservative expat manager, on the gender pay gap among the local manager's subordinates. Standard errors are double clustered by worker and expat manager's home country $\times$ worker's gender.

Table V presents the results. Column (1) shows that exposure to an expat manager has a lasting influence on peer managers' behavior. The gender pay gap narrows among employees who work for a manager who interacted with an expat manager with more progressive gender norms, both before and after exposure. The effect also persists after

[24] Appendix Table A.8 shows that the pay and promotion results are indeed concentrated among subordinates who are managers.

exposure to the peer manager ends, which is typically well after the expat manager leaves the office This suggests that the results are not solely due to the presence of the expat manager. In column (2), we consider work level as the outcome and see the same pattern of peer managers exposed to expats with more progressive norms promoting women to higher work levels.

5.2 Vertical Transmission

To test for vertical transmission, we identify "second-generation" managers, i.e., direct subordinates of a expat manager, and the employees they begin to manage after their exposure to the expat manager.[25] We then estimate equation 2 but now the pairs are the subordinate manager-worker and expat manager-subordinate manager.

The results, presented in Table V, again show that expat managers have a large, indirect impact on the outcomes of future employees under their direct subordinates. A "second-generation" manager who has worked under a more progressive expat manager considerably narrows the gender pay gap among his/her team members relative to a "second-generation" manager who has worked under a conservative expat manager (column 3). The effects again persist after the worker's exposure to the "second-generation" manager. However, an important caveat to this analysis is that it is possible that expat managers choose their successors or provide their subordinate managers with a structure to manage workers. We therefore put more emphasis on the horizontal transmission results as evidence of cultural transmission.

Column (4) repeats the analysis using work level as the outcome. We see a similar pattern with the "second-generation" managers exposed to expats with more progressive gender norms promoting women to higher work levels than "second-generation" managers exposed to expats with less progressive gender norms.

[25] In particular, for each "second-generation" manager, we consider all employees he/she begins to manage between the second and twelfth quarters since his/her exposure to the expat manager.

5.3 Aggregate Effects

Overall, we ask whether offices that are more exposed to expat managers with progressive gender norms exhibit different workplace outcomes compared to those with greater exposure to expat managers holding conservative norms. To examine this question, we exploit variation in gender norms at the office-function level and analyze outcomes at this unit of observation. This approach allows us to assess the broader influence of managerial gender norms on the office environment, beyond their direct effect on exposed employees, at a correlational level.

To quantify exposure to progressive versus conservative gender norms, we construct a continuous measure based on the composition of expat managers within an office-function unit. Specifically, for each quarter, we compute the average gender norms measure among all expat managers in a given office-function. We estimate the following specification:

$$Y_{jfq} = \phi AvgNorms_{jfq} + \theta_j + \theta_{f,Year(q)} + \mathbf{X}_{jfq}\delta + \mu_{jfq} \tag{3}$$

where j indexes the office, f the function, and q the quarter. The variable $AvgNorms_{jfq}$ represents the standardized average gender norms of male expat managers in an office-function unit. For interpretability, we standardize $AvgNorms_{jfq}$ using its standard deviation across office-functions that have at least one expat manager in a given quarter. Panel B of Appendix Figure A.2 presents the distribution of this measure. The coefficient ϕ thus captures the change in outcomes at the office-function level associated with a one standard deviation increase in exposure to more progressive gender norms, relative to exposure to more conservative norms.

We include office fixed effects θ_j and function-by-year fixed effects $\theta_{f,Year(q)}$, ensuring that ϕ is identified from within-office variation in exposure to progressive gender norms while controlling for time-varying function-specific shocks. Our specification also includes office-function level controls, such as the number of local employees, their average age and tenure in years, and the fraction of expat managers.

The analysis focuses on three key outcomes among local employees: (i) the promotion rate of female employees, (ii) the gender pay gap, and (iii) exit rates of local managers.

Panel A of Table VI presents the estimated effects of equation (3) on the promotion rate of women and the gender pay gap. While these estimates do not establish causal relationships, they provide suggestive evidence that exposure to progressive gender norms within an office-function is associated with an increase in women's representation in leadership positions and a reduction in the gender pay gap. Specifically, a one standard deviation increase in the average gender norms measure is linked to a 2.3 percentage-point increase in the share of women promoted to WL3 or above, along with a 2.1 percent reduction in the gender pay gap among employees at WL2 and above. To examine heterogeneity in these effects, we partition employees into those directly exposed to expat managers and those who were not yet exposed or never exposed.

Table VI shows that the increase in promotions is driven by both expat-exposed and unexposed women reaching leadership positions, with no evidence of displacement among unexposed employees. For the gender pay gap, both groups also have positive coefficients, but neither is statistically significant.

We next examine whether offices with more progressive gender norms exhibit lower exit rates. Panel B of Table VI reports the results of estimating equation (3) on exit rates by gender. For female and male managers, the estimated coefficients are small and statistically insignificant, providing further evidence that reducing gender disparities is not a zero-sum game where gains for women come at the expense of men.

We next examine whether the presence of expat managers is associated with changes in aggregate performance, as measured by average pay and the bonus-to-pay ratio. At the aggregate level, the bonus-to-pay ratio provides a useful proxy for overall performance because is calibrated on local unit performance and reflects changes in the total performance bonus pot available to employees, which is then distributed among employees based on their own individual performance assessment. Table VII reports results using two complementary levels of aggregation: the office-function level, focusing exclusively on local employees, and the team level, defined by current local managers. Columns (1)-(2) present estimates at the office-function level, where the average gender norm of expat managers is used as the key explanatory variable. We find no statistically significant effects on either average pay or the bonus-to-pay ratio at this level. Columns (3)-(4) show

that, in the post-expat period, teams with a higher share of workers exposed to expat managers display higher average pay and bonus-to-pay ratios, although the estimates are not statistically significant. Overall, these results suggest that the observed improvements in gender equity are not leading to trade-offs in aggregate performance.

6 Beyond the Firm: Evidence from Brazil

We provide complementary evidence using employer-employee data from Brazil to examine whether the relationship between foreign managers' gender norms and workplace outcomes generalizes beyond the multinational setting analyzed above. This section uses administrative data that offer complete coverage of employment relationships and detailed information on workers and firms.

6.1 Data and Sample Construction

We use the *Relação Anual de Informações Sociais* (RAIS), an administrative employer-employee dataset covering the universe of formal employment in Brazil from 2009 to 2021. The data include worker demographics (age, gender, tenure), occupation, and earnings, as well as firm and establishment identifiers. Crucially, RAIS records the nationality of each employee, allowing us to identify foreign managers.[26]

We focus on establishments that, at some point between 2009 and 2021, employed at least one foreign manager.[27] To improve comparability with the multinational sample, we restrict attention to establishments that had, on average, at least 5% of foreign managers (men and women) over the sample period. We exclude nonprivate entities, retaining only firms with private-sector legal statuses.[28] We construct a quarterly establishment-level

[26]The data identify the following nationalities: Brazil, Argentina, Bolivia, Chile, Paraguay, Uruguay, Venezuela, Colombia, Peru, Ecuador, Germany, Belgium, United Kingdom, Canada, Spain, United States, France, Switzerland, Italy, Haiti, Japan, China, South Korea, Russia, Portugal, Pakistan, India, Guinea-Bissau, Morocco, Cuba, Syria, Bangladesh, Angola, Congo, South Africa, Ghana, and Senegal.

[27]Managers are identified as workers classified in the first major group of the International Standard Classification of Occupations (ISCO).

[28]We restrict the sample to the following legal classifications: 2038, 2046, 2054, 2062, 2135, 2143, 2178, 2216, 2240, 2305, 3069, 3204, 3220, 3999, 5010, and 5029. These codes correspond to private-sector legal statuses, excluding public administration, nonprofits, and cooperatives. See `https://concla.ibge.gov.`

panel using workers' main job spells, defined as the employment relationship that generated the highest quarterly earnings. Among local (Brazilian) employees, we compute four outcomes: (i) the share of women in managerial positions, (ii) the share of women in high-skilled white-collar positions, (iii) the establishment-level gender pay gap among high-skilled white-collars, and (iv) exit rates of male and female managers, measured as the fraction of managers who leave the establishment in a given quarter.

To measure foreign managers' gender norms, we use the World Values Survey to construct a country-level gender norms index, averaged across cohorts and standardized. Each foreign manager in RAIS is assigned the value corresponding to their country of nationality. We then compute the quarterly average of male foreign managers' gender norms for each establishment. Figure A.3 shows the distribution of this measure, which exhibits wide variation due to differences in the nationality composition of foreign managerial staff.

6.2 Empirical Strategy

We estimate the following specification to examine the relationship between exposure to more progressive gender norms among foreign male managers and gender outcomes within establishments:

$$Y_{eq} = \Phi AvgNorms_{eq} + \theta_{Firm(e)} + \theta_{Ind(e),Year(q),State(e)} + \mathbf{X}_{eq}\delta + \mu_{eq} \tag{4}$$

where Y_{eq} is one of the outcomes defined above for establishment e in quarter q. The variable $AvgNorms_{eq}$ represents the standardized average gender norms of male foreign managers in establishment e at quarter q. The vector $\boldsymbol{X}_{eq}$ includes controls for the share of foreign managers, the average age and tenure of local employees, and the number of workers and managers in the establishment. All specifications include firm fixed effects $\theta_{Firm(e)}$ and 1-digit industry $\times$ year $\times$ state fixed effects $\theta_{Ind(e),Year(q),State(e)}$. Standard errors are clustered at the firm level.

The coefficient Φ captures the within-firm correlation between changes in exposure to

br/classificacoes/por-tema/organizacao-juridica.html.

progressive gender norms and changes in gender-related outcomes among local employees, controlling for sectoral and regional shocks. This specification parallels equation (3) in the analysis, facilitating a direct comparison of magnitudes.

6.3 Effects of Foreign Managers' Gender Norms

Table VIII presents estimates from equation (4). Columns (2) and (3) show that male foreign managers' exposure to more progressive gender norms is positively associated with women's representation in leadership positions. A one-standard-deviation increase in the average gender-norms measure is associated with a 1.2 percentage-point rise in the share of women among managers and a similar increase among high-skilled white-collar employees, reflecting gains in female representation. Regarding pay outcomes, column (3) shows that male foreign managers' exposure to progressive gender norms reduces the gender pay gap by roughly 8 percent.

Columns (4) and (5) of Table VIII reports the estimates for managers' exit rates. The coefficients are close to zero and statistically insignificant for both female and male managers, indicating no evidence that the observed gains in female representation occur through higher male turnover. These results are consistent with the multinational evidence: exposure to foreign managers from countries with more progressive gender norms leads to more gender-balanced outcomes within firms, without offsetting male employment.

Taken together, these findings suggest that the relationship between foreign managers' gender attitude and workplace outcomes extends beyond multinational offices. Even in a setting with limited international ownership, exposure to foreign managers from countries with more progressive gender norms is associated with higher female representation in managerial positions and lower gender pay gap. This external validity exercise reinforces the view that managerial practices and norms can shape gender disparities in organizations, even outside the multinational context.

7 Conclusion

Firm culture is increasingly recognized as a determinant of firm performance, particularly when it comes to employee recruitment, motivation, and retention (Graham et al., 2013; Adams et al., 2021). However, identifying the role that culture plays in shaping worker outcomes is challenging as measures of firm culture are often unobserved and correlated with employee characteristics. In addition, it remains an open question how corporate culture is formed, sustained, and transmitted.

We use an observable measure of firm culture, gender attitudes, to test for the impact that culture has on employee outcomes. We showed that managers with more progressive gender norms persistently narrow the gender pay gap in foreign establishments. This is primarily achieved through increased promotion rates of women into senior management roles. We additionally show that the persistent impact of expat managers impact is partly driven by expats' influence on other peer managers.

More broadly, our results highlight the importance of middle managers in diffusing managerial practices and influencing corporate culture. They also suggest that multinational firms play a role in shaping global workplace practices and transmitting cultural norms across borders, beyond their role in inducing productivity catch-up throughout the economy (Alfaro, 2017). By operating in diverse cultural environments but sharing a common internal labor market, these firms can serve as conduits for the diffusion of values, managerial practices, and workplace norms.

In this paper, we focus on the role of managers as key agents of cultural transmission within firms. Specifically, we examine how the gender norms that managers bring from their home countries influence workplace culture and the career trajectories of women and men in foreign establishments. Hence, the practice of rotating managers across space is not only a tool for knowledge transfer, but also a catalyst for social development.

To quantify the potential gains from alternative managerial assignments, we simulate an "optimal rotation policy" based on the estimated interaction between managers' gender norms and the cultural context of the destination country. Specifically, holding constant the stock of managers and destination countries, the optimal allocation corresponds

to negative assortative matching (NAM)—that is, assigning more progressive managers to less progressive country contexts. Under these optimal (NAM) assignments, we estimate that the gender pay gap would further improve by approximately 36 percent, highlighting the large potential gains from better manager-country matching. By exposing workers to managers from different cultural contexts, multinational corporations facilitate the spread of progressive gender norms and equitable management practices.

References

Adams, R. B., A. C. Akyol, and P. A. Grosjean (2021). Corporate Gender Culture. Working Paper.

Alesina, A. and G.-M. Angeletos (2005). Fairness and Redistribution. *American Economic Review 95*(4), 960–980.

Alesina, A., P. Giuliano, and N. Nunn (2013). On the Origins of Gender Roles: Women and the Plough. *The Quarterly Journal of Economics 128*(2), 469–530.

Alfaro, L. (2017). Gains from Foreign Direct Investment: Macro and Micro Approaches. *The World Bank Economic Review 30*(Supplement_1), S2–S15.

Alfaro-Urena, A., I. Manelici, and J. P. Vasquez (2022). The Effects of Joining Multinational Supply Chains: New Evidence from Firm-to-Firm Linkages. *The Quarterly Journal of Economics 137*(3), 1495–1552.

Algan, Y. and P. Cahuc (2010). Inherited Trust and Growth. *American Economic Review 100*(5), 2060–2092.

Aneja, A., S. Farina, and G. Xu (2025). Closing gender gaps through workplace diversity: The intergenerational effects of world war i.

Ashraf, N., O. Bandiera, V. Minni, and V. Quintas-Martınez (2024). Gender Gaps Across the Spectrum of Development: Local Talent and Firm Productivity. Working Paper.

Ashraf, N., N. Bau, N. Nunn, and A. Voena (2020). Bride Price and Female Education. *Journal of Political Economy 128*(2), 591–641.

Bena, J., H. Diep-Nguyen, Q.-A. Do, K.-T. Nguyen, and I. Wang (2025). The cultural origin of the gender pat gap: Evidence from canadian employer-employee matched data. Working Paper.

Benson, A., D. Li, and K. Shue (2019). Promotions and the Peter Principle. *The Quarterly Journal of Economics 134*(4), 2085–2134.

Bertrand, M. (2011). New Perspectives on Gender. In *Handbook of Labor Economics*, Volume 4, pp. 1543–1590. Elsevier.

Biasi, B. and H. Sarsons (2022). Flexible Wages, Bargaining, and the Gender Gap. *The Quarterly Journal of Economics 137*(1), 215–266.

Bisin, A. and T. Verdier (2000). "Beyond the Melting Pot": Cultural Transmission, Marriage, and the Evolution of Ethnic and Religious Traits. *The Quarterly Journal of Economics 115*(3), 955–988.

Bisin, A. and T. Verdier (2001). The Economics of Cultural Transmission and the Dynamics of Preferences. *Journal of Economic Theory 97*(2), 298–319.

Bloom, N., R. Lemos, R. Sadun, D. Scur, and J. Van Reenen (2021). World management survey - manufacturing. UNF:6:k5xYE9W6U534XDiWu3RjrA== [fileUNF].

Bloom, N., R. Sadun, and J. Van Reenen (2012). The Organization of Firms Across Countries. *The Quarterly Journal of Economics 127*(4), 1663–1705.

Boelmann, B., A. Raute, and U. Schönberg (2025). Wind of change? cultural determinants of maternal labor supply. *American Economic Journal: Applied Economics 17*(2), 41–74.

Boudreau, L. (2024). Multinational Enforcement of Labor Law: Experimental Evidence from Bangladesh's Apparel Sector. *Econometrica Forthcoming*.

Chen, Y., J. Hou, and Z. Lei (2024). Persistence of managerial gender bias. *Available at SSRN 4928537*.

Cullen, Z. and R. Perez-Truglia (2023). The Old Boys' Club: Schmoozing and the Gender Gap. *American Economic Review 113*(7), 1703–1740.

Fernández, R. and A. Fogli (2009). Culture: An Empirical Investigation of Beliefs, Work, and Fertility. *American Economic Journal: Macroeconomics 1*(1), 146–177.

Fernández, R., A. Fogli, and C. Olivetti (2004, 11). Mothers and Sons: Preference Formation and Female Labor Force Dynamics. *The Quarterly Journal of Economics 119*(4), 1249–1299.

Fortin, N. M., M. Markevych, and M. Rehavi (2022). Closing the Gender Pay Gap in the US Federal Service: The Role of New Managers. Working Paper.

Giuliano, P. (2007). Living Arrangements in Western Europe: Does Cultural Origin Matter? *Journal of the European Economic Association 5*(5), 927–952.

Giuliano, P. (2021). Gender and Culture. *Oxford Review of Economic Policy 36*(4), 944–961.

Graham, J. R., J. Grennan, C. R. Harvey, and S. Rajgopal (2022). Corporate Culture: Evidence from the Field. *Journal of Financial Economics 146*(2), 552–593.

Graham, J. R., C. R. Harvey, and M. Puri (2013). Managerial Attitudes and Corporate Actions. *Journal of Financial Economics 109*(1), 103–121.

Guiso, L., F. Monte, P. Sapienza, and L. Zingales (2008). Culture, Gender, and Math. *Science 320*(5880), 1164–1165.

Guiso, L., P. Sapienza, and L. Zingales (2016). Long-Term Persistence. *Journal of the European Economic Association 14*(6), 1401–1436.

Hampole, M., F. Truffa, and A. Wong (2024). Peer effects and the gender gap in corporate leadership: Evidence from mba students.

Hjort, J., X. Li, and H. Sarsons (2022). Across-Country Wage Compression in Multinationals. *American Economic Review*.

ILO (2017). Measurement of the Employment and Labour-Related Impacts of Multinational Enterprises (MNEs). *International Labour Organization mimeo*.

Kleven, H. (2022). The Geography of Child Penalties and Gender Norms: Evidence from the United States. Working Paper.

Luttmer, E. F. P. and M. Singhal (2011). Culture, context, and the taste for redistribution. *American Economic Journal: Economic Policy 3*(1), 157–179.

Macchiavello, R. and A. Morjaria (2022). Acquisitions, management, and efficiency in rwanda's coffee industry.

Manski, C. F. (1993). Identification of endogenous social effects: The reflection problem. *The review of economic studies 60*(3), 531–542.

Masso, J., J. Meriküll, and P. Vahter (2022). The role of firms in the gender wage gap. *Journal of Comparative Economics 50*(2), 454–473.

Miho, A., A. Jarotschkin, and E. Zhuravskaya (2024). Diffusion of gender norms: Evidence from stalin's ethnic deportations. *Journal of the European Economic Association 22*(2), 475–527.

Miller, C. (2017). The persistent effect of temporary affirmative action. *American Economic Journal: Applied Economics 9*(3), 152–190.

Miller, C., J. Peck, and M. Seflek (2022). Missing women, integration costs, and big push policies in the saudi labor market. *American Economic Journal: Applied Economics 14*(2), 51–77.

Minni, V. (2024). Global Managers, Local Workers: Wage Setting Inside a Multinational Firm. In *AEA Papers and Proceedings*, Volume 114, pp. 586–591.

Minni, V. (2025). Making the Invisible Hand Visible: Managers and the Allocation of Workers to Jobs. Working Paper.

Nguyen, K.-T. (2025). Trust and Innovation within the Firm: Evidence from Matched CEO-Firm Data. Working Paper.

Olivetti, C., E. Patacchini, and Y. Zenou (2020, 12). Mothers, Peers, and Gender-Role Identity. *Journal of the European Economic Association 18*(1), 266–301.

Ronchi, M. and N. Smith (2021). Daddy's Girl: Daughters, Managerial Decisions, and Gender Inequality. Working Paper.

Tabellini, G. (2008). Institutions and Culture. *Journal of the European Economic Association 6*(2-3), 255–294.

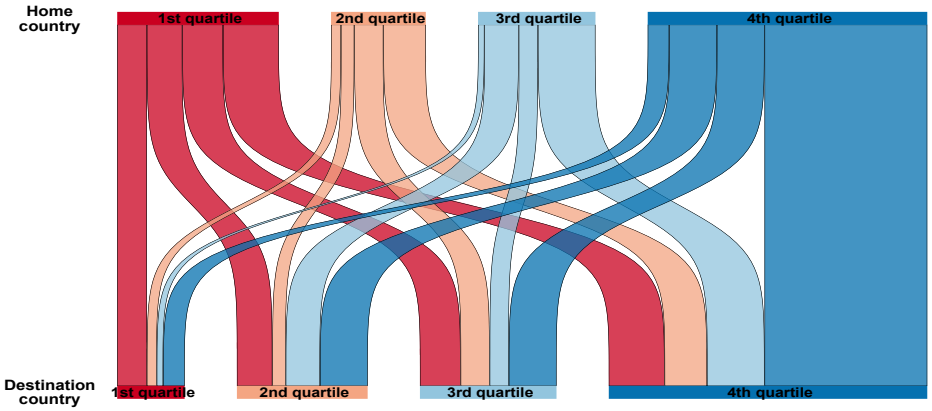
Tang, H. and Y. Zhang (2021). Do multinationals transfer culture? evidence on female employment in china. *Journal of International Economics 133*, 103518.

Tur-Prats, A. (2019). Family Types and Intimate Partner Violence: A Historical Perspective. *Review of Economics and Statistics 101*(5), 878–891.

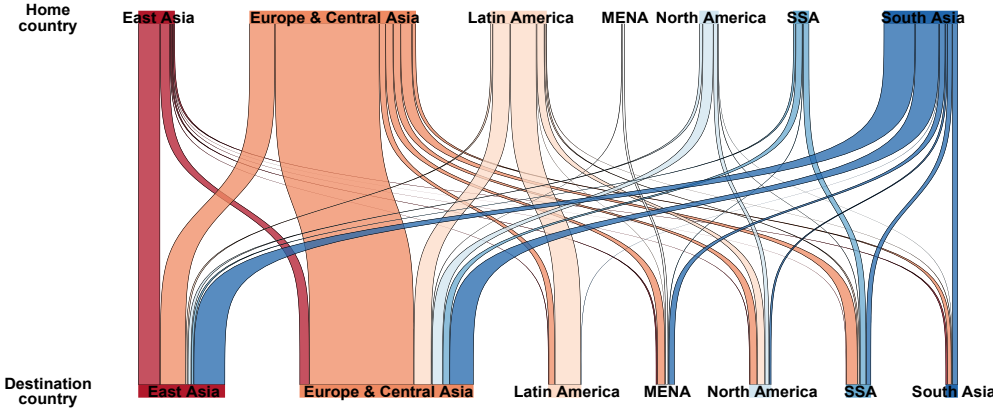
Xu, G. (2018). The costs of patronage: Evidence from the british empire. *American Economic Review 108*(11), 3170–3198.

Figures and Tables

Figure I: Expat Managers' Home and Destination Countries



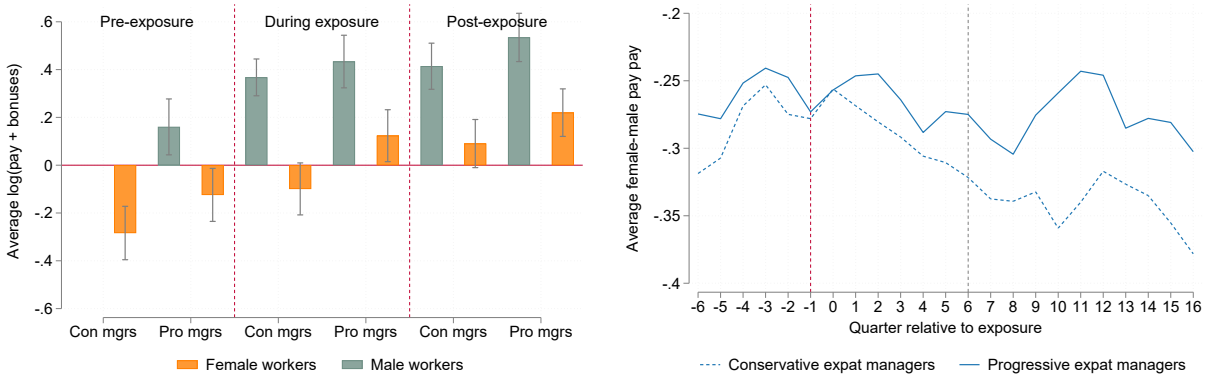
A. By country gender norms



B. By geographical region

Notes: This figure shows baseline sample's manager flows during their expat rotations across countries based on the origin and destination countries' gender norms and geographical regions. The top row corresponds to the home countries of expat managers and the bottom row corresponds to the destination countries where expat managers are posted during their expat rotations. In **Panel A**, countries are grouped into quartiles based on their country-level gender norms. The first quartile is the most gender-conservative and the fourth quartile the most gender-progressive. In **Panel B**, countries are grouped into regions following the World Bank classification. Latin America stands for Latin America and Caribbean countries, SSA Sub-Saharan Africa, and MENA Middle-East and North Africa.

Figure II: Pay of Women and Men Exposed to Expat Managers

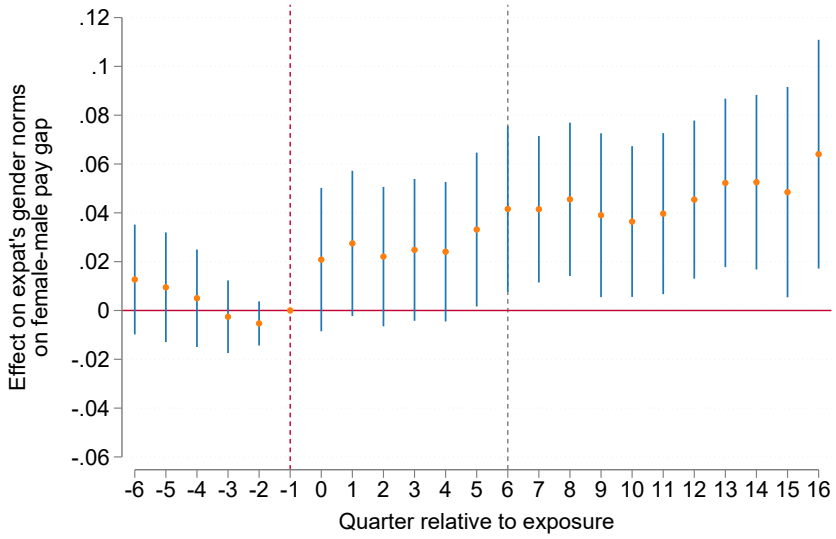


A. Average pay

B. Female-male pay gap

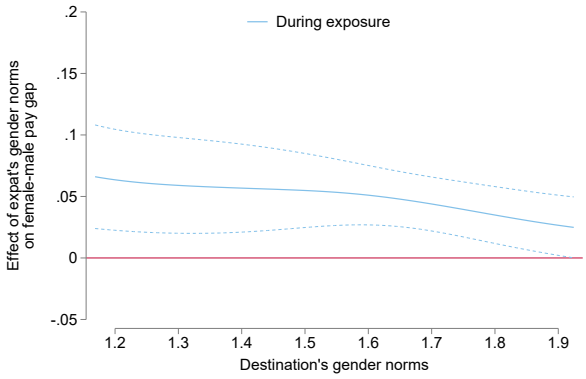
Notes: **Panel A** plots the average log(pay + bonuses) of female and male workers exposed to expat managers with conservative and progressive gender norms before, during, and after such exposure, relative to that of male workers exposed to gender-conservative expat managers pre-exposure. Standard errors used to compute the 95% confidence intervals are clustered by worker. **Panel B** plots the average female-male pay gap among workers exposed to gender-progressive (solid lines) and conservative (dotted lines) expat managers. Exposure to the expat manager begins in quarter zero and, on average, ends in quarter six.

Figure III: Evolution of Impact of Expat Manager's Gender Norms on the Gender Pay Gap

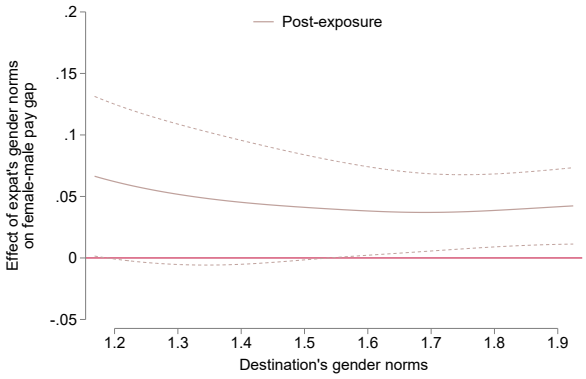


Notes: This figure presents the results from estimating the event-study equation: $Y_{imlkqt} = \sum_{q=-7}^{17} \sigma_q \mathbf{1}[Q_{it} = q](Norms_m \times Fem_i) + \theta_i + \theta_{mk} + \theta_{l,Year(t),Fem(i)} + \mathbf{X}_{it}\beta + \varepsilon_{imlkqt}$ where q indexes the quarter relative to worker i's exposure to expat manager m, with $q = -7$ subsuming the time period before quarter -6 and $q = 17$ the time period after quarter 16 (see Section 3 for other notation details). The plotted coefficients $\hat{\sigma}_q$ capture the impacts of the expat manager's gender norms on the within-team female-male gender pay gap in the quarter q relative to that in quarter -1 (the quarter right before the exposure). The estimation sample includes all ever–expat-exposed workers whose pay is observed for more than three months both before and after their expat exposure. Standard errors used to compute the 95% confidence intervals are double clustered by worker and expat manager's home country $\times$ worker's gender.

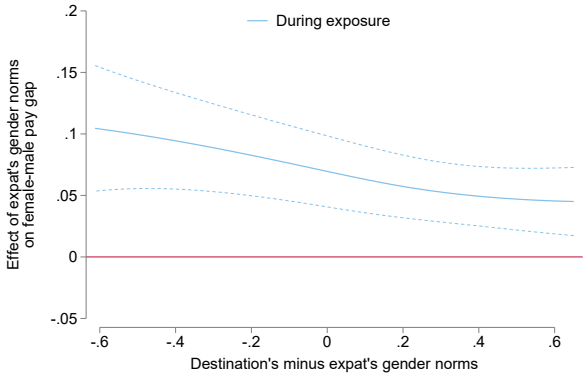
Figure IV: Impact of Expat Manager's Gender Norms by Destination Country



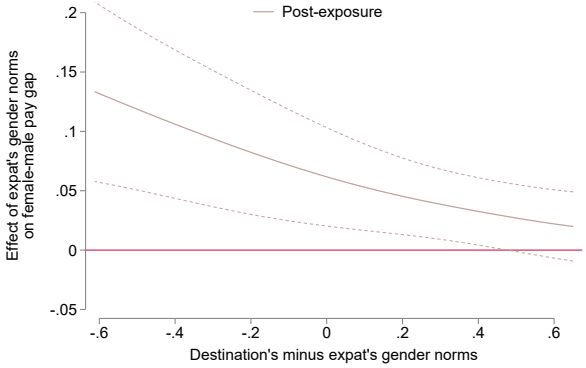
A. Contemporaneous effect by destination's absolute gender norms



B. Persistent effect by destination's absolute gender norms



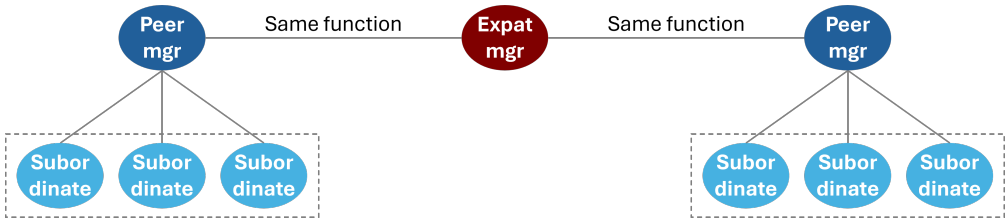
C. Contemporaneous effect by destination's relative gender norms



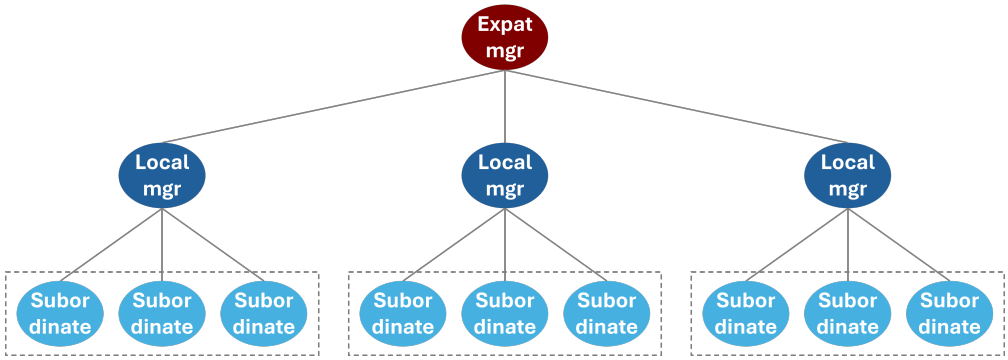
D. Persistent effect by destination's relative gender norms

Notes: This figure plots semi-parametric estimates of the impact of expat manager's gender norms on the gender pay gap as a function of the X-axis variable. The point estimates of the contemporaneous and persistent effects at each value of the X-axis variable are obtained from the baseline regression in equation (1), weighted by a Gaussian kernel function of the X-axis variable around that particular value with a bandwidth equal to 25% of the range of X-axis variable. The X-axis variable is the destination country's gender norms in **Panels A** and **B** and the difference between the destination country's and expat manager's gender norms in **Panels C** and **D**. Standard errors used to compute the 95% confidence intervals are double clustered by worker and expat manager's home country × worker's gender.

Figure V: Transmissions Along and Across the Hierarchy



A. Horizontal transmission



B. Vertical transmission

Notes: This figure illustrates the horizontal (**Panel A**) and vertical (**Panel B**) transmissions of expat managers' gender norms along and across the hierarchy.

Table I: Expat Managers and Exposed Employees versus Peers

Panel A: Expat managers vs. peers prior to international rotations

Dependent variable:	(1) **Age**	(2) **Tenure**	(3) **Log(Pay + bonuses)**	(4) **Bonuses-pay ratio**	(5) **Work level**
Expat managers	-2.381***	-0.701	0.035*	-0.003	0.022
	(0.321)	(0.446)	(0.018)	(0.004)	(0.031)
Peer dependent variable mean	45.690	15.640	12.150	0.260	3.130
Peer dependent variable std. dev.	7.106	9.028	0.411	0.075	0.339
Office × Year × Func × WL FEs	✓	✓	✓	✓	
Office × Year × Func FEs					✓
N	162,450	162,450	77,275	77,275	162,520

Panel B: Exposed workers vs. peers prior to expat exposure

Dependent variable:	(1) **Female**	(2) **Age**	(3) **Tenure**	(4) **Log(Pay + bonuses)**	(6) **Bonuses-pay ratio**	(6) **Work level**
Exposed workers	0.003	-2.111***	-1.192***	0.043***	0.001*	0.021
	(0.009)	(0.184)	(0.200)	(0.009)	(0.001)	(0.021)
Peer dependent variable mean	0.440	40.260	11.050	10.930	0.150	1.780
Peer dependent variable std. dev.	0.496	9.624	9.368	0.758	0.093	0.618
Office × Year × Func × WL FEs	✓	✓	✓	✓	✓	
Office × Year × Func FEs						✓
N	863,180	863,251	863,251	455,734	455,734	863,801

Notes: **Panel A** compares male employees who subsequently become expats with peers who do not, restricting the peer group to managers at work level 3 or 4. For expat managers, outcomes are measured one year prior to their first international rotation. **Panel B** compares employees who will work under an expat with peers who never do, restricting the peer group to employees who work under managers at work level 3 or 4. For exposed workers, outcomes are measured one year prior to working under an expat. Standard errors in parentheses are clustered by office.

Table II: Impact of Expat Manager's Gender Norms on the Gender Pay Gap

Dependent variable:	(1)	(2)	(3)	(4)
	Log(Pay + bonuses)			
Expat mgr norms × Female × During	0.049***	0.039**	0.041***	0.027***
	(0.012)	(0.018)	(0.010)	(0.009)
Expat mgr norms × Female × Post	0.049***	0.057***	0.042***	0.021
	(0.015)	(0.020)	(0.013)	(0.013)
Team F-M gap pre-exposure	-0.277	-0.277	-0.277	-0.277
P-value: During vs. Post	0.994	0.106	0.924	0.553
Worker FEs	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓
Manager × Year × Fem FEs	✓	✓	✓	✓
Dest. country × Period × Fem FEs		✓		
Sub-function FEs			✓	
Work level FEs				✓
N	249,968	249,968	249,968	249,968

Notes: Column (1) reports the coefficients from estimating equation (1) using worker's log(pay + bonuses) as the outcome variable. Column (2) additionally controls for destination country × exposure period × worker's gender fixed effects; column (3) worker's sub-function fixed effects; and column (4) worker's work level fixed effects. Baseline controls include worker's age, age^2, tenure, and tenure^2. Standard errors in parentheses are double clustered by worker and expat manager's home country × worker's gender.

Table III: Impact of Expat Manager's Gender Norms on Worker's Performance, Promotions, Lateral Moves, and Retention

Channel:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Performance		Promotions		Lateral moves		Retention	
Dependent variable:	**Bonuses-pay ratio**	**Performance rating**	**Work level promotions**	**Work level achieved**	**All sub-function transfers**	**Only same-function transfers**	**Leave in 1 year**	**Leave in 5 years**
Expat mgr norms × Female × During	0.006	0.535	0.048***	0.064***	0.018	0.114**		
	(0.005)	(1.716)	(0.013)	(0.018)	(0.060)	(0.046)		
Expat mgr norms × Female × Post	0.010*	4.757**	0.052***	0.079***	0.067	0.107*		
	(0.006)	(2.128)	(0.015)	(0.020)	(0.066)	(0.056)		
Expat mgr norms × Female							-0.018	-0.070***
							(0.013)	(0.026)
Dependent variable mean	0.155	43.516	0.345	1.968	1.419	1.088	0.104	0.710
Dependent variable std. dev.	0.101	31.349	0.508	0.843	1.446	1.271	0.305	0.454
Team F-M gap pre-exposure	-0.025	-2.021	-0.054	-0.266	0.023	-0.026		
P-value: During vs. Post	0.134	0.022	0.728	0.219	0.185	0.851		
Worker FEs	✓	✓	✓	✓	✓	✓		
Expat manager × Period FEs	✓	✓	✓	✓	✓	✓		
Manager × Year × Fem FEs	✓	✓	✓	✓	✓	✓		
Expat manager FEs							✓	✓
Work level × Female FEs							✓	✓
Function × Female FEs							✓	✓
Dest. country × Female FEs							✓	✓
Year × Female FEs							✓	✓
N	249,968	215,741	249,968	249,968	249,968	249,968	2,055	921

Notes: Columns (1) to (6) report the coefficients from estimating equation (1) using worker's performance (columns 1 and 2), promotions (columns 3 and 4), and lateral moves (columns 5 and 6) as the outcome variables. Performance rating (column 2) is percentile relative to all workers. Work level promotions (column 3) and sub-function transfers (columns 5 and 6) are cumulative counts. Controls include worker's age, age^2, tenure, and tenure^2. Standard errors in parentheses are double clustered by worker and expat manager's home country × worker's gender. Columns (7) and (8) report the coefficients from estimating the equation: $Y_{im} = \gamma Norms_m \times Fem_i + \theta_m + \mathbf{X_i}\beta + \varepsilon_i$ (see Section 3 for notation details). Each observation is an expat-exposed worker. Dependent variables are whether the worker leaves the firm within 1 year (column 7) and 5 years (column 8) from the first month of their expat exposure. Controls $\mathbf{X_i}$ include worker's age, age^2, tenure, tenure^2, log(pay + bonuses), work level dummies, function dummies, country dummies, and year dummies, all measured at that first month and interacted with worker's gender. Standard errors in parentheses are clustered by expat manager's home country × worker's gender.

Table IV: Expat Manager's Gender Norms and Worker's Pulse Surveys

Panel A. Direct managerial influence

Dependent variable:	(1) **Manager**	(2) **Feedback**	(3) **Control**	(4) **Development**	(5) **Balance**	(6) **Extra mile**	(7) **Morale**
Expat mgr norms × Female × During	0.098**	0.156**	0.089*	0.116**	0.072*	0.078*	0.077**
	(0.047)	(0.074)	(0.052)	(0.044)	(0.038)	(0.046)	(0.033)
Team F-M gap during exposure	0.105	0.116	0.251	0.227	0.092	0.059	0.119
Expat manager FEs	✓	✓	✓	✓	✓	✓	✓
Work level × Female FEs	✓	✓	✓	✓	✓	✓	✓
Function × Female FEs	✓	✓	✓	✓	✓	✓	✓
Dest. country × Female FEs	✓	✓	✓	✓	✓	✓	✓
Year × Female FEs	✓	✓	✓	✓	✓	✓	✓
N	7,152	4,112	6,386	7,894	7,899	7,903	7,880

Panel B. Broader organizational culture

Dependent variable:	(1) **Corporate strategy**	(2) **Trust & integrity**	(3) **Inclusive leadership**	(4) **Personnel management**	(5) **Team dynamics**
Expat mgr norms × Female × During	0.008	0.022	0.003	0.020	0.020
	(0.037)	(0.035)	(0.046)	(0.025)	(0.033)
Team F-M gap during exposure	0.192	-0.037	-0.073	0.133	0.063
Expat manager FEs	✓	✓	✓	✓	✓
Work level × Female FEs	✓	✓	✓	✓	✓
Function × Female FEs	✓	✓	✓	✓	✓
Dest. country × Female FEs	✓	✓	✓	✓	✓
Year × Female FEs	✓	✓	✓	✓	✓
N	7,852	7,085	7,163	6,253	7,832

Notes: This table reports the coefficients from estimating equation: $Y_{imkt} = \sum_{k=1,2} \gamma_k \mathbf{1}[K_{it} = k](Norms_m \times Fem_i) + \theta_m + \mathbf{X_{it}}\beta + \varepsilon_{imkt}$ (see Section 3 for notation details). Each observation is a worker × year during or after the worker's expat exposure. Dependent variables are the worker's standardized responses to the MNE's annual employee survey. **Panel A:** Column (1) considers the question *"My line manager is an effective leader;"* column (2) *"I receive feedback from my line manager that helps me grow;"* column (3) *"I have control over prioritising tasks when facing multiple demands at work;"* column (4) *"I am satisfied with my development opportunities at [MNE];"* column (5) *"I can maintain a reasonable balance between my personal life and work life;"* column (6) *"My job inspires me to go the extra mile;"* and column (7) considers three questions *"Overall, I am extremely satisfied with [MNE] as a place to work," " I am proud to say that I work for [MNE],"* and *"I would gladly refer a friend or family member to [MNE] for employment,"*. **Panel B** considers the set of questions related to confidence in corporate strategy (column 1), trust in the company and senior leadership (column 2), leadership's commitment to diversity and inclusion (column 3), effectiveness of personnel management practices (column 4), and quality of team dynamics (column 5). Controls $\mathbf{X_{it}}$ include worker's age, age^2, tenure, tenure^2, and log(pay + bonuses), together with worker's work level dummies, function dummies, country dummies, and year dummies, each interacted with worker's gender. Standard errors in parentheses are double clustered by worker and expat manager's home country × worker's gender.

Table V: Impacts of Expat Manager's Gender Norms on Local Managers' Subordinates

Sample: Subordinates of	(1) Peer managers (horizontal)	(2) Peer managers (horizontal)	(3) Direct employees (vertical)	(4) Direct employees (vertical)
Dependent variable:	**Log(Pay + bonuses)**	**Work level**	**Log(Pay + bonuses)**	**Work level**
Expat mgr norms × Female × During	0.037**	0.060***	0.021*	0.049***
	(0.015)	(0.020)	(0.011)	(0.018)
Expat mgr norms × Female × Post	0.024*	0.065***	0.030***	0.060***
	(0.014)	(0.020)	(0.010)	(0.017)
P-value: During vs. Post	0.243	0.818	0.476	0.532
Worker FEs	✓	✓	✓	✓
Local peer manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	249,308	249,308	375,509	375,509

Notes: This table reports the coefficients from estimating equation (2) using "indirect" worker's log(pay + bonuses) and work level as the outcome variables. Columns (1) and (2) examine horizontal transmission through local peer managers at the same work level in the same function, while columns (3) and (4) examine vertical transmission through local direct employees who are themselves "second-generation" managers. Exposure period is defined based on the worker's exposure to the local manager, which is measured within three years of the local manager's first month of expat exposure. Controls include worker's age, age^2, tenure, tenure^2, and local manager's gender norms × worker's gender × exposure period dummies. Standard errors in parentheses are double-clustered by worker and by expat manager's home country × worker's gender.

Table VI: Aggregate Impacts on Office-Function's Gender Gaps and Exit Rates

Panel A. Promotion and gender pay gap

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)
	Female share of leadership			**Female-male pay gap**		
Local employee sample:	All	Exposed	Unexposed	All	Exposed	Unexposed
Male expat mgrs' average norms	0.0225*	0.0132	0.0101	0.0205**	0.0067	0.0173
	(0.0116)	(0.0111)	(0.0085)	(0.0099)	(0.0183)	(0.0185)
Dependent variable mean	0.433	0.300	0.123	-0.130	-0.096	-0.177
Dependent variable std. dev.	0.269	0.249	0.176	0.191	0.295	0.744
Expat manager share control	✓	✓	✓	✓	✓	✓
Office × Year FEs	✓	✓	✓	✓	✓	✓
Function × Year FEs	✓	✓	✓	✓	✓	✓
N	2,052	2,052	2,052	2,052	2,052	2,052

Panel B. Managers' exit rates

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)
	Female exit rates			**Male exit rates**		
Local employee sample:	All	Exposed	Unexposed	All	Exposed	Unexposed
Male expat mgrs' average norms	-0.0000	0.0003	-0.0004	0.0005	0.0001	0.0001
	(0.0007)	(0.0005)	(0.0004)	(0.0009)	(0.0007)	(0.0005)
Dependent variable mean	0.011	0.005	0.005	0.013	0.007	0.005
Dependent variable std. dev.	0.017	0.011	0.012	0.022	0.016	0.014
Expat manager share control	✓	✓	✓	✓	✓	✓
Office × Year FEs	✓	✓	✓	✓	✓	✓
Function × Year FEs	✓	✓	✓	✓	✓	✓
N	2,052	2,052	2,052	2,052	2,052	2,052

Notes: This table reports the coefficients from estimating equation (3) using aggregate gender gaps (**Panel A**) and exit rates (**Panel B**) as the outcome variables. Each observation is an office × function × quarter. In both panels, columns (1) and (4) consider all local employees at WL2 or above in each office × function × quarter, while the remaining columns consider only expat-exposed employees (columns 2 and 5) or unexposed employees (columns 3 and 6). To compute the female share of leadership (columns 1 to 3 of Panel A), we further restrict the sample to local employees at WL3 or above. To compute the female-male pay gap (columns 4 to 6 of Panel A), we estimate a worker × quarter-level wage regression controlling for worker's age, age^2, tenure, and tenure^2, then store the worker's gender coefficient for each office × function × quarter. For female share of leadership and female and male exit rates, we decompose the overall share and exit rates into the corresponding values for expat-exposed and unexposed employees. For female-male pay gap, we estimate the aforementioned wage regression separately for expat-exposed and unexposed employees. Controls include the share of expat managers, number of local employees, and their average age and tenure. Standard errors in parentheses are clustered by office × year.

Table VII: Aggregate Impacts of Office-Function's and Team's Performance

Level of analysis:	(1)	(2)	(3)	(4)
	Office-function		Team	
Dependent variable:	**Log(Avg. pay + bonuses)**	**Bonuses-pay ratio**	**Log(Avg. pay + bonuses)**	**Bonuses-pay ratio**
Male expat mgrs' average norms	0.005	0.001	0.014	0.001
	(0.010)	(0.002)	(0.009)	(0.001)
Dependent variable mean	10.816	0.162	10.726	0.134
Dependent variable std. dev.	0.513	0.046	0.685	0.073
Expat manager share control	✓	✓		
Exposed worker share control			✓	✓
Office × Year FEs	✓	✓	✓	✓
Function × Year FEs	✓	✓	✓	✓
Local manager FEs			✓	✓
N	2,052	2,052	108,231	108,231

Notes: Columns (1) and (2) report the coefficients from estimating equation (3) using aggregate log(pay + bonuses) and bonuses-to-pay ratio as the outcome variables, computed using all local employees. Each observation is an office × function × quarter. Columns (3) and (4) replicate columns (1) and (2) at the team level. Each observation is a team × quarter with a local manager and at least one prior-expat-exposed worker. Controls include number of local employees and their average age and tenure, measured at the corresponding level of aggregation. Columns (1) and (2) additionally control for the share of expat managers. Standard errors are clustered by office × year. Columns (3) and (4) additionally control for the share of prior-expat-exposed workers and local manager fixed effects. Standard errors in parentheses are clustered by manager.

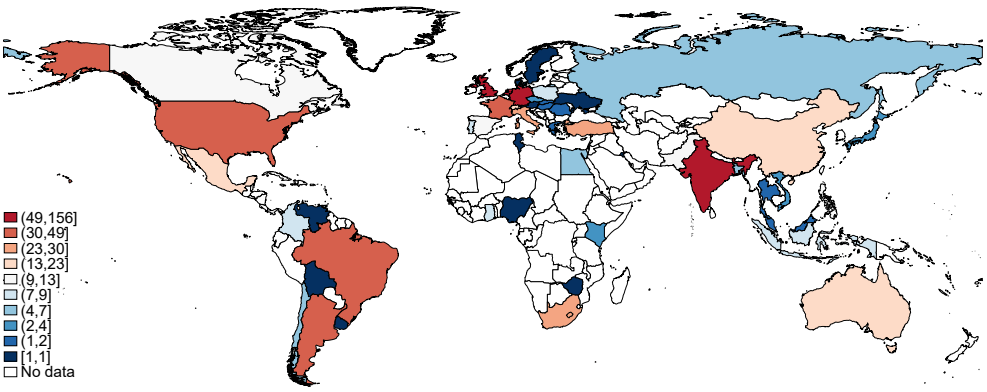
Table VIII: Impacts of Foreign Managers' Gender Norms on Brazilian Establishment-Level Gender Gaps and Exit Rates

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Female share of leadership		**Female-male pay gap**	**Female exit rate**	**Male exit rate**
Local employee sample:	Managers	High skilled	High skilled	High skilled	
Male expat mgrs' average norms	0.012*	0.012***	0.084*	-0.001	0.000
	(0.007)	(0.004)	(0.044)	(0.003)	(0.003)
Dependent variable mean	0.277	0.373	-0.121	0.042	0.043
Dependent variable std. dev.	0.258	0.171	2.513	0.121	0.108
Foreign manager share control	✓	✓	✓	✓	✓
Firm FEs	✓	✓	✓	✓	✓
Industry × State × Year FEs	✓	✓	✓	✓	✓
N	30,327	30,327	30,327	30,327	30,327
Number of firms	2,168	2,168	2,168	2,168	2,168

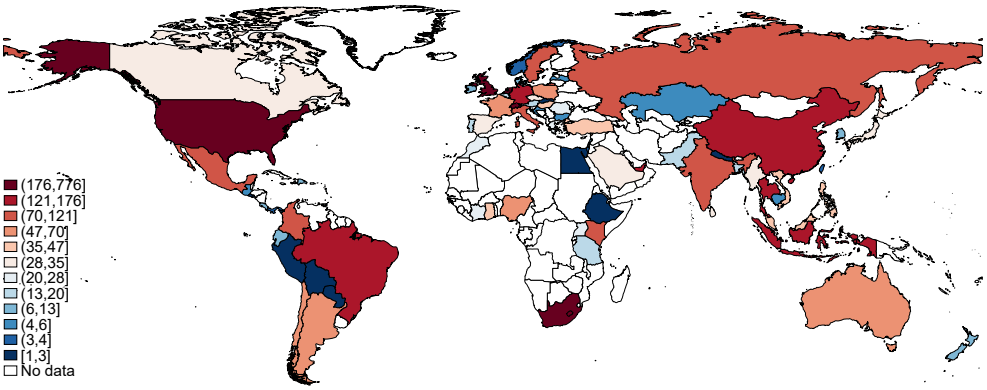
Notes: This table reports the coefficients from estimating equation (4) using quarterly establishment-level RAIS data. Columns (1) to (3) examine the gender promotion and pay gaps among local employees, while columns (4) and (5) examine exit rates among high-skilled white-collar employees. Managers in columns (1) correspond to the first major group of the ISCO classification. High-skilled white-collar employees in columns (2) to (5) include both managers and professionals (first and second major ISCO groups). To compute the female-male pay gap (column 3), we estimate a worker × quarter-level wage regression controlling for worker's age, age^2, tenure, tenure^2, and 1-digit ISCO occupation code dummies, then store the worker's gender coefficient for each establishment × quarter. Controls include the share of foreign managers, numbers of workers and managers, and local employees' average age and tenure. Industry is classified according to the 1-digit ISIC code. Standard errors in parentheses are clustered by firm.

A Appendix Figures and Tables

Figure A.1: Distributions of Expat Managers' and Workers' Countries



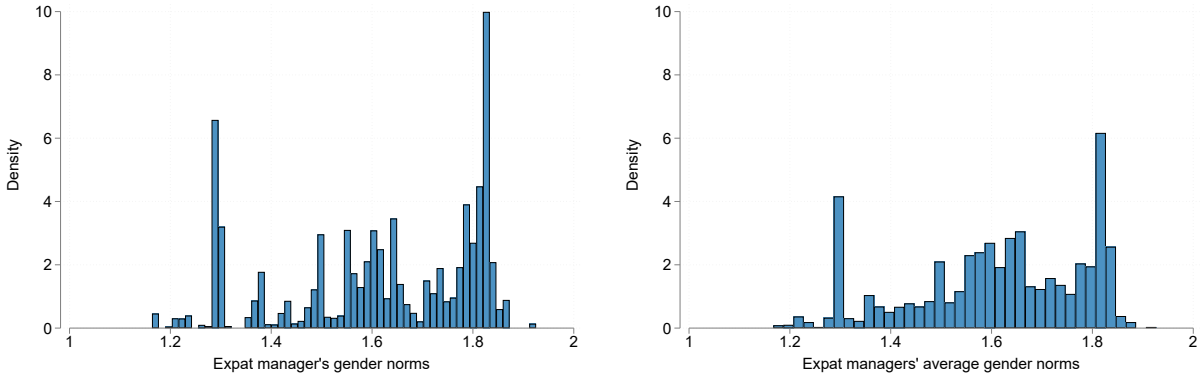
A. Expat managers' countries



B. Workers' countries

Notes: The figure shows the geographical distributions of baseline sample's expat managers' home countries (origin countries) and baseline sample's workers' countries at exposure (destination countries).

Figure A.2: Distribution of Expat Managers' Gender Norms

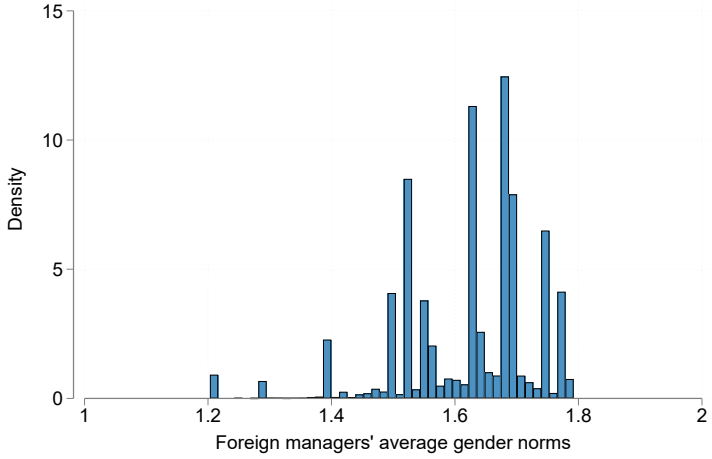


A. Individual expat managers

B. Office-function-quarter averages

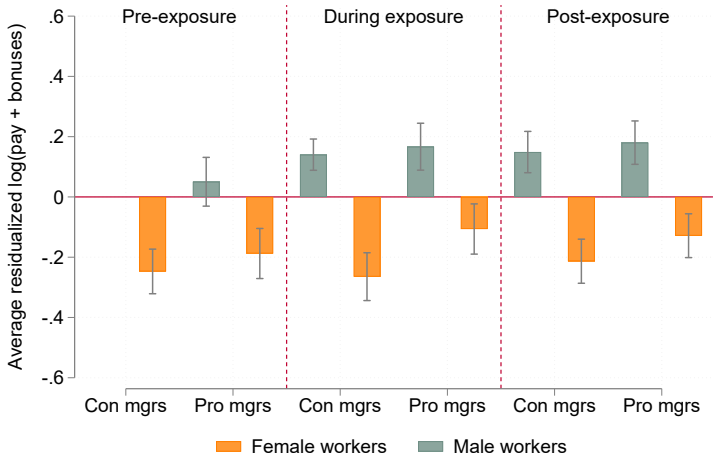
Notes: Subfigure A plots the distribution of baseline sample's expat managers' gender norms before standardization. Subfigure B plots the distribution of male expat managers' average gender norms at the office-function-quarter level before standardization.

Figure A.3: Distribution of Foreign Managers' Average Gender Norms at Establishment-Quarter Level in Brazil

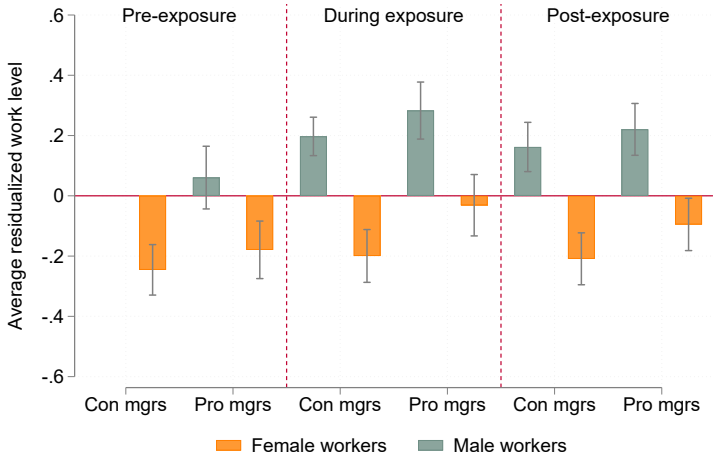


Notes: This figure plots the distribution of male foreign managers' average gender norms at the establishment-quarter level before standardization.

Figure A.4: Pay and Work Level by Gender and Expat Managers' Gender Norms



A. Log(Pay + bonuses)



B. Work level

Notes: This figure plots the average log(pay + bonuses) (**Panel A**) and average work level (**Panel B**) of male and female employees exposed to expat managers with conservative and progressive gender norms before, during, and after such exposure, after partialling out worker's age, age^2, tenure, tenure^2, and office x year fixed effects. These averages are shown relative to those of male workers exposed to gender-conservative expat managers pre-exposure. Standard errors used to compute the 95% confidence intervals are clustered by worker.

Table A.1: Impacts of Expat Manager's Gender Norms on Gender Gaps Prior to Exposure

Dependent variable:	(1) **Log(Pay + bonuses)**	(2) **Bonuses-pay ratio**	(3) **Performance rating**	(4) **Work level promotions**	(5) **Work level achieved**
Expat mgr norms × Fem × Quarter -2	-0.009*	-0.002	0.874	0.001	0.005
	(0.005)	(0.002)	(0.618)	(0.006)	(0.005)
Expat mgr norms × Fem × Quarter -3	-0.004	-0.001	0.671	-0.002	0.004
	(0.007)	(0.003)	(1.003)	(0.011)	(0.011)
Expat mgr norms × Fem × Quarter -4	0.002	-0.001	0.318	0.001	0.007
	(0.010)	(0.004)	(1.195)	(0.014)	(0.012)
Expat mgr norms × Fem × Quarter -5	0.005	-0.001	-0.776	0.001	0.005
	(0.012)	(0.003)	(1.336)	(0.012)	(0.011)
Expat mgr norms × Fem × Quarter -6	0.003	-0.001	-1.557	-0.010	-0.007
	(0.011)	(0.004)	(1.463)	(0.013)	(0.012)
Worker FEs	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓
Manager × Year × Fem FEs	✓	✓	✓	✓	✓
Expat manager FEs	✓	✓	✓	✓	✓
N	249,968	249,968	215,741	249,968	249,968

Notes: This table reports the results from estimating the equation: $Y_{imlkqt} = \sum_{q=-7}^{0} \sigma_q \mathbf{1}[Q_{it} = q](Norms_m \times Fem_i) + \theta_i + \theta_{mk} + \theta_{l,Year(t),Fem(i)} + \mathbf{X}_{it}\beta + \varepsilon_{imlkqt}$ where q indexes the quarter relative to worker i's exposure to expat manager m, with $q = -7$ subsuming the time period before quarter -6 and $q = 0$ the time period after quarter -1 (see Section 3 for other notation details). The reported coefficients $\hat{\sigma_q}$ capture the impacts of the expat manager's gender norms on the within-team female-male gender gap in quarter q relative to that in quarter -1 (the quarter right before the exposure). Performance rating (column 3) is percentile relative to all workers. Work level promotions (column 4) is cumulative count. Standard errors are double clustered by worker and expat manager's home country × worker's gender.

Table A.2: Impact of Expat Manager's Gender Norms Using Other Norms Measures

Panel A. Other gender norms measures

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Log(Pay + bonuses)				
Gender norms measure:	Right to jobs	Working mothers	Business executives	University education	Working to be independent
Expat mgr norms × Female × During	0.042***	0.039***	0.046***	0.046***	0.048***
	(0.014)	(0.011)	(0.012)	(0.011)	(0.016)
Expat mgr norms × Female × Post	0.050**	0.043***	0.046***	0.046***	0.038*
	(0.020)	(0.013)	(0.015)	(0.017)	(0.021)
Worker FEs	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓
Manager × Year × Fem FEs	✓	✓	✓	✓	✓
N	253,514	251,612	249,113	250,575	247,386

Panel B. Baseline gender norms measure by education

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Log(Pay + bonuses)				
Respondent sample:	All respondents		Male respondents		
Respondent education:	Upper level	College	All levels	Upper level	College
Expat mgr norms × Female × During	0.050***	0.044***	0.052***	0.044***	0.043***
	(0.011)	(0.011)	(0.011)	(0.012)	(0.012)
Expat mgr norms × Female × Post	0.050***	0.049***	0.052***	0.048***	0.049***
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Worker FEs	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓
Manager × Year × Fem FEs	✓	✓	✓	✓	✓
N	248,479	249,113	249,968	249,225	249,113

Notes: This table shows the coefficients from estimating equation (1). In panel A, the baseline gender norms measure used in column (1) is the average of those used in columns (2) to (4) on a 1-2 scale, following Kleven (2022). The gender norms measure used in column (2) is constructed from WVS responses to the statement *"When jobs are scare, men should have more of a right to a job than women"* (1-2 scale); column (3) *"When mother works for pay, the child suffer"* (1-4 scale); column (4) *"On the whole, men make better business executives than women do"* (1-4 scale); column (5) *"A university education is more important for a boy than a girl"* (1-4 scale); and column (6) *"Having a job is the best way for a woman to be an independent person"* (1-2 scale). Panel B reports coefficients using the baseline gender norms measure across different respondent samples. Columns (1) and (2) restrict the sample to respondents with upper-level and college education, respectively. Columns (3) to (5) include only male respondents, with samples defined by any education level, upper-level education, and college education, respectively. Controls include worker's age, age^2, tenure, and tenure^2. Standard errors are double clustered by worker and expat manager's home country × worker's gender.

Table A.3: Impact of Expat Manager's Gender Norms Using Alternative Samples

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Log(Pay + bonuses)				
Sample type:	Expat managers	Workers			
Sample:	First rotation	Equal weight	First team	Non-first team	Incl. non-exposed
Expat mgr norms × Female × During	0.065**	0.036***	0.047**	0.052***	0.034***
	(0.031)	(0.012)	(0.020)	(0.017)	(0.012)
Expat mgr norms × Female × Post	0.097***	0.039***	0.042**	0.053***	0.029***
	(0.036)	(0.015)	(0.018)	(0.020)	(0.008)
Worker FEs	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓	✓
N	146,674	249,968	249,968		1,762,700

Notes: This table shows the coefficients from estimating equation (1) using alternative samples. Column (1) restricts the sample to expat managers' first international rotations. Column (2) assigns equal weight to each worker by weighting each observation by the inverse of the number of months the worker appears in the sample. Columns (3) and (4) report the results from one single regression with separate $Norms_m \times Fem_i$ coefficients for employees who join the expat manager's team within the expat manager's first quarter in the destination country (column 3) and employees who subsequently join the expat manager's team (column 4). Column (5) employs the full sample of workers, including never-treated ones. Controls include worker's age, age^2, tenure, tenure^2. Standard errors are double clustered by worker and expat manager's home country × worker's gender.

Table A.4: Impact of Expat Manager's Gender Norms
Controlling for Expat Manager's Other Characteristics and Cultural Traits

Panel A. Other characteristics

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Log(Pay + bonuses)				
Characteristic type:	Of expat manager		Of home country		
Other characteristic:	Demo-graphic	Performance	GDP per capita	Education	WMS talent mgmt. score
Expat norms × Fem × During	0.039***	0.036***	0.053*	0.059***	0.047**
	(0.011)	(0.013)	(0.030)	(0.019)	(0.021)
Expat norms × Fem × Post	0.031**	0.035**	0.083**	0.108***	0.051***
	(0.013)	(0.015)	(0.039)	(0.033)	(0.015)
Worker FEs	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓
Manager × Year × Fem FEs	✓	✓	✓	✓	✓
N	249,099	249,968	243,540	247,244	194,051

Panel B. Other cultural traits

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Log(Pay + bonuses)				
Other trait:	Trust	Work ethic	Preference for redistri-bution	Risk preference	Cultural proximity
Expat norms × Fem × During	0.051***	0.040***	0.083***	0.036**	0.042***
	(0.013)	(0.013)	(0.018)	(0.015)	(0.012)
Expat norms × Fem × Post	0.043**	0.032	0.077***	0.028	0.053***
	(0.017)	(0.019)	(0.018)	(0.018)	(0.015)
Other trait × Fem × During	0.005	-0.023	0.043**	-0.016	-0.032**
	(0.013)	(0.014)	(0.019)	(0.017)	(0.013)
Other trait × Fem Post	0.016	-0.033	0.038**	-0.031	0.008
	(0.018)	(0.020)	(0.018)	(0.023)	(0.016)
Worker FEs	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓
Manager × Year × Fem FEs	✓	✓	✓	✓	✓
N	247,706	247,706	245,238	234,305	249,968

Notes: This table reports the coefficients from estimating equation (1). Controls include worker's age, age^2, tenure, and tenure^2. In column (1) of **Panel A**, we additionally control for expat manager's age, tenure, and work level at the time of exposure; column (2) expat manager's performance, measured as his age and tenure at achieving WL3; column (3) expat manager's home country's GDP per capita; column (4) expat manager's home country's average years of schooling; and column (5) expat manager's home country's average management talent score from the World Management Survey (WMS) - Manufacturing. In column (1) of **Panel B**, we additionally control for expat manager's trust; column (2) expat manager's work ethic; column (3) expat manager's preference for redistribution; and column (4) expat managers' risk preference. Trust, work ethic, preference for redistribution, and risk preference are constructed analogously to gender norms, using WVS responses to the statements *"Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?"* (1-2 scale); *"Important in life: work"* (1-4 scale); *"In the long run, hard work usually brings a better life" or "Hard work doesn't generally bring success – it's more a matter of luck and connections"* (1-10 scale); and *"Adventure and taking risks are important to have an exciting life"* (1-6 scale) respectively. All additional controls are interacted with the worker's gender and exposure period. Standard errors are double clustered by worker and expat manager's home country × worker's gender.

Table A.5: Contributions of Promotions, Lateral Moves, and Retention

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Log(Pay + bonuses)				
Channel:	Baseline	Promotions	Lateral moves	Retention	All three
Expat mgr norms × Female × During	0.049***	0.027***	0.039***	0.050***	0.021**
	(0.012)	(0.009)	(0.010)	(0.012)	(0.009)
Expat mgr norms × Female × Post	0.049***	0.021	0.038***	0.050***	0.015
	(0.015)	(0.013)	(0.012)	(0.015)	(0.011)
Worker FEs	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓
Manager × Year × Fem FEs	✓	✓	✓	✓	✓
Work level FEs		✓			✓
Lateral move controls			✓		✓
Sub-function FEs			✓		✓
Heckman selection correction				✓	✓
N	249,968	249,968	249,180	249,968	249,180

Notes: This table shows the coefficients from estimating equation (1). Controls include worker's age, age^2, tenure, tenure^2. In columns (3) and (5), lateral move controls include second-order polynomials of cumulative function and sub-function transfers. In columns (4) and (5), the Heckman selection correction term is a third-order polynomial of worker's estimated exit probability, using the number of worker exits in the same office × function × year as the excluded variable for the exit equation, following Benson et al. (2019). Standard errors are double clustered by worker and expat manager's home country × worker's gender.

Table A.6: Impacts on Within-Team 25th-75th Percentile Gaps

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)
	25th/75th percentile ratio					
	Pay + bonuses		Pay		Bonuses	
Worker sample:	All	Male	All	Male	All	Male
Expat mgr norms × During	-0.001	0.007	0.000	0.008	-0.009	-0.000
	(0.005)	(0.006)	(0.005)	(0.005)	(0.007)	(0.008)
Expat mgr norms × Post	-0.005	0.000	-0.005	-0.000	-0.008	-0.001
	(0.006)	(0.006)	(0.006)	(0.006)	(0.008)	(0.009)
Dependent variable mean	0.877	0.928	0.883	0.931	0.834	0.902
Dependent variable std. dev.	0.228	0.172	0.218	0.165	0.299	0.231
Expat manager FEs	✓	✓	✓	✓	✓	✓
Office × Year FEs	✓	✓	✓	✓	✓	✓
Function × Year FEs	✓	✓	✓	✓	✓	✓
N	144,791	87,148	144,791	87,148	139,224	83,805

Notes: This table reports results from regressions of the ratio between the 25th and 75th percentiles of pay and bonus, using team-level specifications defined by the expat manager. Columns (1) and (3) include male employees only, whereas columns (2) and (4) include all employees supervised by the expat. The main explanatory variable follows our primary specification (1), which uses a continuous measure of expat gender norms. All regressions control for the number of local employees, their average age, and their average tenure (in years). Standard errors are clustered at the expat manager level.

Table A.7: Impact of Expat Manager by Expat Manager's Link with Headquarters

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Log(Pay + bonuses)				
Expat mgrs excluded from sample:	None		From HQ	Exposed to HQ	From or exposed to HQ
Expat mgr norms × Female × During	0.065***	0.082***	0.077***	0.066***	0.085**
	(0.013)	(0.015)	(0.028)	(0.015)	(0.035)
Expat mgr norms × Female × Post	0.039*	0.034	0.052	0.041*	0.064
	(0.020)	(0.025)	(0.032)	(0.023)	(0.040)
Expat mgr's HQ link controls		✓			
Worker FEs	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓
Manager × Year × Fem FEs	✓	✓	✓	✓	✓
N	187,268	187,268	144,074	173,567	130,405

Notes: This table shows the coefficients from estimating equation (1). All columns exclude HQ as destination country. Column (3) excludes expat managers who are from the HQ country. Column (4) excludes expat managers who have previously spent time working in the HQ country. Column (5) excludes both types of expats: those from the HQ country and those with HQ experience. Controls include worker's age, age^2, tenure, and tenure^2. Standard errors are double clustered by worker and expat manager's home country × worker's gender.

Table A.8: Heterogeneous Impacts on Managers versus Non-managers

Dependent variable:	(1)	(2)	(3)	(4)
	Log(Pay + bonuses)		**Work level**	
Worker sample:	Managers	Non-managers	Managers	Non-managers
Expat mgr norms × Female × During	0.059***	0.028	0.086***	0.040
	(0.011)	(0.028)	(0.017)	(0.039)
Expat mgr norms × Female × Post	0.064***	0.018	0.102***	0.046
	(0.015)	(0.027)	(0.025)	(0.043)
Worker FEs	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	249,968		249,968	

Notes: This table shows the coefficients from estimating equation (1) with separate $Norms_m \times Fem_i$ coefficients for exposed employees who are managers (columns 1 and 3) and non-managers (columns 2 and 4) prior to expat exposure. Columns (1) and (2) report the results from one single regression; the same holds for columns (3) and (4). Controls include worker's age, age^2, tenure, tenure^2. Standard errors are double clustered by worker and expat manager's home country × worker's gender.

Table A.9: Expat Manager's Gender Norms and Worker's Pulse Surveys, by Gender

Panel A: Female employees

Dependent variable:	(1) **Manager**	(2) **Feed-back**	(3) **Control**	(4) **Devel-opment**	(5) **Balance**	(6) **Extra mile**	(7) **Morale**
Expat mgr norms × During	0.053**	0.068***	0.024	0.014	0.030	0.002	0.007
	(0.025)	(0.025)	(0.021)	(0.024)	(0.031)	(0.027)	(0.016)
Work level FEs	✓	✓	✓	✓	✓	✓	✓
Function FEs	✓	✓	✓	✓	✓	✓	✓
Dest. country FEs	✓	✓	✓	✓	✓	✓	✓
N	3,604	2,110	3,215	3,930	3,936	3,940	3,926

Panel B: Male employees

Dependent variable:	(1) **Manager**	(2) **Feed-back**	(3) **Control**	(4) **Devel-opment**	(5) **Balance**	(6) **Extra mile**	(7) **Morale**
Expat mgr norms × During	-0.005	-0.001	-0.002	-0.012	-0.006	0.007	-0.025
	(0.023)	(0.021)	(0.025)	(0.017)	(0.021)	(0.018)	(0.023)
Work level FEs	✓	✓	✓	✓	✓	✓	✓
Function FEs	✓	✓	✓	✓	✓	✓	✓
Dest. country FEs	✓	✓	✓	✓	✓	✓	✓
N	3,613	2,111	3,229	4,030	4,030	4,030	4,020

Notes: Observation unit is a worker × year. Sample includes observations during and after worker's expat exposure. Panel A reports estimates for female workers; Panel B for male workers. Dependent variables are worker's standardized responses to the MNE's annual employee survey. Column (1) considers worker's response to the question *"My line manager is an effective leader"*, column (2) *"I receive feedback from my line manager that helps me grow"*, column (3) *"I have control over prioritising tasks when facing multiple demands at work"*, column (4) *"I am satisfied with my development opportunities at [MNE NAME]"*, column (5) *"My job inspires me to go the extra mile"*, and column (6) considers worker's average responses to three questions *" Overall, I am extremely satisfied with [MNE NAME] as a place to work"*, *" I am proud to say that I work for [MNE NAME]"*, and *" I would gladly refer a friend or family member to [MNE NAME] for employment"*. Controls include worker's age, age^2, tenure, tenure^2, and log(pay + bonuses). Standard errors are double clustered by worker and expat manager's home country × worker's gender.

Table A.10: Heterogeneous Impacts by and on Parental Leave

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Log(Pay + bonuses)		**Parental leave within 1 year**		
Worker sample:	Has parental leave	No parental leave	All	Female	Male
Expat mgr norms × Female × During	0.075**	0.045***			
	(0.037)	(0.012)			
Expat mgr norms × Female × Post	0.082**	0.045***			
	(0.040)	(0.015)			
Expat mgr norms × Female			0.013**		
			(0.006)		
Epxat mgr norms				0.008*	-0.004
				(0.005)	(0.005)
Dependent variable mean	11.156	11.212	0.078	0.117	0.037
Dependent variable std. dev.	0.624	0.854	0.268	0.322	0.189
Worker FEs	✓	✓			
Expat manager × Period FEs	✓	✓			
Manager × Year × Female FEs	✓	✓			
Expat manager FEs			✓		
Work level × Female FEs			✓	✓	✓
Function × Female FEs			✓	✓	✓
Dest. country × Female FEs			✓	✓	✓
Year × Female FEs			✓	✓	✓
N	249,968		2,083	1,124	1,085

Notes: Columns (1) and (2) shows the coefficients from estimating equation (1) with separate $Norms_m \times Fem_i$ coefficients for employees with (column 1) and without (column 2) parental leave prior to their expat exposure. Controls include worker's age, age^2, tenure, tenure^2. Observation unit in columns (3) to (5) is a worker. Column (3) includes all employees, while columns (4) and (5) include only female and male employees respectively. Controls include worker's age, age^2, tenure, tenure^2, and log(pay + bonuses), measured at the first month of expat exposure. In column (3), these controls are further interacted with worker's gender. Standard errors are double clustered by worker and expat manager's home country.