Managers and the Cultural Transmission of Gender Norms*

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Abstract

This paper examines the influence of managers from countries with different gender norms on workplace culture and gender disparities in foreign establishments. Using data from a multinational operating in over 100 countries, we exploit cross-country manager rotations that are orthogonal to workers to estimate the impact of male managers' gender attitudes on the work outcomes of male and female workers within the same team. We find that managers from countries with 1 s.d. more progressive gender attitudes narrow the gender 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. Moreover, workers in the destination office change their own attitudes, as evidenced by those workers in turn being more gender-equal with their subordinates. Our evidence points to individual managers as critical in shaping corporate culture.

Keywords: MNEs, managers, gender gaps, corporate culture

JEL: J16, J24, F23, M14, M5

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1 Introduction

A growing literature documents the role that both firms and managers play in shaping gender inequality in the workplace. For example, the evaluation systems and promotion policies that firms adopt affect gender gaps in promotion (Benson, Li, and Shue, 2019). Managers who have daughters, and therefore likely have more progressive gender attitudes, hire and promote more women (Ronchi and Smith, 2021). A natural question, then, is whether individual managers' can have lasting impacts on firm culture, making firms better (or worse) workplaces for women.

This paper uses data on multinationals to test whether managers with more progressive gender attitudes not only influence the outcomes of their subordinates, but also influence the attitudes and actions of other managers. Using a unique dataset and setting with 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 first establish that expat managers have an impact on gender gaps in pay and promotions among their direct subordinates. We then test whether expat managers have a lasting influence on firm culture by estimating firm pay gaps among employees who are managed by local managers who have been interacting with the expat manager. We find evidence of both a direct and indirect effect of managers' attitudes on gender inequality within the firm.

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 gender norms. For example, the firm has offices in India and Pakistan, countries with more conservative attitudes, and in the Netherlands and Canada, countries with more progressive 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 worker 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. Last and most importantly, the structure of the company allows us to test for cultural spillovers to other managers and workers in the local subsidiaries within the firm, both during and after the expat manager's rotation.

We begin by assessing expat managers' impact on the gender gaps among their direct subordinates. We first measure a manager's inherited gender norms as the average gender attitudes among World Values Survey respondents of the same home country and birth cohort, building on the economics of transmitted and inherited cultural traits that emphasize the role of cultural origin in shaping an individual's cultural values (Bisin and Verdier, 2001; Giuliano, 2007; Fernández and Fogli, 2009).[1] 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 women exposed to a manager with one standard deviation higher progressive gender norms have a 4.9 percentage point smaller gender pay gap relative to those exposed to a manager with more conservative norms, corresponding to a narrowing of the gender pay gap of 18%. This effect is larger in destination offices with more conservative gender norms, where the gender pay gaps are also larger to begin with. Moreover, it persists well after workers' exposure to the expat manager, and even after the expat has left the destination office. These findings are in line 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, Peck, and Seflek, 2022).

The gender pay gap may narrow under a more progressive expat manager in these offices for a variety of reasons. For example, women in conservative offices may be positively selected (Ashraf, Bandiera, Minni, and Quintas-Martınez, 2024) but underpaid, and the expat manager may actively adjust pay to reflect productivity. Alternatively, there may be no productivity differences or underpayment, but the expat manager mentors women or assigns them to tasks better suited to their skills. The expat manager

[1]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, Monte, Sapienza, and Zingales (2008), and the empirical evidence in Giuliano (2007); Fernández and Fogli (2009); Algan and Cahuc (2010); Guiso, Sapienza, and Zingales (2016), among others.

may additionally be better at evaluating female workers, retaining high-potential women which leaves the firm with the best female workers.[2] We find that a substantial portion of the narrowing pay gap comes from women being promoted to higher salary grades and work levels, and that these results are not driven by changes in the composition of workers. There is some limited evidence that expat managers move women to different tasks, However, we find that the results are concentrated among women in the same sub-function as their manager, suggesting some role for personal interactions.

We then turn to estimating the impact of progressive managers on local managers' behaviors. We identify two types of managers: those who were direct employees of the expat manager and those who were at the same manager level as the expat manager. We look at the outcomes of each of these managers' subordinates both during and *after* the expat manager has left. Both the lower-level and same-level managers tend to improve the pay of their own female subordinates if the expat manager they interacted with had more progressive norms. This phenomenon of managerial inheritance of norms applies to both male and female subordinates. It underlines the long-lasting influence of "first-generation" managers on workplace culture. On the other hand, an expat manager's prior experience in other foreign countries matters little to the gender gaps among their subordinates.

These results highlight the role of corporate managers in transmitting and shaping workplace culture 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 forms, evolves and matters within the firm. This channel is all the more important as corporate culture has been increasingly recognized as a key determinant of firm performance (Guiso, Sapienza, and Zingales, 2015; Graham, Grennan, Harvey, and Rajgopal, 2022; Adams, Akyol, and Grosjean, 2021). Beyond the existing evidence on the CEOs' influence on corporate culture (e.g., Nguyen, 2023), this paper's perspective permeates down the firm's hierarchy. This expansion of scope allows much richer implications for corporate policies to influence corporate culture, beyond the simple selection

[2]Note that worker fixed effects already account for differences in workers' time-invariant productivity and hence corresponding composition changes. However, these fixed effects cannot account for differences in how workers' productivity evolves over time.

of CEO.

Within the literature on the impact of managers on firm and worker outcomes, a set of papers focus specifically on the impact managers have on gender gaps within the firm (Fortin, Markevych, and Rehavi, 2022; Cullen and Perez-Truglia, 2023). As mentioned, Ronchi and Smith (2021) uses variation in managers' gender attitudes, induced by the manager having a daughter rather than a son, to show that managers with more progressive attitudes hire more women and pay them more. This paper brings complementary evidence that managers can affect gender pay gaps when there is cultural mismatch between the manager and workers, through mechanisms beyond hiring and pay adjustments. In addition, we examine what happens after the expat manager leaves by using manager rotations and considering workers' career trajectories. We further test for the manager's impact on other local managers through horizontal and vertical spillovers.

Second, we contribute to a growing body of evidence that documents multinationals' role in transposing wages and practices across national borders (Hjort, Li, and Sarsons, 2022; Alfaro-Urena, Manelici, and Vasquez, 2022; Minni, 2024a; Boudreau, 2024). This paper highlights managers' rotations as a transmission channel for norms across establishments. This channel will become increasingly more important, as multinationals have been a major contributor to the recent accelerating globalization of labor markets that has made cross-cultural working relations ever more necessary.[3]

Third, we contribute to the research on the evolution of (gender) norms and economic disparities (Giuliano, 2021). Several studies show that inherited gender norms are a key determinant of women's labor market outcomes (Fernández, Fogli, and Olivetti, 2004; Bertrand, 2011; Olivetti, Patacchini, and Zenou, 2020) and more broadly, gender disparities (Tur-Prats, 2019; Ashraf, Bau, Nunn, and Voena, 2020). Such norms are often deeply ingrained and slow to change (Alesina, Giuliano, and Nunn, 2013), raising the questions of how they are transmitted across space and over time and how they can be altered. Our paper documents the vertical and horizontal mechanisms of transmission of gender norms within the organization, as well as their consequences on the within-firm gender

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

gaps.

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 with operations in over 100 countries worldwide. The multinational has a workforce of about 155,000 people, of which approximately 60,000 are white collars, and turnover of well over €50 billion in 2019.[4] This setting is ideal for studying the impact of culture within firms since its geographic reach has an unparalleled global presence and its business activities span a wide variety of jobs, which allows us to further investigate how the nature of the job mediates the effects of manager gender norms on gender gaps.

International assignments. Similar to many other multinationals, the company follows a policy of international assignments among its top managers (director and vice-president levels), whose rationale is for the manager to acquire global experience and build leadership capability. To progress to the upper echelon of the firm and become a global leader, a manager must 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 man-

[4]For a detailed description of the firm's structure and workforce, see Minni (2024b).

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

agers, these individuals are considered the "most promising" managers. Our identification strategy looks at the effects that expat managers have on women compared to men, hence netting out the level effect that expat managers might have on worker performance, being on average better managers. Moreover, given that they have already reached some seniority within the company, their subordinates consist of middle managers, who, in turn, manage other employees. 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. In addition to the work levels, twelve salary grades further differentiate employees within work levels. 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.

2.3 Gender Norms Measures

We measure gender norms using survey data from the World Values Survey (WVS), a representative comparative social survey conducted globally in more than 100 countries every 5 years since 1990, following Kleven (2022).[6] In particular, we compute each employee's gender norms as the average gender attitudes among World Values Survey respondents in the employee's home country and birth cohort, which accounts for the fact that gender views vary not only cross-country but also over time.[7]

Our main gender norms measure is constructed using responses to the statement regarding women's roles in the workplace versus at home: *"When mother works for pay, the children suffer,"* with which respondents state whether they strongly agree (4), agree (3), disagree (2), or strongly disagree (1). Among the WVS questions that directly ask respondents about their views toward women working, this question has the highest correlation with countries' female labor force participation and was asked in both early and recent WVS waves. Averaging the responses to these questions provides us with a measure of gender norms, on a scale of 1-4, for each birth year in each country, which we then link to the multinational data.[8]

We also consider other WVS questions on gender attitudes, including the two included in Kleven's (2022) gender progressivity measure. These questions ask if the respondents agree with the statements *"When jobs are scare, men should have more of a right to a job then women"* and *"On the whole, men make better business executives than women do."* Appendix Table A.1 shows that the paper's main results are unchanged when using alternative gender norms measures constructed based on responses to these questions.

Last, for some analyses, we create a binary measure of country office norms by dividing countries into those with above and below median gender norms. A country's gen-

[6] Kleven (2022) measures state-level gender norms in the US using survey data from the US General Social Survey, the US equivalent and predecessor of the WVS.

[7] We 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 then motivates our gender norms measure that varies by country and birth cohort.

[8] As there may be too few WVS respondents in each country $\times$ 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.

der norms are computed as the average individual norms of all local managers from that country, hence a score above the median reflects a more progressive culture within the firm's offices regarding women's roles in society in general and in the workplace in particular. We will interchangeably refer to more progressive managers/countries as "high norms" managers/countries and more conservative managers/countries as "low norms" managers/countries.

Panel A of Figure I shows the manager flows to the foreign offices, grouping countries by quartiles of their gender norms. Roughly one-third of managers from countries in the top quartile of gender norm progressivity go to countries in the bottom two quartiles in terms of gender norms. Panel B shows expat managers' flows based on geography.

3 Empirical Strategy

In this section, we describe our empirical strategy that involves the rotation of managers across country offices and we describe our analysis sample.

3.1 Sample Construction

Expat managers. We leverage manager rotations across country offices to identify the impact of an expat manager's gender norms 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 further 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. Figure I shows where managers from different geographic areas go on their first, second, third, and fourth rotations. Managers tend to go to other countries in the same region, but there are a number of rotations across regions, with managers from Europe going to South Asia and Sub-Saharan Africa, for example. 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 do not go on rotation the next year.[9] Managers who go on rotation within a year are younger and have a shorter tenure with the firm.

Exposed workers. To look at the impact of expat managers on workers, we focus on all employees who are ever directly exposed to an expat manager. In this sense, we do not have a set of "untreated" workers who are never exposed to an expat manager.[10] This is because employees who do not have expat managers are different than those who work under an expat manager, even within the same office. Panel B of Table I compares the characteristics of workers 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. Workers 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 have had "sufficiently long" exposure to an expat manager, which we define as spending at least three months working together in the same office. This ensures that we are considering cases where the expat manager spends enough time in the local office to interact with employees and potentially change workplace culture. We then restrict these worker-manager pairs to a worker's first exposure to an expat

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

[10] In a robustness check, we also include the set of "never-treated" workers as a control group in the sample and find qualitatively similar results.

manager as this gives us the cleanest identification of an expat manager's impact on local workers. 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 norms on the managerial decisions of men, net of any "same gender" effect.

Baseline sample. These restrictions give us a final sample of 917 male managers (0.4% of the firm's workforce) who complete an international rotation. Figure II shows that there is considerable variation in the inherited (home country) gender norms of these expat managers. Appendix Figure A.2 shows the fraction of expat managers moving from and to various countries in terms of their gender norms among the baseline sample. 25% of the managers go to countries with gender norms in a quartile below their home country's gender norms while 35% travel to countries with gender norms in a quartile above their home country's norms. We therefore additionally test whether expat managers traveling to countries with more progressive norms negatively influence women's outcomes.

The vast majority (95%) of managers are in WL3 or WL4 when they do their first rotation. Just under 90% of these managers do more than one rotation, allowing us to look at whether an expat manager's behavior changes as they move to different countries. The median time that an expat spends on an international rotation is 32 months. There are 4,755 employees working across 74 countries who are "first-time" exposed to these expat managers, who correspond to roughly 250,000 employee $\times$ month observations between 2016 and 2021.

3.2 Triple Differences Design

We use a triple difference design to estimate the impact of an expat manager on exposed workers' outcomes. Specifically, we look at before and after expat manager arrivals and compare the outcomes of male and female employees who receive an expat manager with more progressive gender norms to the outcomes of those who receive an expat manager

with conservative norms. Our main estimation 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 i's contemporaneous manager at calendar month t, and k the time period relative to i's exposure to m. In our main specifications, 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 measure of the expat manager's gender norms, $Norms_m$, with the worker's female indicator Fem_i.[11] For ease of interpretation, we standardize $Norms_m$ by its standard deviation across expat managers. Our main coefficients of interest, $\hat{\gamma}_k$, therefore 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.

We include worker fixed effects θ_i and contemporaneous manager fixed effects $\theta_{l,Year(t),Fem(i)}$ to account for changes in the composition of workers or local managers when the expat manager arrives. The contemporaneous manager fixed effects are interacted with the worker's gender and calendar year when $k \neq 1$ to allow for the fact that contemporaneous managers may have a different impact on male and female workers before and after exposure.[12] We include expat manager $\times$ exposure period fixed effects θ_{mk} to account for the expat manager's overall impact on exposed workers. In an augmented specification we further include country $\times$ exposure period $\times$ worker's gender fixed effects to ensure that we are comparing workers within the same destination country during and surrounding exposure; this does not materially change our results. Other worker con-

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

[12] These fixed effects also help account for the fact that within-team gender gaps widen as workers 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.

trols X_{it} include worker age, age squared, tenure, and tenure squared. Standard errors are double clustered by worker and expat manager's home country times worker's gender, following Abadie, Athey, Imbens, and Wooldridge's (2023) advice to cluster at the level of treatment variation.

The primary outcomes we consider are pay, which we define as the combination of base and bonus pay; promotions; lateral moves; and retention. The manager has considerable influence over these metrics. Performance assessments, which encompass the determination of pay 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.

To visualize the impact of a manager on worker outcomes, we also estimate an event study equation,

$$Y_{imjckt} = \sum_{s=-6}^{16} \sigma_k(Fem_i \times Norms_m) + \theta_i + \theta_{mk} + \theta_{j,Year(t),Fem(i)} + \theta_{c,k,Fem_i} + \varepsilon_{imjkt} \quad (2)$$

where the coefficients $\hat{\sigma_k}$ give the impact of a manager with one standard deviation more progressive gender norms on women's pay relative to men's pay. We restrict our sample to all workers who ever interact with an expat manager, meaning that we have no "never treated" groups. Identification thus comes from differences in the timing of exposure to an expat manager.

Identification assumption. Our main identification assumption is that managers from countries with more progressive gender norms are not systematically sent to teams with improving gender gaps, which then allows us to interpret our estimates as the impacts of the manager himself. This identification assumption likely holds in our setting as managers do not get to choose their teams in the destination offices. However, we test for this directly by estimating an event study equation and checking for trends in gender pay and promotion gaps.

4 Direct Impacts on Exposed Workers' Outcomes

In this section, we estimate the impact that an expat manager with more or less progressive gender norms has on the gender gaps among his direct subordinates in the destination office. We find that a more progressive manager narrows the gender pay gap in the team he supervises (relative to a conservative one). To shed light on what drives this result, we then estimate the impact of an expat manager on promotion rates, task assignment, and retention rates.

4.1 Gender Pay Gap among Exposed Workers

Expat manager's gender norms. Panel A of Table II reports the results from estimating equation (1). The first row presents the estimates for γ_1, i.e., the impact of an expat manager's gender norms on the within-team gender pay gap (the pay of exposed local female workers relative to that of corresponding male workers) *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 period prior to exposure ($k = 0$).

Expat managers with more progressive gender norms 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 norms is associated with a 4.9% pay increase for exposed female workers relative to exposed male workers under his leadership. 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 fifth ($\frac{4.9}{28} = 17.5\%$). After an expat manager leaves, the gender gap remains 4.9% smaller than it was before the manager's arrival. 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 a large share of the pay increase is attributable to women being promoted as opposed to the manager raising women's pay relative to men's pay.

Figure III visualizes the effect of an expat manager's gender attitudes on pay, plotting

event study coefficients from estimating equation 2.[13] Importantly, we do not see any trends in the gender pay gap prior to the expat manager rotation. Expat managers with progressive norms then have an immediate impact on the gender pay gap and, notably, the effect persists beyond exposure to the manager. The average expat manager rotates out after 8-12 quarters and, consistent with the previous results, we continue to see an impact on the gender pay gap 16 quarters out.

The immediate change in the pay gap, though statistically insignificant in the first four quarters, can be attributed to two reasons, supported by anecdotal evidence from HR managers. The first reported observation is that expat managers often foster an open and transparent work environment from the outset. 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 fresh perspectives and fewer social constraints (Macchiavello and Morjaria, 2022). This external position gives them greater freedom to question existing practices and introduce new ideas without being influenced by prior relational dynamics. Moreover, employees are often more willing to reach out and open up to these managers, perceiving them as neutral and less biased, which further immediately enhances communication and trust within the team. Second, 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. With a pre-existing understanding of the team's dynamics and challenges, combined with the team's increased willingness to engage with the new manager, they can quickly implement changes and make an impact early on.

A natural question is whether women's gains under an expat manager come at the expense of men's careers. Figure IV shows the average pay of male and female workers who are exposed to expat managers with conservative and progressive gender norms. Before exposure to an expat manager, 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

[13] Appendix Figure A.3 shows the same estimates using the promotion gap as the outcome.

at the expense of men's pay. A similar pattern persists beyond exposure.[14]

Destination country's gender norms. We next examine whether gender norms in the destination country matter. 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 to promoting women. On the other hand, if there is only a small gender pay gap to begin with, expat managers will have no impact. Managers may therefore have a larger impact in countries with conservative gender norms. Panel B of Table II shows the results from estimating equation (1), splitting by destination countries with progressive or conservative gender norms.[15] Expat managers indeed have a larger impact in countries with conservative gender norms (columns 1 and 3).

Table A.3 shows that results are robust when only considering the first international rotation for the expat manager, although the sample decreases by 40%.[16]

Worker Performance In Appendix Table A.4 we test whether women do better in terms of performance under managers with more progressive gender norms. We estimate equation (1) and in column (4) use performance ratings as the outcome of interest. Women receive higher performance ratings under managers with more progressive gender norms, although the estimates are noisy and insignificant. Importantly, though, we see that these women receive significantly higher performance ratings *after* an expat manager has departed. This suggests that expat managers may be better at identifying and promoting talented women, a possibility that we test in the next sub-section.

Other expat manager's characteristics. The absence of a pre-trend in Figure III allows us to interpret this narrowing of the gender pay gap as expat managers' impact on their workers' outcomes. However, this effect could be driven by managers' gender norms, or it could be driven by other characteristics and cultural traits that correlate with gender

[14] Appendix Figure A.4 shows the same estimates using work level as the outcome. Appendix Figure A.5 shows the same figures but includes workers who are never treated; that is, they are never exposed to an expat manager.

[15] Countries with progressive (conservative) gender norms are those with above (below)-median average local managers' gender norms.

[16] We are already restricting to a worker's first exposure to an expat manager.

norms but directly influence the gender pay gap. Recall that in equation (1) we control for expat manager fixed effects, which account for all characteristics of the expat manager that similarly affect male and female workers. For example, more progressive managers are likely from more developed countries and thereby are different from their more conservative counterparts from less developed countries in managerial ability.[17] This is only a concern for us if managerial ability impacts male and female workers differently, e.g., if higher-ability managers are better at identifying and grooming female talents.

To assess the extent of this concern, we explicitly control for a range of expat managers' other characteristics and other cultural traits and report the results in Appendix Table A.2. In particular, we control for the managers' 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).[18] In columns (3) and (4), we control for the other cultural traits that have been shown to matter to both macroeconomic and firm outcomes, including trust (e.g., Bloom, Sadun, and Van Reenen, 2012; Nguyen, 2023) and preferences for redistribution (e.g., Alesina and Angeletos, 2005).[19] In all columns, we interact the additional controls with worker's gender and exposure period, similar to $Norms_m$, and find that the impact of expat managers' gender norms on the within-team gender pay gap remains robust to the inclusion of these controls. These results suggest that while we cannot completely rule out managers' other characteristics and cultural traits as potential confounding factors, they are unlikely a first-order concern. Moreover, the fact that preferences for redistribution are also correlated with the gender pay gap does not affect the interpretation that managers transmit culture and shape workplace outcomes.

[17] This difference in managerial ability could be positive if managers from more developed countries have access to better education, training, and managerial technologies. This difference could also be negative if managers from less developed countries face greater barriers to going on international rotations and as a result, are more positively selected.

[18] Following Minni (2024b), 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.

[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.2).

4.2 Promotions, Lateral Moves, and Retention

Promotions. Motivated by the result in column (4) of Table II, we directly explore the impact of managers on gender gaps in promotions. Panel A of Table III presents the results from re-estimating equation (1) but using three measures of promotions as the outcomes. Columns (1) and (2) report the impact of an expat manager's gender attitudes on the cumulative number of times a worker is promoted to a new salary grade (column 1) or a new work level (column 2). Under the supervision of an expat manager with progressive norms, women see an average of 0.07 more salary grade promotions (5% of the mean) and 0.05 more work level promotions (14% of the mean) relative to cases when a manager with conservative norms is in charge. These effects translate into these women moving up 0.06 work levels within the firm (column 3).[20] In column 4, the outcome is an indicator of a worker being promoted to a manager-level position. Women are more likely to be promoted to management-level positions when they work under an expat manager with progressive norms.

Moreover, as in the case of pay, women exposed to a more progressive expat manager continue to be promoted after they are no longer supervised by the manager, and even after the manager rotates out of the office. This 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 must promote women more. We study this possibility in subsection 5.

Lateral moves. We next explore 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, 2024b). This could happen if these expat managers more readily acknowledge a range of tasks that women can do, or are better at recognizing female talent. Panel B of Table III examines whether the horizontal

[20] Because promotions are zero-sum in many organizations, the gains in promotions among women who are exposed to more progressive managers could come at the loss of some other group(s), including other women. As the triple differences design does not directly estimate each group's gains and losses, we investigate this possibility by examining the changes in promotions across different worker groups, including "never-treated" ones, controlling for a range of worker, job, and office characteristics. Our results indicate that the "lose-out" groups are men and women who are never exposed to expat managers, particularly the women, and not women who are exposed to less progressive expat managers or men who are exposed to more progressive ones.

allocation of workers to jobs after the arrival of an expat manager varies by the manager's gender norms. In column (1), we estimate equation (1) using whether a worker is transferred to another function as the outcome. Columns (2) and (3) look at sub-function transfers, splitting by whether the worker changes sub-function but remains within the same function. Women are less likely to be moved to another function but 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. As more progressive expat managers improve women's pay, promotions, and other positive aspects of the job, it is likely that they also have a positive impact on the retention of female workers. We estimate this effect at the worker level and report the results in Table IV. Similar to equation (1), the main explanatory variable is $Norms_m \times Fem_i$, separately for more and less progressive destination countries, with controls for worker characteristics at the time of exposure and destination country fixed effects (all interacted with worker's gender), and expat manager fixed effects and exposure year fixed effects.

The outcome variables in columns (1) and (3) indicate if the worker leaves the firm within one year of their first month of expat exposure; in column (1), we further require that the worker's first month of expat exposure is at least one year prior to the end of the study period.[21] The outcome variables and samples in columns (2) and (4) consider a five-year period instead and are constructed analogously to those in columns (1) and (3). In column (5), the outcome variable indicates if the worker leaves at any point; for this analysis, we consider all exposed workers and account for differences in observation period length with exposure year fixed effects.

Expat managers have a significant impact on the retention of female employees, particularly in more conservative destination countries. There, under a more progressive manager, women are 5.6 percentage points less likely to leave the firm within one year of their exposure, relative to a baseline of 10%. However, we are unable to distinguish be-

[21] In column (3), we only require that we know for sure if the worker leaves within one year of expat exposure. Compared to column (1), column (3) additionally includes workers whose first months of expat exposure are within the end of the study period but who already left the firm by then.

tween mechanisms that could be driving this result; for example, whether the improved retention is due to changes in workplace culture or other job amenities.

Appendix Table A.7 shows that the pay and promotion effects are concentrated among workers who stay at the firm, suggesting that managers are not applying a blanket policy of raising the pay of all women at the firm. Rather, they seem to be recognizing and rewarding talented women.

Quantification. In Table V 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.[22] Column (1) reports the baseline results; column (2) adds work-level fixed effects to quantify the impact of promotions; column (3) adds sub-function fixed effects to net out the effect of lateral moves; column (4) estimates a two-step Heckman selection estimator to control for selective worker retention. Column (5) includes all three channels. For the Heckman two-step selection model 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).

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. Another dimension of workplace gender inequality is the extent to which managerial attitudes influence not only pay and promotions but also 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.6 investigates how exposure to expat managers with progressive gender norms

[22] Appendix table A.5 shows that results are robust to using all 10 years of data available for non-pay variables.

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 expatriate 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)–(5) shift the focus to whether exposure to expat managers with progressive gender norms influences workers' likelihood of taking parental leave within the next year. The coefficient on Expat mgr norms × Female in column (3) suggests that in offices managed by more progressive expatriate managers, women are slightly more likely to take parental leave. When disaggregating by gender (columns 4 and 5), the effect remains statistically significant for women but is insignificant for men. Hence, these managers primarily influence women's parental leave decisions rather than changing men's uptake of leave.

4.3 Workers' perceptions from pulse surveys

We leverage the company's annual pulse surveys to shed some light on how workplace experiences are shaped by the expat managers. Table VI presents estimates of the impact of expat managers' gender norms on workers' perceptions of managerial effectiveness and job satisfaction. The results provide evidence of a significant and positive effect during expat managers' tenure, though these effects diminish or become null once the expat manager departs. The dependent variables correspond to standardized worker responses to six main survey questions related to managerial effectiveness, feedback, sense of autonomy, development opportunities, motivation, and overall morale. The sample includes observations from workers during and after their exposure to an expatriate manager, with the observation unit defined at the worker-year level.

The results indicate that during exposure to expat managers with more progressive

gender norms, female workers report significantly more positive perceptions of managerial effectiveness, feedback, job control, development opportunities, motivation, and morale. Specifically, column (1) shows that female workers rate their expatriate managers as more effective leaders (coefficient = 0.098, $p < 0.05$). Column (2) reveals that they also report receiving greater feedback that supports their growth (0.156, $p < 0.05$). Similarly, columns (3)–(6) show positive and statistically significant effects on perceived control over task prioritization (0.089, $p < 0.05$), development opportunities (0.116, $p < 0.05$), motivation to go the extra mile (0.078, $p < 0.10$), and overall morale (0.077, $p < 0.05$).

However, these effects seem to dissipate in the post-exposure period, with most coefficients on the Expat mgr norms × Fem × Post interaction being small and statistically insignificant. The only exception is column (2), where the perceived feedback effect remains positive and significant (0.076, $p < 0.05$), suggesting some persistence in workers' perceptions of managerial support.

5 Spillovers Along and Across the Hierarchy

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. In this subsection, we investigate whether expat managers additionally influence the behavior of workers in the destination offices. In particular, we test for two forms of spillovers. First, we focus on the behavior of 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 has "vertical transmission" of culture. Second, we test whether other local managers who are exposed to but are not subordinates of the expat manager change their behavior. We refer to this as the "horizontal 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

[23] These managers are middle managers in WL2.

structure of an expat manager's subordinate workers (vertical transmission). Expat managers only directly influence the outcomes of their direct subordinates, 60% whom are themselves managers.[24] In this figure, we are analyzing the impact of an expat manager on his subordinates' behavior by looking at how the local managers (as labeled in the figure) influence their subordinates' outcomes. These subordinates are not directly impacted by the expat manager. Panel B shows the structure for horizontal transmission. We focus on other 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 look at how these managers' subordinates' outcomes change.

5.1 Vertical Transmission

To test for vertical transmission of culture, we first identify "second-generation" managers, i.e., direct subordinates of a "first-generation" expat manager, and the workers they begin to manage in the time period between the first month and one year after the last month of their expat exposure. We then estimate how the gender norms of the "first-generation" expat manager matter to the gender pay gap among these workers, using the following equation:

$$\begin{aligned} Y_{jimlkt} = & \sum_{k=0,1,2} \kappa_k \mathbf{1}[K_{jt} = k](Norms_m \times Fem_j) \\ & + \sum_{k=0,1,2} \gamma_k \mathbf{1}[K_{jt} = k](Norms_i \times Fem_j) \\ & + \theta_j + \theta_{ik} + \theta_{l,Year(t),Fem(i)} + \mathbf{X}_{jt}\beta + \varepsilon_{jimlkt} \end{aligned} \tag{3}$$

where j indexes the worker, i the "second-generation" manager, m the "first-generation" expat manager, l j's contemporaneous manager at calendar month t, and k the time period relative to j's exposure to i. Note that 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 (3). As such, exposure is based on the worker's exposure to the local manager. Second, equation (3) addition-

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

ally includes $Norms_m \times Fem_j$, i.e., the expat manager's gender norms 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 "second-generation" manager's exposure to a more progressive expat manager, relative to one exposed to a conservative expat manager, on the gender pay gap. Standard errors are double clustered by worker and expat manager's home country times worker's gender.

The results, presented in Panel A of Table VII, show that expat managers also have a large, indirect impact on the outcomes of future workers under their direct subordinates. That is, a "second-generation" manager who has worked under a more progressive expat manager considerably narrows the gender pay gap among their team members (relative to a "second-generation" manager who has worked under a conservative expat manager) (column 1). As this effect also persists after the worker's exposure to the "second-generation" manager, which in most cases is well beyond the expat manager's tenure in the destination office, it is unlikely the direct impact of the expat manager himself but instead reflects his influence on the gender attitudes (and/or management styles) of his direct subordinates, i.e., the "second-generation" managers. Columns (2) and (3) further show that this vertical transmission of managerial gender norms affects both female and male "second-generation" managers and is likely stronger for female managers (although the differences between the coefficients in columns (2) and (3) are not statistically significant). 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 exposed to expats with less progressive gender norms.

5.2 Horizontal Transmission

Panel B of Table VII tests whether expat managers influence the behavior of their local peer managers. We estimate equation (3) but the worker manager pairs are now the peer managers and their subordinates. Column 1 shows that exposure to an expat manager has a lasting influence on peer managers' behavior. The gender pay gap narrows among

workers who work for a manager who interacted with an expat manager with more progressive gender norms, both before and after exposure. In columns (2) and (3) we split the sample into female peer managers (column 2) and male peer managers (column 3). Here we see that the results are larger among female peer managers. In column (4) we again 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.

5.3 Reverse Transmission on Expat Managers

If expat managers impact the destination office environment, could the norms in the destination office influence the manager? We study whether managers pick up the norms of the destination office by identifying managers from the same home country who do a rotation in different countries. We then look at whether and how the gender pay gap under those managers differs in the immediate next country they work in, i.e., the office after their rotation. This immediate next country could be their home country, or it could be another rotation. For example, we would like to compare two British managers, one of whom does a rotation in India (conservative gender norms) and one of whom does a rotation in Denmark (progressive gender norms). If the manager who completes a rotation in India picks up conservative norms, the gender pay gap under that manager in his next office location should be larger than the corresponding gender pay gap under the manager who spent time in Denmark.

Formally, we test this by estimating:

$$\begin{aligned} Y_{imlkt} = &\sum_{k=0,1,2} \kappa_k \mathbf{1}[K_{it} = k](LowPriorNorms_{mt} \times Fem_i) \\ &+ \sum_{k=0,1,2} \gamma_k \mathbf{1}[K_{it} = k](Norms_m \times Fem_i) \\ &+ \theta_i + \theta_{mk} + \theta_{l,Year(t),Fem(i)} + \mathbf{X}_{imt}\beta + \varepsilon_{imlkt} \end{aligned} \tag{4}$$

where the variable $LowPriorNorms_{mt}$ is an indicator that takes the value one if the manager was previously in a country with conservative gender norms, and all indices have the same meaning as those in equation (1). This specification also includes the same

suite of fixed effects and controls as equation (1). In addition, we further control for low norms expat manager's home country x low norms next country interacted with exposure period $\times$ worker's gender. The outcomes are measured at the expat manager's next country rotation (which could be the expat's home country) for their direct subordinates there. Equation (4) thus estimates the impact of the manager's exposure to one destination country on the gender gap in the teams in their next office. Standard errors are double clustered by worker and expat manager's home country times worker's gender.

The estimates in column (1) of Table A.9 show that managers who previously visited countries with less progressive norms do not increase the gender pay gap in their next rotation country, if not the opposite, suggesting that the norms do not rub off on the expat manager. Columns (2) and (3) present the results from estimating equation (4) but interact $LowPriorNorms_{mt} \times Fem_i$ with an indicator for the manager being from a country with progressive gender norms. The positive and statistically significant coefficients in column (3) imply that among expat managers from high norm countries, those who spent time in low norms countries *narrow* the gender pay gap in their next country rotations more than those who spent time in high norms countries, i.e., a "reversal" effect.[25] The results are qualitatively similar when looking at work-level promotions (columns 4 to 6). Albeit counterintuitive at first glance, these results are consistent with Ashraf et al.'s (2024) finding from the same firm that women workers are more positively selected in low norms countries, which potentially induces exposed expat managers to update positively on the overall quality of the female workforce.[26]

5.4 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

[25] Note that the coefficients on the expat manager's own norms remain positive throughout the columns as in Table II, i.e., managers from progressive countries continue to have a positive impact on the gender pay gap in their next country rotation.

[26] Although speculative, we do find evidence that this "reversal" effect exists only when the next country rotation is new to the expat manager, consistent with this story of belief updating.

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.

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:

$$Y_{jfq} = \phi AvgNorms_{jfq} + \theta_j + \theta_{f,Year(q)} + \boldsymbol{X}_{jfq}\delta + \mu_{jfq} \tag{5}$$

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. Appendix Figure A.6 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, their average tenure in years, and the fraction of expat managers.

The analysis focuses on three key outcomes among local workers: (i) the promotion rate of female employees, (ii) the gender pay gap, and (iii) exit rates of local managers.[27] Panel A of Table VIII presents the estimated effects of equation (5) on the promotion rate

[27]Promotion rate is defined as the share of women in the office-function unit who attain work level 3 or above. The gender pay gap is computed at the office-function-quarter level using worker-quarter data. To construct this measure, we estimate a worker-level wage regression controlling for age, age^2, tenure, and tenure^2, and store the gender coefficient for each office-function-quarter unit. Exit rates are measured separately for male and female managers, defined as the fraction of managers at work level 2 and above who leave the firm in a given quarter.

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 2.4 percentage-point increase in the share of women promoted to work level 3 or above, along with a 5.1 percent reduction in the gender pay gap among employees at work level 2 and above. To examine heterogeneity in these effects, we partition employees into those directly exposed to expat managers (treated) and those who were not yet exposed or never exposed.[28]

Panel B of Table VIII suggests that the observed increase in promotions is largely driven by a higher fraction of treated women attaining leadership positions, without evidence that these gains come at the expense of untreated employees. Similarly, while the coefficient for the gender pay gap among treated women is relatively large and positive compared to untreated women, the latter group's coefficient remains positive. However, neither estimate is statistically significant.[29]

We next examine whether offices with more progressive gender norms exhibit lower exit rates, particularly among female managers. Table IX reports the results of estimating equation (5) on exit rates by gender. Consistent with our worker-level findings, Panel A of Table IX shows that offices with more progressive expatriate managers experience lower female manager turnover. A one standard deviation increase in the average gender norms measure is associated with a 0.1 percentage-point decrease in the exit rate of female managers, though this effect is not statistically significant. For 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. When we differentiate between treated and untreated employees, our findings indicate that lower exit rates are primarily driven by treated women.

[28]To compute the fraction of women in leadership positions by treatment status, we divide the number of treated (untreated) women by the total number of employees in the office-function-quarter. Similarly, we compute the gender pay gap by estimating it separately for treated (untreated) women relative to all men in the office-function-quarter.

[29]The results are qualitatively similar when restricting the sample of office-function-quarters to be identical across outcomes.

6 Conclusion

Multinational firms play an increasingly important role in shaping global workplace practices and transmitting cultural norms across borders. 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 inherited gender norms that managers bring from their home countries influence workplace culture and the career trajectories of women and men in foreign establishments.

We find 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. Despite ongoing efforts, women are still vastly underrepresented in leadership positions, and progress in identifying effective policy remedies has been limited (Bohnet, 2016; Bertrand, 2018; Azmat and Boring, 2020). Our findings indicate that the views of the managers just below the top echelons of the firm, who are tasked with guiding the company's strategy and ensuring effective implementation, can significantly impact gender disparities in career trajectories. These managers can initiate a positive feedback loop by fostering the careers of their direct reports – who are middle managers – which in turn influences those reporting to them. This underscores the potential for managerial influence to create lasting shifts in organizational culture.

Building on the literature on the role of multinationals in inducing productivity catch-up throughout the economy (Alfaro, 2017), our results suggest that their practice of rotating managers across space is not only a tool for knowledge transfer but also a catalyst for social development. By exposing workers to managers from different cultural contexts, multinational corporations facilitate the spread of progressive gender norms and equitable management practices.

While the results pertain to a single multinational company, we are exploring next whether our core findings extend to other multinationals using administrative employer-

employee data from Brazil (RAIS). We plan to focus on the set of multinationals that have establishments in Brazil and investigate how the gender norms of the countries of their headquarters correlate with the gender pay gap in their Brazilian subsidiaries.

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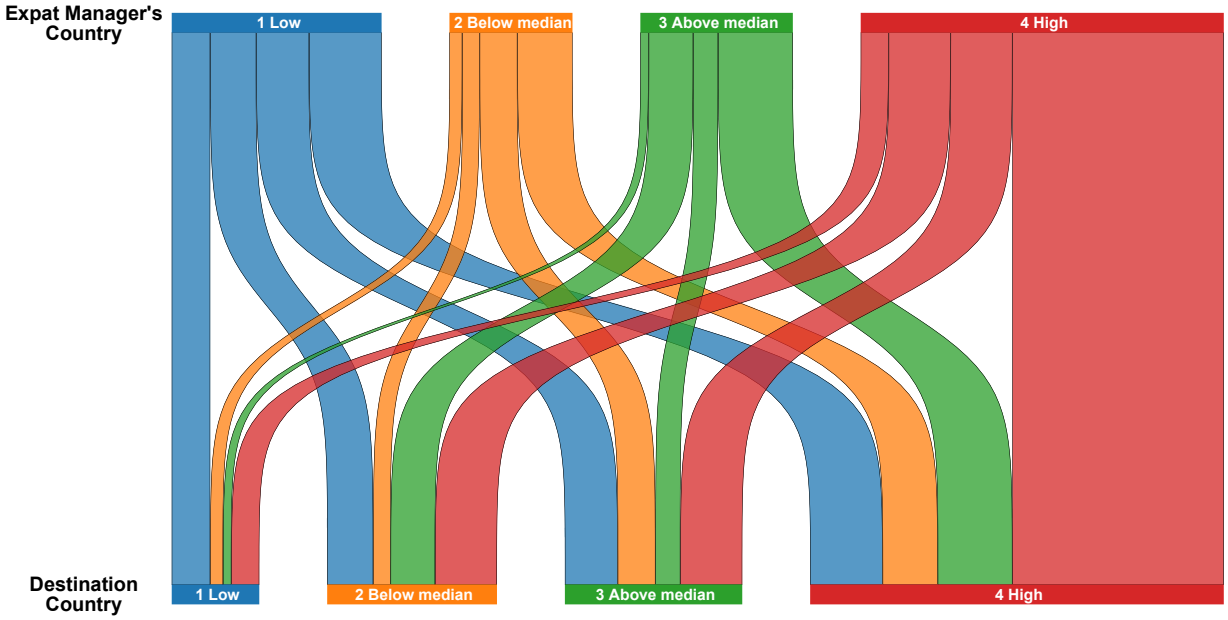
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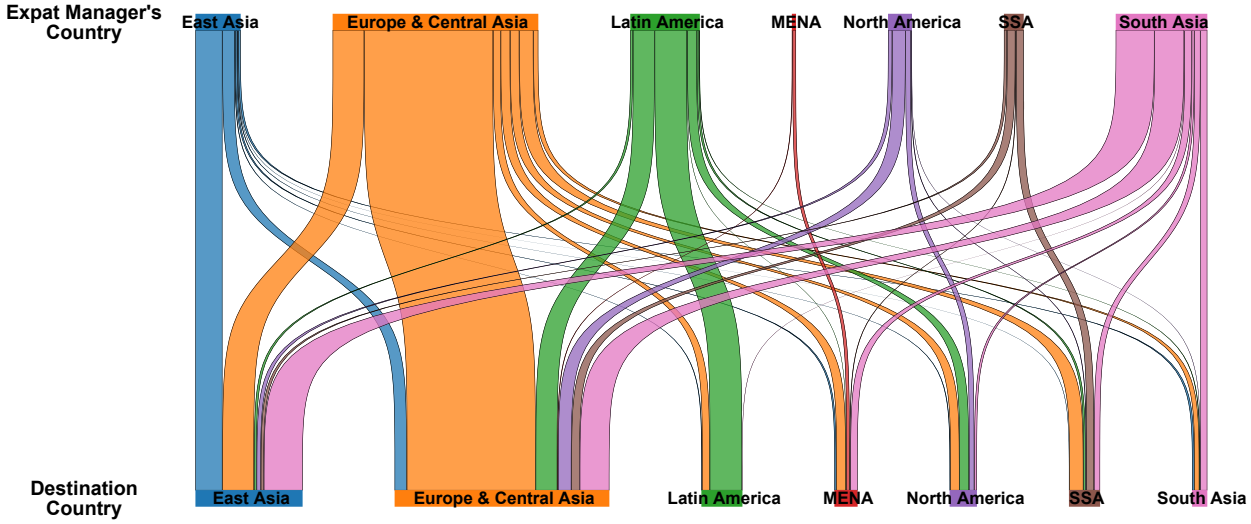
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Figures and Tables

Figure I: Expat Managers' Origins-Destinations



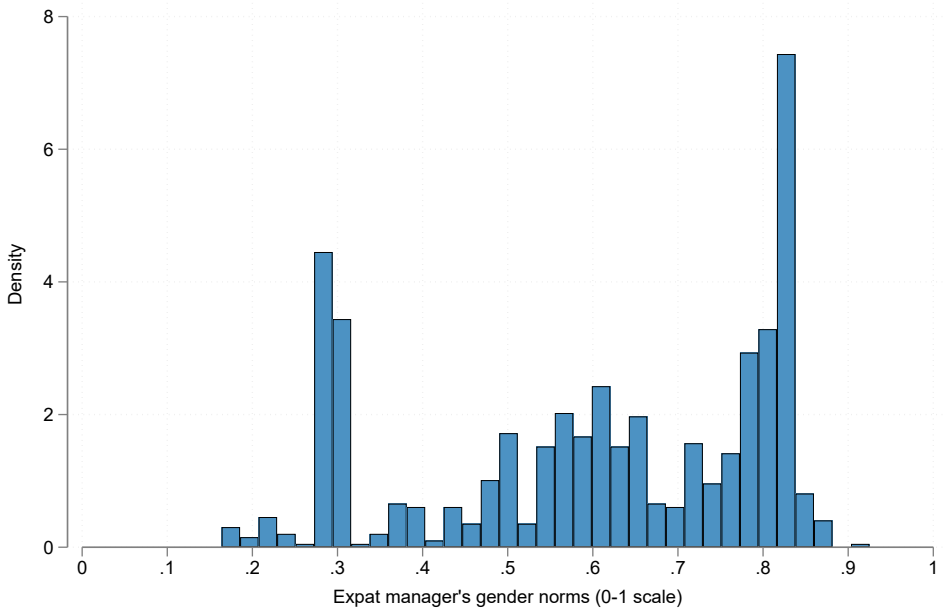
A. By country gender norms



B. By geographical region

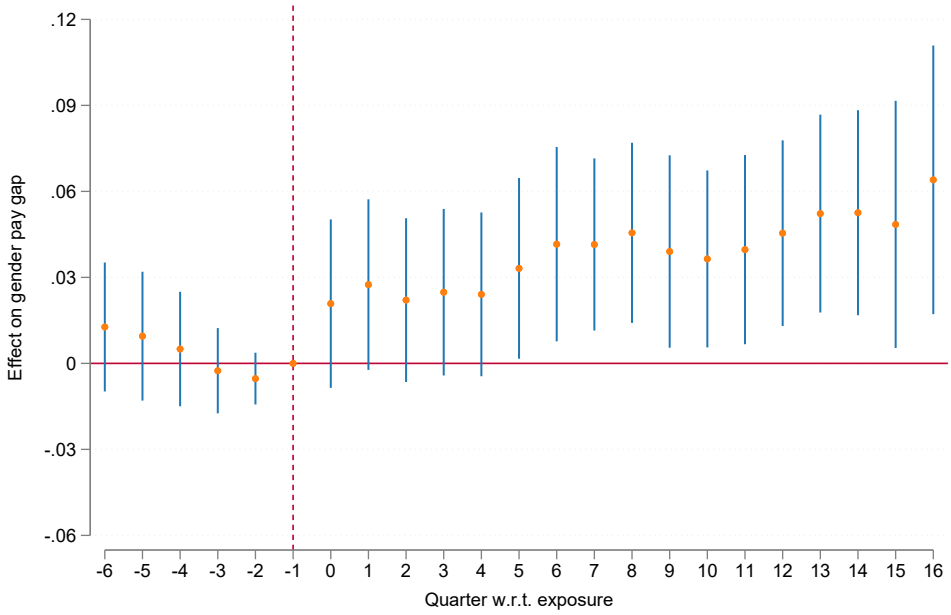
Notes: This figure shows baseline sample's manager flows during their expat rotations across countries based on the origin and destination countries' gender norms and geographical regions. In both figures, the top row corresponds to the home countries of expat managers (the origin countries) and the bottom row corresponds to the countries where expat managers are posted during their expat rotations (the destination countries). In the top figure, the country gender norms measure is divided into quartiles, with low/below median and above median/high countries being those with the more conservative and progressive gender norms. In the bottom figure, the regions of the countries are borrowed from the World Bank classification and abbreviated for simplicity; Latin America stands for Latin America and Caribbean countries, SSA stands for Sub-Saharan Africa, and MENA stands for Middle-East and North Africa.

Figure II: Distribution of Expat Managers' Gender Norms



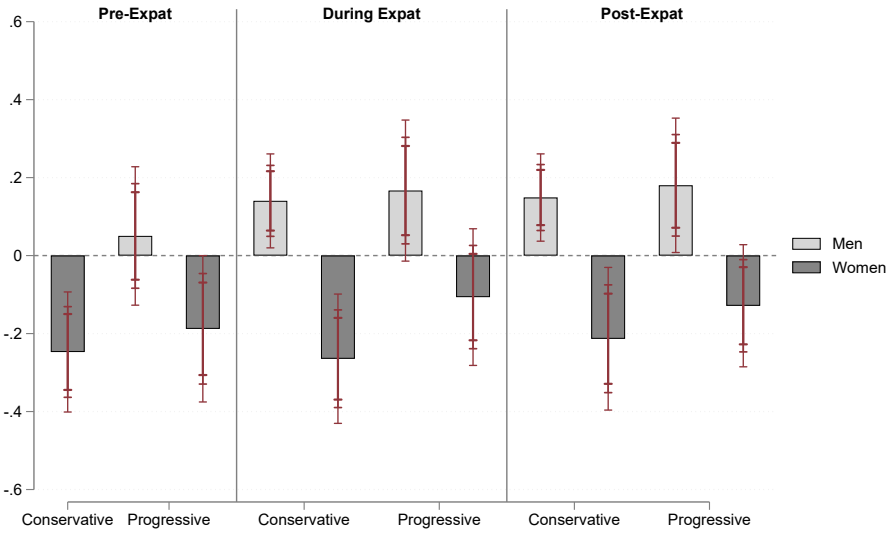
Notes: This figure plots the distribution of baseline sample's expat managers' gender norms, on the original scale of 0-1 before standardization.

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



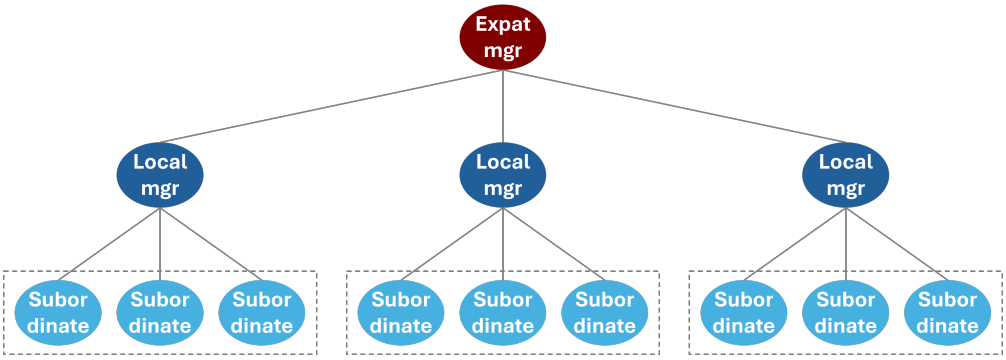
Notes: This figure shows the effects of the expat manager's gender norms on the female-male gender pay gap in the quarters before and after the expat manager rotates into the office. All coefficients are plotted relative to the pay gap in the quarter before the expat manager enters.

Figure IV: Pay by Gender and Expat Managers' Gender Norms

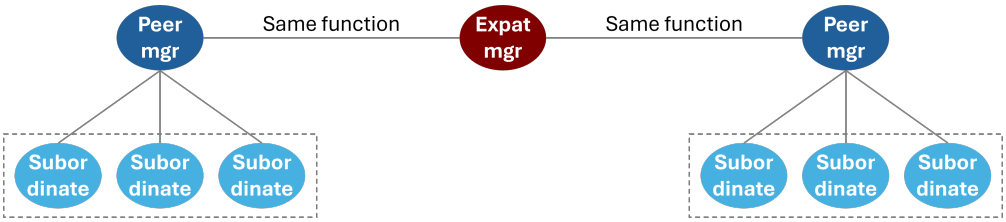


Notes: This figure plots the average log(pay + bonuses) of male and female workers exposed to expat managers with conservative and progressive gender norms before, during, and after such exposure, after partialling out worker's age, age^2, tenure, tenure^2, and office x year fixed effects.

Figure V: Transmission Along and Across the Hierarchy



A. Vertical transmission



B. Horizontal transmission

Notes: This figure illustrates the vertical and horizontal transmissions of expat managers' gender norms along and across the hierarchy.

Table I: Expat Managers and Exposed Workers versus Peers

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

Dependent Variable:	(1) **Age**	(2) **Tenure**	(3) **Log(Pay)**	(4) **Log(Bonuses)**	(5) **Bonuses to Pay**	(6) **Work Level**
Expat managers	-2.439***	-2.251***	-0.037*	-0.044**	-0.001	-0.273***
	(0.3380)	(0.4495)	(0.0197)	(0.0193)	(0.0024)	(0.0570)
Mean peer outcome	45.500	15.920	11.970	10.600	0.270	3.170
N	219,295	219,295	99,182	96,862	99,182	219,493

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

Dependent Variable:	(1) **Female**	(2) **Age**	(3) **Tenure**	(4) **Log(Pay)**	(5) **Log(Bonuses)**	(6) **Bonuses to Pay**	(7) **Work Level**
Exposed workers	-0.012*	-1.879***	-1.067***	0.010*	0.016**	-0.000	-0.187***
	(0.0068)	(0.1472)	(0.1374)	(0.0056)	(0.0077)	(0.0004)	(0.0189)
Mean peer outcome	0.490	39.010	9.930	10.730	8.870	0.150	1.730
N	2,325,815	2,332,619	2,332,619	1,266,279	1,161,656	1,266,279	2,333,325

Notes: Panel A compares the characteristics of male employees in the year before they become expat managers with their peers who do not become expat managers but do work at WL3 or above in the same year. Panel B compares the characteristics of employees in the year before they work under an expat manager with their peers who never work under expat managers but do work under managers of WL3 or above in the same year. In columns (1) to (6) of both panels, we control for the office $\times$ year $\times$ function $\times$ work level fixed effects. In column (7) of both panels, we control for office $\times$ year fixed effects. Standard errors are clustered by office.

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

Panel A: All destination countries

	(1)	(2)	(3)	(4)
Dependent variable:	**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)
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

Panel B: Split by destination country gender norms

	(1)	(2)	(3)	(4)
Dependent variable:	**Log(Pay + bonuses)**			
Destination country sample:	Conservative	Progressive	Conservative	Progressive
Relative to:	All countries		Expat mgr's home country	
Expat mgr norms × Female × During	0.070***	0.020	0.091**	0.066***
	(0.019)	(0.014)	(0.048)	(0.018)
Expat mgr norms × Female × Post	0.054*	0.050***	0.144**	0.037
	(0.028)	(0.014)	(0.059)	(0.023)
Worker FEs	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓
Manager × Year × Fem FEs	✓	✓	✓	✓
N	233,989		233,989	

Notes: Panel A shows the coefficients from estimating equation (1). Panel B splits the sample into destination countries with conservative gender norms (columns 1 and 3) and progressive gender norms (columns 2 and 4). Columns (1) and (2) report the results from one single regression with separate $Norms_m \times Fem_i$ coefficients for conservative and progressive destination countries; the same holds for columns (3) and (4). In both panels, we control for 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. The baseline gender pay gap (women - men) is -0.28: women earn 28% less than men on average.

Table III: Impacts of Expat Manager's Gender Norms on Worker's Promotions and Lateral Moves

Panel A. Impact on promotions

Dependent variable:	(1) **Salary promotion**	(2) **Work level promotion**	(3) **Work level achieved**	(4) **Work level 3 or above**
Expat mgr norms × Fem × During	0.067*	0.048***	0.064***	0.070***
	(0.040)	(0.013)	(0.018)	(0.011)
Expat mgr norms × Fem × Post	0.046	0.052***	0.079***	0.096***
	(0.034)	(0.015)	(0.020)	(0.014)
Dependent variable mean	1.552	0.345	1.968	0.222
Dependent variable std. dev.	1.362	0.508	0.843	0.416
Worker FEs	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	249,968	249,968	249,968	249,968

Panel B. Impacts on lateral moves

Dependent variable:	(1) **Function transfer**	(2) **Sub-function transfer**	(3)	(4) **Standard job transfer**
		All	**Same function**	
Expat mgr norms × Fem × During	-0.096***	0.018	0.114**	0.061
	(0.024)	(0.060)	(0.046)	(0.060)
Expat mgr norms × Fem × Post	-0.041	0.067	0.107*	0.161**
	(0.029)	(0.066)	(0.056)	(0.081)
Dependent variable mean	0.331	1.419	1.088	2.412
Dependent variable std. dev.	0.755	1.446	1.271	1.904
Worker FEs	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	249,968	249,968	249,968	249,968

Notes: This table shows the coefficients from estimating equation (1). Promotions and transfers are cumulative counts. 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 IV: Impact of Expat Manager's Gender Norms on Worker's Retention

Sample:	(1)	(2)	(3)	(4)
	Restricted		Unrestricted	
Dependent variable:	**Leave 1 yr**	**Leave 5 yrs**	**Leave 1 yr**	**Leave 5 yrs**
Expat mgr norms × Female × Conservative	-0.055**	-0.276***	-0.055**	-0.131***
	(0.023)	(0.051)	(0.023)	(0.034)
Expat mgr norms × Female × Progressive	-0.001	0.003	-0.006	-0.072**
	(0.017)	(0.055)	(0.017)	(0.032)
Dependent variable mean	0.102	0.509	0.103	0.714
Dependent variable std. dev.	0.303	0.500	0.305	0.452
Expat manager FEs	✓	✓	✓	✓
Work level × Female FEs	✓	✓	✓	✓
Function × Female FEs	✓	✓	✓	✓
Dest. country × Female FEs	✓	✓	✓	✓
Year × Female FEs	✓	✓	✓	✓
N	1,925	448	1,928	857

Notes: Observation unit is a worker. Controls include worker's age, age^2, tenure, tenure^2, and log(pay + bonuses), measured at the first month of expat exposure, interacted with worker's gender. Standard errors are clustered by expat manager's home country × worker's gender.

Table V: Contributions of Promotions, Lateral Moves, and Retention

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Log(Pay + bonuses)				
Channel:	Baseline	Work level	Sub-function	Retention	All three
Expat mgr norms × Female × During	0.049***	0.027***	0.041***	0.050***	0.021**
	(0.011)	(0.009)	(0.010)	(0.012)	(0.009)
Expat mgr norms × Female × Post	0.049***	0.021	0.042***	0.050***	0.017
	(0.015)	(0.013)	(0.013)	(0.015)	(0.012)
Worker FEs	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓	✓
Work level FEs		✓			✓
Sub-function FEs			✓		✓
Heckman selection correction				✓	✓
N	249,968	249,968	249,968	249,968	249,968

Notes: This table shows the coefficients from estimating equation (1). Controls include worker's age, age^2, tenure, tenure^2. In columns (4) and (5), we additionally include the Heckman selection correction term, i.e., 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 VI: Expat Manager's Gender Norms and Worker's Pulse Surveys

Dependent variable:	(1) **Manager**	(2) **Feedback**	(3) **Control**	(4) **Development**	(5) **Extra mile**	(6) **Morale**
Expat mgr norms × Fem × During	0.098**	0.156**	0.089*	0.116**	0.078*	0.077**
	(0.047)	(0.074)	(0.026)	(0.044)	(0.046)	(0.033)
Expat mgr norms × Fem Post	0.057	0.076**	-0.054	-0.041	-0.019	-0.007
	(0.036)	(0.033)	(0.044)	(0.033)	(0.030)	(0.030)
Work level × Female FEs	✓	✓	✓	✓	✓	✓
Function × Female FEs	✓	✓	✓	✓	✓	✓
Expat manager FEs	✓	✓	✓	✓	✓	✓
Dest. country × Female FEs	✓	✓	✓	✓	✓	✓
N	7,125	4,112	6,386	7,894	7,903	7,880

Notes: Observation unit is a worker × year. Sample includes observations during and after worker's expat exposure. 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 VII: Impacts of Expat Manager's Gender Norms on Local Managers' Subordinates

Panel A. Vertical transmission through direct employees

Dependent variable:	(1)	(2)	(3)	(4)
	Log(Pay + bonuses)			**Work level**
Worker's exposure to 2nd-gen mgr:	Within 3 yrs of 2nd-gen mgr's expat exposure			Within 3 yrs
2nd-gen manager sample:	Full sample	Female manager	Male manager	Full sample
Expat mgr norms × Female × During	0.021*	0.008	0.029*	0.049***
	(0.011)	(0.012)	(0.018)	(0.018)
Expat mgr norms × Female × Post	0.030***	0.029	0.027**	0.060***
	(0.010)	(0.018)	(0.013)	(0.017)
Worker FEs	✓	✓	✓	✓
2nd-gen manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	375,509	375,509		375,509

Panel B. Horizontal transmission through peer managers

Dependent variable:	(1)	(2)	(3)	(4)
	Log(Pay + bonuses)			**Work level**
Worker's exposure to peer mgr:	Within 3 yrs of peer mgr's expat exposure			Within 3 yrs
Local peer manager sample:	Full sample	Female manager	Male manager	Full sample
Expat mgr norms × Female × During	0.037**	0.052***	0.024	0.060***
	(0.015)	(0.017)	(0.021)	(0.020)
Expat mgr norms × Female × Post	0.024*	0.054**	0.003	0.065***
	(0.014)	(0.027)	(0.020)	(0.020)
Worker FEs	✓	✓	✓	✓
Local peer manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	249,308	249,308		249,308

Notes: This table shows the coefficients from estimating equation (3). Panel A considers vertical transmission through local direct employees who are "second-generation" managers. Panel B considers horizontal transmission through local peer managers in the same function. Exposure periods are defined based on the worker's exposure to the local manager. Columns (2) and (3) report the results from one single regression with separate $Norms_m \times Fem_j$ coefficients for female (column 2) and male (column 3) local managers. Controls include worker's age, age^2, tenure, tenure^2, and local manager's gender norms × worker's gender × exposure period. Standard errors are double clustered by worker and expat manager's home country × worker's gender.

Table VIII: Aggregate Impacts on Office-Function Gender Promotion and Pay Gaps

Panel A: All local employees

	(1)	(2)	(3)	(4)
Dependent Variable:	**% of Women in Leadership Positions (WL$\geq$ 3)**		**Gender Pay Gap (WL$\geq$ 2)**	
Male Expat Managers' Average Norms	0.0235***	0.0235***	0.0511**	0.0522**
	(0.0091)	(0.0091)	(0.0228)	(0.0230)
% of Expat Foreign Managers		0.0762		-0.2467*
		(0.0583)		(0.1435)
Office FE	✓	✓	✓	✓
Function $\times$ Year FE	✓	✓	✓	✓
N	18,658	18,658	7,885	7,885

Panel B: Treated vs Untreated local employees

	(1)	(2)	(3)	(4)
Dependent Variable:	**% of Women in Leadership Positions (WL$\geq$ 3)**		**Gender Pay Gap (WL$\geq$ 2)**	
	Treated	Untreated	Treated	Untreated
Male Expat Managers' Average Norms	0.0295***	-0.0065	-0.0004	-0.0488*
	(0.0084)	(0.0057)	(0.0389)	(0.0296)
% of Expat Foreign Managers	0.1315***	-0.0386	-0.2677	0.1029
	(0.0499)	(0.0376)	(0.3728)	(0.2848)
Office FE	✓	✓	✓	✓
Function $\times$ Year FE	✓	✓	✓	✓
N	17,522	18,657	4,613	4,298

Notes: This table presents the coefficients from estimating equation (5). Panel A reports estimates using the full sample of local employees in each office-function-quarter unit, while Panel B reports separate estimates for treated and untreated employees. Controls include the number of local employees, their average age, and their average tenure (in years). Standard errors are clustered at the Office $\times$ Year level. Office-function units with fewer than 10 local employees are excluded.

Table IX: Aggregate Impacts on Office-Function Managers' Exit Rates

Panel A: All local employees

Dependent Variable:	(1)	(2)	(3)	(4)
	Female Managers		**Male Managers**	
Male Expat Managers' Average Norms	-0.0013	-0.0013	0.0008	0.0008
	(0.0008)	(0.0008)	(0.0007)	(0.0007)
% of Expat Foreign Managers		-0.0022		0.0107
		(0.0050)		(0.0070)
Office FE	✓	✓	✓	✓
Function × Year FE	✓	✓	✓	✓
N	25,975	25,975	32,483	32,483

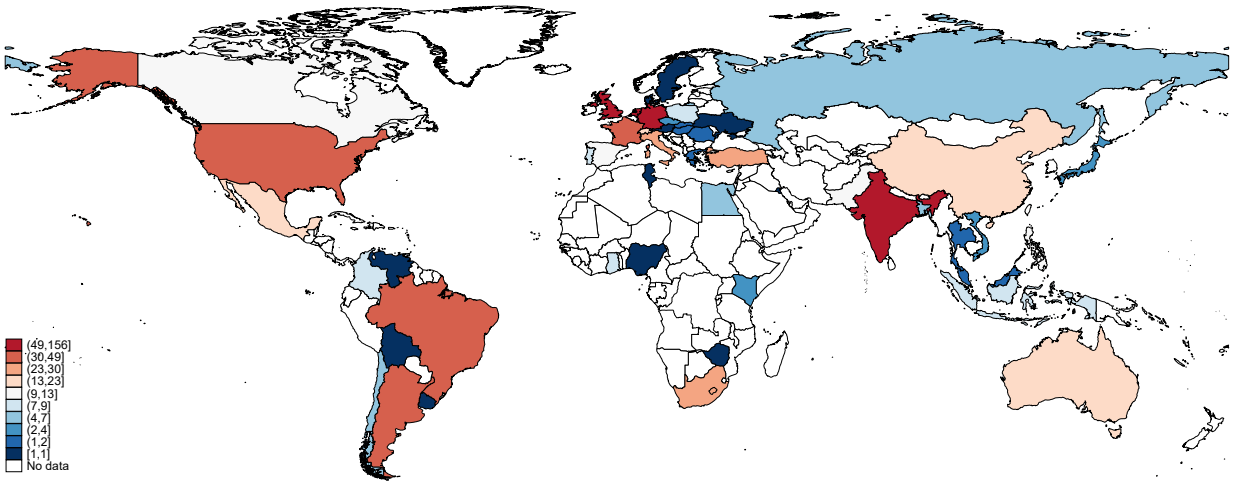
Panel B: Treated vs Untreated local employees

Dependent Variable:	(1)	(2)	(3)	(4)
	Female Managers		**Male Managers**	
	Treated	Untreated	Treated	Untreated
Male Expat Managers' Average Norms	-0.0011	-0.0002	0.0004	0.0003
	(0.0007)	(0.0004)	(0.0006)	(0.0004)
% of Expat Foreign Managers	0.0009	-0.0044	0.0158**	-0.0054**
	(0.0036)	(0.0036)	(0.0067)	(0.0026)
Office FE	✓	✓	✓	✓
Function × Year FE	✓	✓	✓	✓
N	23,455	25,966	28,851	32,452

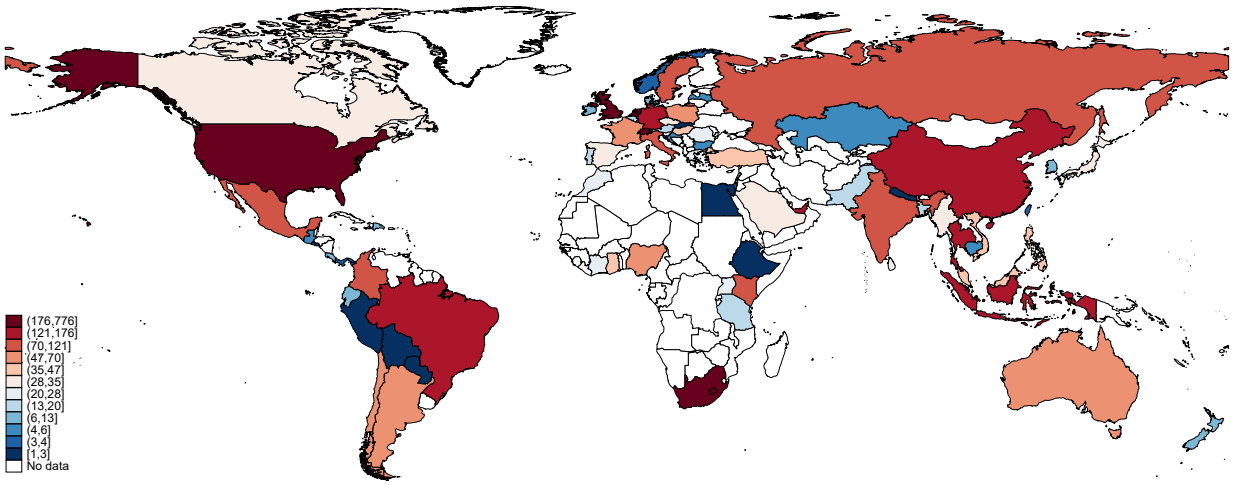
Notes: This table presents the coefficients from estimating equation (5). Panel A reports estimates using the full sample of local employees in each office-function-quarter unit, while Panel B reports separate estimates for treated and untreated employees. Columns (1) and (2) restrict the sample to local female managers, whereas Columns (3) and (4) restrict it to local male managers. Controls include the number of local employees, their average age, and their average tenure (in years). Standard errors are clustered at the Office × Year level. Office-function units with fewer than 10 local employees are excluded.

A Appendix Figures and Tables

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



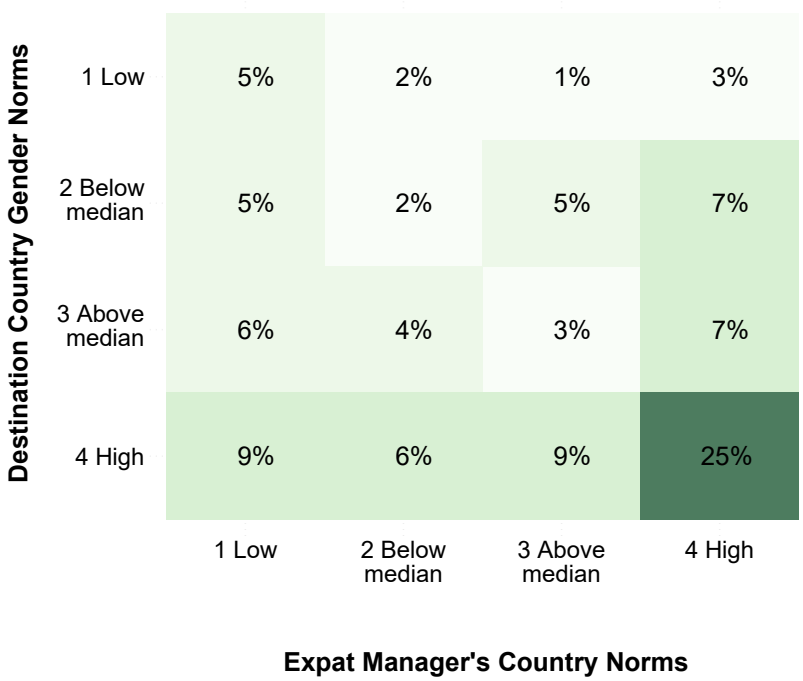
A. Expat managers' countries



B. Workers' countries

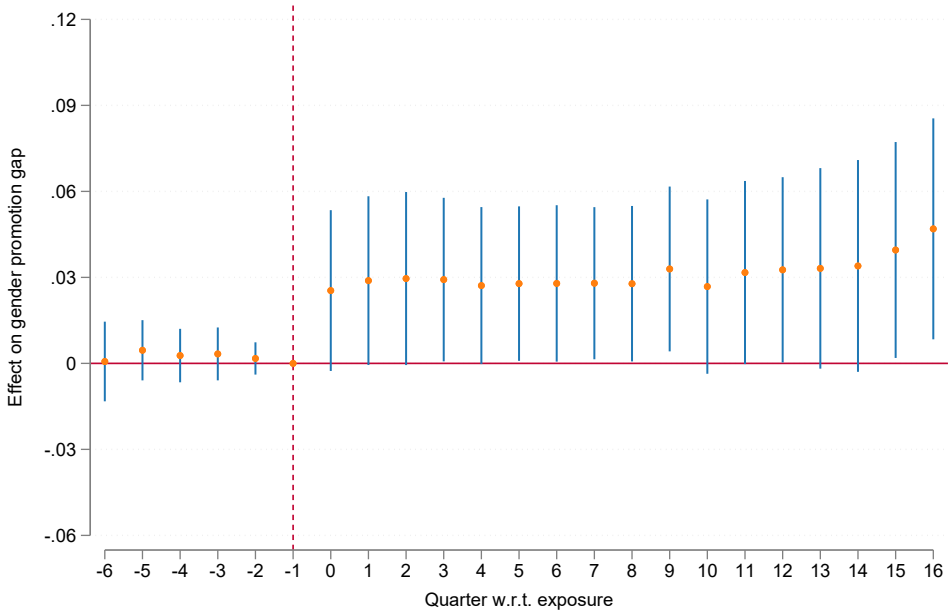
Notes: The figure shows the geographical distributions of baseline sample's expat managers' home countries (origin countries) and baseline sample's workers' countries at exposure (destination countries).

Figure A.2: Expat Managers' Origins-Destinations by Country Gender Norms



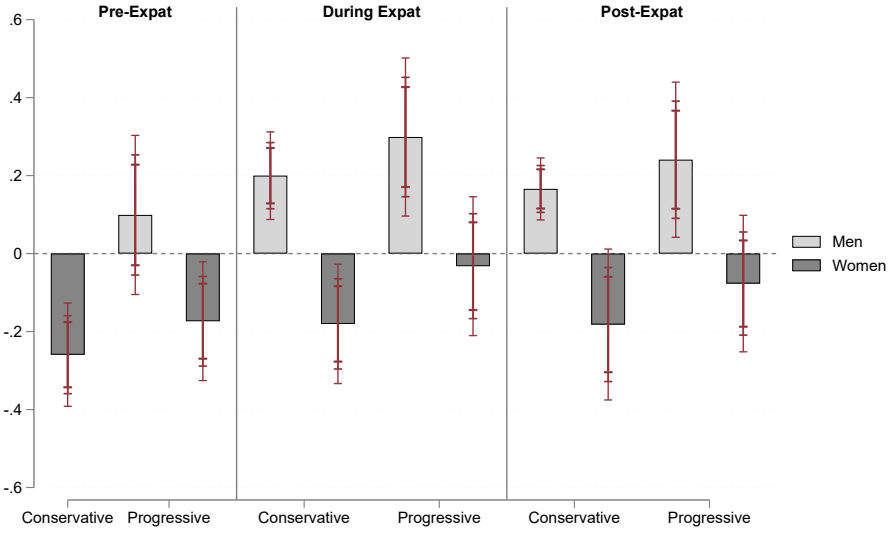
Notes: This figure shows baseline sample's manager flows during their expat rotations across countries based on the origin and destination countries' gender norms. The X-axis corresponds to the home countries of expat managers (the origin countries) and the Y-axis corresponds to the countries where expat managers are posted during their expat rotations (the destination countries). Country gender norms measure is divided into quartiles, with low/below median and above median/high countries being those with the more conservative and progressive gender norms.

Figure A.3: Evolution of Impact of Expat Manager's Gender Norms on the Gender Promotion Gap



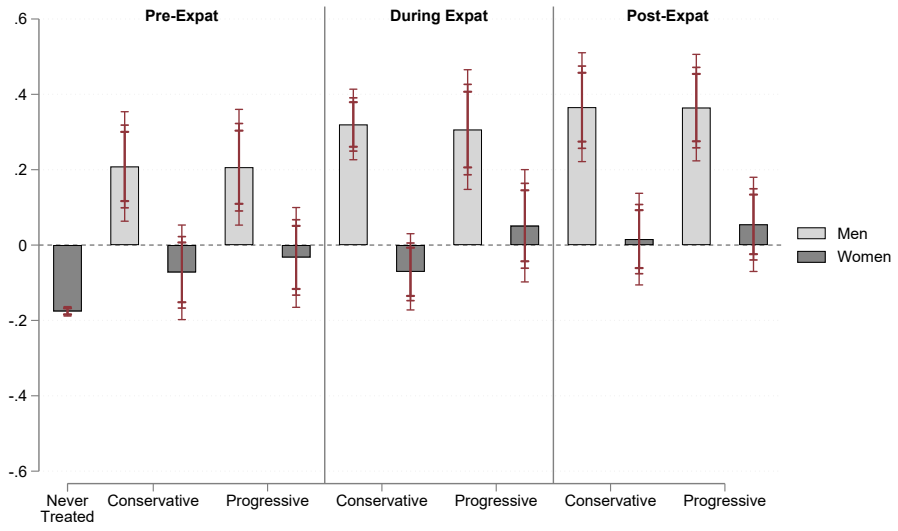
Notes: This figure shows the effects of the expat manager's gender norms on the female-male gender promotion gap in the quarters before and after the expat manager rotates into the office. All coefficients are plotted relative to the pay gap in the quarter before the expat manager enters.

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

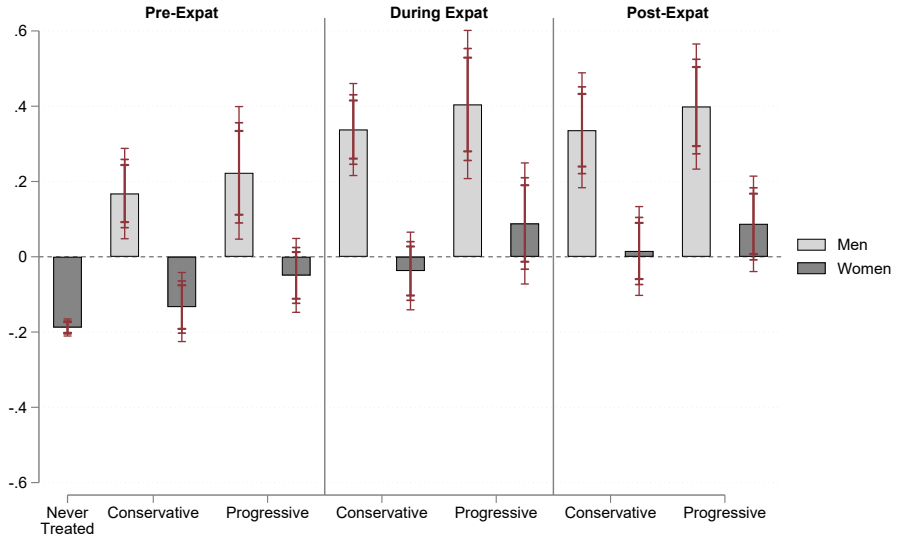


Notes: This figure plots the average work level of male and female workers exposed to expat managers with conservative and progressive gender norms before, during, and after such exposure, after partialling out worker's age, age^2, tenure, tenure^2, and office x year fixed effects.

Figure A.5: Pay and Work Level by Gender and Expat Managers' Gender Norms Including Never Treated Workers



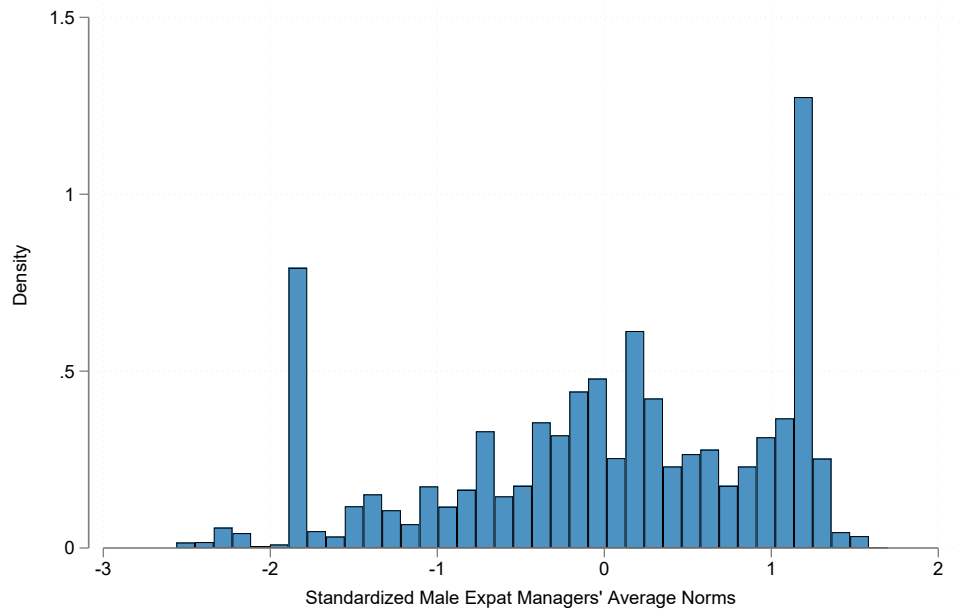
A. Log(Pay + bonuses)



B. Work level

Notes: This figure plots the average log(pay + bonuses) and work level of male and female workers not exposed and 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.

Figure A.6: Distribution of Male Expat Managers' Average Gender Norms at the Office-Function-Quarter Level



Notes: This figure plots the distribution of male expat managers' average gender norms at the office-function-quarter level after standardization.

Table A.1: Impact of Expat Manager's Gender Norms Using Other Norms Measures

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)
	Log(Pay + bonuses)					
Gender norms measure:	Baseline (all three)	Right to jobs	Working mothers	Business executives	University education	Working to be independent
Expat mgr norms × Female × During	0.049***	0.052***	0.039***	0.053***	0.046***	0.048***
	(0.012)	(0.013)	(0.011)	(0.012)	(0.011)	(0.016)
Expat mgr norms × Female × Post	0.049***	0.054***	0.038***	0.049***	0.046***	0.038*
	(0.015)	(0.019)	(0.012)	(0.016)	(0.017)	(0.021)
Worker FEs	✓	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓	✓	✓
N	249,968	253,074	250,978	248,479	250,575	247,386

Notes: This table shows the coefficients from estimating equation (1). 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). 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.2: Impact of Expat Manager's Gender Norms
Controlling for Other Characteristics and Cultural Traits

Panel A. Other characteristics

Dependent variable:	(1)	(2)	(3)	(4)
	Log(Pay + bonuses)			
Other characteristics:	Of expat manager		Of home country	
	Demographic	Performance	GDP per capita	Education
Expat mgr norms × Fem × During	0.039***	0.036***	0.053*	0.059***
	(0.011)	(0.013)	(0.029)	(0.019)
Expat mgr norms × Fem × Post	0.031**	0.035**	0.083**	0.108***
	(0.013)	(0.015)	(0.039)	(0.033)
Worker FEs	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	249,099	249,968	243,540	247,244

Panel B. Other cultural traits

Dependent variable:	(1)	(2)	(3)	(4)
	Log(Pay + bonuses)			
Other trait:	Trust	Work ethic	Redistribution	Risk
Expat mgr norms × Fem × During	0.051***	0.040**	0.083***	0.035**
	(0.013)	(0.013)	(0.018)	(0.015)
Expat mgr norms × Fem × Post	0.043**	0.032*	0.077***	0.028
	(0.017)	(0.019)	(0.018)	(0.018)
Other trait × Fem × During	0.005	-0.023	0.043**	-0.016
	(0.013)	(0.014)	(0.019)	(0.017)
Other trait × Fem × Post	0.016	-0.033	0.038**	-0.031
	(0.018)	(0.020)	(0.018)	(0.023)
Worker FEs	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	247,706	247,706	245,238	234,305

Notes: This table shows 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; in 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; and column (4) expat manager's home country's average years of schooling. 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.3: Impact of Expat Manager's Gender Norms Using Alternative Samples

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable:	**Log(Pay + bonuses)**					
Sample type:	Expat managers	Workers				
Sample:	First rotation	Local	Non-local	First team	Non-first team	All
Expat mgr norms × Female × During	0.065**	0.043***	0.075*	0.047**	0.052***	0.032***
	(0.031)	(0.014)	(0.040)	(0.020)	(0.017)	(0.010)
Expat mgr norms × Female × Post	0.097***	0.056***	0.029	0.042**	0.053***	0.077***
	(0.036)	(0.018)	(0.041)	(0.018)	(0.020)	(0.016)
Expat mgr norms × Female × Next expat						-0.007
						(0.016)
Worker FEs	✓	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓	✓	✓
N	146,674	249,968		249,968		249,698

Notes: This table shows the coefficients from estimating equation (1) using alternative samples. Column (1) restricts the sample to expat managers' first international rotations. Columns (2) and (3) report the results from one single regression with separate $Norms_m \times Fem_i$ coefficients for exposed workers who are local workers in the destination country (column 2) and non-local workers (column 2). Columns (4) and (5) report the results from one single regression with separate $Norms_m \times Fem_i$ coefficients for workers who join the expat manager's team within the expat manager's first quarter in the destination country (column 4) and workers who subsequently join the expat manager's team (column 5). Column (6) splits the post-exposure period into before and after the worker's next expat exposure. 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 on Performance

	(1)	(2)	(3)	(4)
Dependent variable:	**Log(Pay)**	**Log(Bonuses)**	**Bonuses/Pay**	**Perf. rating**
Expat mgr norms × Fem × During	0.046***	0.167	0.006	2.102
	(0.010)	(0.151)	(0.005)	(1.414)
Expat mgr norms × Fem × Post	0.043***	0.137	0.010*	3.450*
	(0.013)	(0.172)	(0.006)	(1.785)
Dependent variable mean	11.105	8.724	0.169	101.802
Dependent variable std. dev.	0.801	2.511	0.120	23.127
Worker FEs	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	249,968	252,097	249,968	225,048

Notes: This table shows the coefficients from estimating equation (1). 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.5: Impacts of Expat Manager's Gender Norms on Worker's Promotions and Lateral Moves Using Full Panel

Dependent variable:	(1) **Salary promotion**	(2) **Work level achieved**	(3) **Function transfers**	(4) **Sub-function transfers**	(5) **Standard job transfers**
Expat mgr norms × Fem × During	0.077***	0.028**	-0.012	0.046	0.123***
	(0.022)	(0.012)	(0.026)	(0.028)	(0.037)
Expat mgr norms × Fem Post	0.043*	0.038***	0.051**	0.018	0.098***
	(0.025)	(0.012)	(0.023)	(0.030)	(0.030)
Dependent variable mean	1.075	1.901	0.232	0.991	1.656
Dependent variable std. dev.	1.220	0.825	0.627	1.274	1.744
Worker FEs	✓	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓	✓
N	509,609	509,609	509,609	509,609	509,609

Notes: This table shows the coefficients from estimating equation (1). Promotions and transfers are cumulative counts. 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.6: Heterogeneous Impacts by and on Parental Leave

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Log(Pay + bonuses)		**Parental leave within 1 yr**		
Worker sample:	Has par leave	No par 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 varianle 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 workers 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 workers, while columns (4) and (5) include only female and male workers 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.

Table A.7: Heterogeneous Impacts by Worker's Retention

Dependent variable:	(1) **Log(Pay + bonuses)**	(2)	(3) **Work level**	(4)
Worker sample:	Leave 3 yrs	Stay 3 yrs	Leave 3 yrs	Stay 3 yrs
Expat mgr norms × Female × During	0.054**	0.076***	0.031	0.021
	(0.027)	(0.014)	(0.036)	(0.022)
Expat mgr norms × Female × Post	0.055*	0.049***	0.025	0.039**
	(0.030)	(0.014)	(0.041)	(0.019)
Worker FEs	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	206,729		206,729	

Notes: This table shows the coefficients from estimating equation (1) with separate $Norms_m \times Fem_i$ coefficients for workers that leave within three years of their expat exposure (columns 1 and 3) and those that stay (columns 2 and 4). 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.8: Heterogeneous Impacts on Managers vs. 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 workers 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: Impacts of Destination Country's Gender Norms on Expat Manager

Panel A. Progressive vs. conservative prior destination country

Dependent variable:	(1) **Log(Pay + bonuses)**	(2)	(3) **Work level**	(4)
Worker sample:	Exposed	All	Exposed	All
Progressive prior dest. × Female × During	-0.062	-0.043**	-0.177***	-0.056*
	(0.055)	(0.018)	(0.049)	(0.031)
Progressive prior dest. × Female × Post	-0.076	-0.030	-0.164**	-0.045
	(0.066)	(0.022)	(0.066)	(0.040)
Worker FEs	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	162,113	2,037,536	162,113	2,037,536

Panel B. Prior destination country's gender norms

Dependent variable:	(1) **Log(Pay + bonuses)**	(2)	(3) **Work level**	(4)
Worker sample:	Exposed	All	Exposed	All
Prior dest.'s norms × Female × During	-0.036	-0.015	-0.112***	-0.037*
	(0.029)	(0.011)	(0.035)	(0.020)
Prior dest.'s norms × Female × Post	-0.053*	-0.009	-0.084*	-0.022
	(0.031)	(0.013)	(0.043)	(0.024)
Worker FEs	✓	✓	✓	✓
Expat manager × Period FEs	✓	✓	✓	✓
Manager × Year × Female FEs	✓	✓	✓	✓
N	162,113	2,037,536	162,113	2,037,536

Notes: This table shows the coefficients from estimating equation (4). Columns (1) and (3) in both panels consider only expat-exposed workers in expat managers' next destination countries. Columns (2) and (4) in both panels consider all workers in expat managers' next destination countries. Controls include worker's age, age^2, tenure, tenure^2; expat manager's norms x worker's gender x exposure period; low norms expat manager's home country x low norms prior destination country x low norms next destination country. Standard errors are double clustered by worker and expat manager's home country × worker's gender.