Breaking the Glass Ceiling by Exporting: Evidence from China

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Abstract

Using data from Chinese customs and publicly listed firms, we present evidence that exporting to countries with higher levels of gender equality significantly enhances corporate board gender diversity. Importantly, this improvement goes beyond mere tokenism, as female representation increases not only among independent directors but also within the corporate strategy committee. We also account for the potential confounding influence of inward or outward FDI activities. Furthermore, we identify two key mechanisms—cultural spillover and conformance channels—that drive this enhanced board gender diversity.

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1. Introduction

Participation in international trade has long been recognized as a powerful driver of firm upgrading. Existing research has explored various ways in which exporting impacts firm performance and behavior, including enhancing productivity and survival (Atkin et al., 2017; Bernard and Jensen, 1999; De Loecker, 2013, 2007; Van Biesebroeck, 2005), fostering technology adoption and innovation (Bai et al., 2017; Bustos, 2011; Keller, 2010; Lileeva and Trefler, 2010), improving management practices (Bloom et al., 2021, 2016), and promoting compliance with labor standards and corporate social responsibility (CSR) practices (Banerjee et al., 2022; Harrison and Scorse, 2010; Newman et al., 2018). Despite this extensive body of research, the impact of trade on corporate governance has attracted relatively limited attention.

At the same time, a related line of research highlights how globalization facilitates the cross-border transmission of gender norms and values. Studies in this area emphasize the role of foreign direct investment (FDI) and trade linkages in spreading gender-equal practices, such as female employment and women's rights, from countries with higher levels of gender equality to those with lower levels (Choi and Greaney, 2022; Kodama et al., 2018; Neumayer and De Soysa, 2011; Tang and Zhang, 2021).

In this paper, we aim to bridge these two strands of literature by investigating whether exporting can influence corporate governance culture. Specifically, we focus on board gender diversity, a critical aspect of corporate governance, and examine whether exposure to gender-equal norms through exporting leads to greater female representation in corporate leadership. This question is particularly important given the persistent underrepresentation of women in corporate leadership roles worldwide. According to the Morgan Stanley Capital International (MSCI) 2022 Women on Boards report, women occupy only 24.5% of corporate board seats in major economies.

Figure 1 further illustrates this disparity, showing the average proportion of female directors across more than 20,000 companies worldwide based on BoardEx data spanning 2000–2022. While female board representation has increased considerably over the past decade, it remained just above 20% as of 2022.

To conduct our analysis, we utilize data from Chinese listed firms and customs records. As the world's largest exporting economy and a society with deep-rooted patriarchal traditions, China provides an ideal context for this investigation. Although significant progress has been made in women's education and labor force participation, women remain notably underrepresented in corporate leadership. As illustrated in Figure 2, female board representation in China lags substantially behind that of developed countries. This persistent leadership gap, combined with China's rapid integration into global supply chains, offers a unique opportunity to explore how external influences—such as norms from export destinations with higher levels of gender equality—affect corporate board gender composition.

We begin our analysis by presenting some preliminary patterns. Using both ordinary least squares (OLS) regression and matched sampling techniques (De Loecker, 2007), we uncover a robust relationship: firms with a higher export share tend to have a significantly greater proportion of female directors on their boards. Notably, this positive association is driven primarily by exports to destinations with higher levels of gender equality.

To formally test whether exporting to more gender-equal destinations promotes board gender diversity in Chinese firms, we construct a firm-year measure of exposure to gender equality through exporting. This measure leverages the United Nations Development Programme's Gender Inequality Index (GII), weighted by each firm's export value to different destinations.[1] To address

[1] For ease of interpretation, we later transform the GII and present our results using the Gender Equality Index (GEI).

potential endogeneity, such as the possibility that board gender diversity might influence export patterns, we employ an instrumental variable (IV) approach. The IV estimates confirm a significantly positive causal impact: greater exposure to gender-equal norms through exporting leads to increased board gender diversity.

To assess whether this rise in female representation reflects genuine influence or mere tokenism (Field et al., 2020; Kanter, 1977), we analyze its impact on different types of directors. The results reveal that exporting to destinations with high levels of gender-equal (high-GEI destinations) not only increases the proportion of female independent directors but also boosts female representation on corporate strategy committees and the likelihood of achieving a critical mass of female directors. Importantly, this growth in female leadership occurs primarily through the replacement of male directors rather than the creation of additional board positions (Knippen et al., 2019).

We also account for the potential confounding influence of FDI. To ensure that our findings are driven by exporting rather than inward or outward FDI activities, we employ two approaches. First, we include a firm's FDI status as an additional control; second, we interact FDI status with our exposure measure. In both cases, the results consistently confirm that the observed effects stem from exporting activities.

Next, we explore two potential mechanisms through which exporting can influence board gender diversity: the *cultural spillover channel* and the *conformance channel*. The cultural spillover channel suggests that firms absorb gender-equal values from trading partners in high-GEI regions, akin to the way firms learn new technologies or management practices through trade (Grossman and Helpman, 1991; Keller, 2010). In contrast, the conformance channel posits that firms increase board gender diversity to align with the preferences of customers in gender-equal

countries, thereby strengthening their ability to attract and retain clients (Banerjee et al., 2022; Newman et al., 2018).

Our findings provide evidence for both mechanisms. Consistent with the cultural spillover channel, the effect of exporting on board gender diversity strengthens with a firm's experience in high-GEI destinations. Furthermore, we identify a substitution effect: the exporting effect is weaker for firms located in cities with greater overall trade exposure to high-GEI countries, reflecting city-level cultural spillovers. Supporting the conformance channel, we find that the effect of exporting is more pronounced among firms with lower bargaining power in international markets, as these firms may rely more heavily on aligning with customer preferences in gender-equal countries.

Our study makes several important contributions to the literature. First, it extends the extensive body of research on the effects of exporting on firm performance and behavior (e.g., Atkin et al., 2017; Aw et al., 2011; Bai et al., 2017; Bernard and Jensen, 1999; Bloom et al., 2021, 2016; Bustos, 2011; De Loecker, 2013, 2007; Harrison and Scorse, 2010; Keller, 2010; Lileeva and Trefler, 2010; Van Biesebroeck, 2005). Recent studies in this literature have increasingly emphasized the role of destination market characteristics in shaping the effects of exports. For example, Brambilla et al. (2012) show that exporting to high-income countries promotes skill upgrading; Bastos et al. (2018) find that exporting to wealthier destinations enhances product quality; Newman et al. (2018) reveal that Vietnamese exporters engage more in CSR activities when the United States is the primary export destination, but less so when China is the main destination; and Banerjee et al. (2022) demonstrate that Indian firms strategically adjust CSR expenditures in response to demand shocks from countries with strong CSR preferences.

These studies collectively highlight that exporting can influence firm-level practices and that

destination-specific characteristics play a critical role in shaping these effects. However, limited evidence exists on how exporting interacts with destination-specific gender norms to influence corporate governance, particularly at the level of top leadership. Our study addresses this gap by providing novel evidence that exporting to gender-equal destinations can reshape corporate leadership structures and increase board gender diversity.

Second, our study contributes to the literature on globalization and cultural spillovers. Prior research shows that FDI and trade can serve as channels for transmitting gender norms across borders. For example, Choi and Greaney (2022), Kodama et al. (2018), and Tang and Zhang (2021) demonstrate that FDI facilitates the transfer of gender-equal employment practices internationally. Similarly, Neumayer and De Soysa (2011) and Heckl et al. (2025) find that country-level trade exposure promotes the global diffusion of women's rights and employment opportunities. We extend this body of work by providing new evidence that firm-level exposure to gender norms in export destinations can shape corporate board gender diversity. Unlike prior studies, which typically do not focus on gender equality at the executive or board level, we show that national gender norms in export destinations significantly influence the composition of corporate boards in Chinese firms. Our findings uncover a cultural transmission channel through trade that affects the upper echelons of corporate hierarchies, shedding light on a previously underexplored dimension of globalization's impact on corporate governance.

Finally, our study connects to the corporate governance literature on board gender diversity. Most existing research in this area focuses on the consequences of board gender diversity for firm performance (e.g., Adams and Ferreira, 2009; Ahern and Dittmar, 2012; Carbonero et al., 2021; Chen et al., 2018; Griffin et al., 2021; Kim and Starks, 2016; Levi et al., 2014; Liu et al., 2014; Matsa and Miller, 2013; Miller and Del Carmen Triana, 2009),while relatively little attention has

been paid to its determinants. A small number of early studies examined how internal corporate factors influence board gender diversity. For instance, Farrell and Hersch (2005) find that the presence of existing female directors reduces the likelihood of adding additional female members, while Hillman et al. (2007) highlight how firm size, industry sector, diversification strategies, and network effects shape female representation on boards. More recently, Gormley et al. (2023) emphasize the critical role of institutional investors in promoting gender diversity. Our study complements this literature by identifying a novel external determinant: exposure to gender norms in export destination countries. By demonstrating how globalization can shape board composition, we provide new insights into the external drivers of board gender diversity, extending the understanding of its determinants beyond internal corporate dynamics.

The rest of the paper is organized as follows: Section 2 describes our data and main variables, and Section 3 outlines our empirical strategy. We report our empirical results in Section 4. Concluding remarks are provided in Section 5.

2. Data and Variables

2.1 Data sources

Our study draws on three main data sources. The first is the China Stock Market & Accounting Research (CSMAR) database, which provides detailed information on executives, board members, and financial statements for all publicly listed firms in China. Following standard cleaning procedures, we exclude non-manufacturing firms and those subject to Special Treatment (ST), resulting in a final sample of 1,376 listed companies. The second source is the Chinese Customs database, maintained by the General Administration of Customs of China, covering the period from 2000 to 2016. We merge the CSMAR data with the Chinese Customs data to obtain firm-

level export transactions at the HS 8-digit product level.

The third source is country-level data on gender norms, derived from the Human Development Reports published by the United Nations Development Programme (UNDP). The UNDP produces the Gender Inequality Index (GII), a composite measure that reflects gender inequality across three dimensions: reproductive health, empowerment, and labor market participation.[2] The GII ranges from 0 to 1, with lower values indicating greater gender equality. For better interpretability, we define the Gender Equality Index (GEI) as 1 minus the GII. These data are available from 1990 for selected countries and are updated annually, progressively covering a wider range of nations.

2.2 Measures of board gender diversity

The primary outcome variable in our analysis is corporate board gender diversity, which we measure in various ways to capture its different dimensions. The first measure, $female\_ratio$, represents the overall female presence on the board and is calculated as the proportion of female directors to the total number of directors. To better distinguish the roles of directors in corporate decision-making, we also construct two additional measures: the ratio of female independent directors ($independent$) and the ratio of female members on the corporate strategy committee ($strategy$). While female representation among independent directors may sometimes be symbolic, female members on the strategy committee hold a central role in shaping a firm's decisions.

For robustness, we include two supplementary measures. $Important$ reflects the ratio of female directors who are neither independent nor honorary, thereby representing key board

[2] See UNDP Technical Notes for detailed calculation methods. Specifically, the health dimension is measured by the maternal mortality ratio and adolescent birth rate; empowerment is measured by the population with at least secondary education and the share of parliamentary seats held by women; and the labor market dimension is measured by labor force participation rates. We acknowledge that the GII does not fully capture all aspects of gender equality, but it remains the most suitable measure available that covers a wide range of countries over a sufficiently long period.

members. $Critical$ is a binary variable that indicates whether a firm has a sufficient number of female directors to form a significant gender-based group capable of influencing board decisions. Based on prior literature, this variable equals 1 if there are three or more female directors and 0 otherwise (Schwartz-Ziv, 2017; Torchia et al., 2011).

2.3 Firm exposure to gender equality norms through exporting

To measure a firm's exposure to gender equality norms through exporting, we begin by merging the CSMAR data with the Customs data to obtain a firm i's exports to each destination country c in year t (denoted as $exports_{i,c,t}$). We then calculate the share of export value to each destination country relative to the firm's total sales, expressed as $exports_{i,c,t}/totalsales_{i,t}$.[3] Next, we rank destination countries based on their Gender Equality Index (GEI) values and define a high-GEI dummy variable, $HighGEI_{c,t}$, which takes the value of one if country c's GEI value falls within the top 20% globally in year t and zero otherwise.[4] Using the export-to-sales shares as weights, we compute a weighted average of $HighGEI_{c,t}$ to serve as a proxy for a firm's exposure to gender equality norms through exporting, denoted as $exposure_{i,t}$.[5]

$$exposure_{i,t} = \sum_{c=1}^{k} \frac{ex_{i,c,t}}{totalsales_{i,t}} \times HighGEI_{c,t} \quad (1)$$

For robustness, we construct several alternative measures of firm exposure. The first measure uses $HighGEI_{c,0}$, which is based on the initial three-year average GEI (1999–2001) to mitigate potential biases introduced by the expanding country coverage in the GEI database. The second measure replaces the $HighGEI_{c,t}$ dummy with the continuous GEI value to compute exposure.

[3] Total sales are proxied by Operating Revenue reported in the financial statement of listed firms from CSMAR data.

[4] Countries with the top 20% GEI values are listed in Appendix Table 2. While these countries generally score high on gender equality dimensions, in a few cases a particularly strong performance in one component may disproportionately drive the overall ranking.

[5] Since the exposure measure requires the export value to calculate the weights, the exposure of non-exporting firms or the exporting firms with no export data available will be zero.

The third measure utilizes a narrowly defined high-GEI dummy $HighGEI_{c,t}^{narrow}$ that excludes the reproductive health dimension and focuses solely on the empowerment and labor market dimensions.

Over the past two decades, some high-GEI countries have introduced board gender quota policies aimed at increasing women's representation on corporate boards.[6] We exploit cross-country and time variations in these board quota policies to construct additional measures of gender-equality exposure. Specifically, we define a dummy variable, $Quota_{c,t}$, which takes one if the country c has the quota policy in place and zero otherwise. Since countries with quota policies represent a subset of high-GEI countries, we also define $NoQuota_{c,t}$ which equals 1 for high-GEI countries without a quota policy in year *t*, and 0 otherwise. This decomposition allows us to distinguish between exposure to high-GEI destinations with and without formal board quotas and to construct two separate measures: $Exposure\_Quota$ and $Exposure\_NoQuota$.

Finally, we use the Global Gender Gap Index (GGI) from the World Economic Forum as an alternative measure of gender norms. The GGI tracks progress toward gender parity across four dimensions—economic participation and opportunity, educational attainment, health and survival, and political empowerment—starting in 2006. While the GGI directly captures disparities in political empowerment and education, its shorter time span limits longitudinal analysis. Following a similar procedure, we rank countries by their GGI values and define a $HighGGI_{c,2006}$ dummy, which equals one if country c's GGI falls within the top 20% globally in 2006 and zero otherwise. We then replace $HighGEI_{c,t}$ with this GGI-based measure to construct the alternative exposure measure.[7]

[6] Appendix Table 3 reports the timetable for the quota policy adoption in different countries.
[7] Countries with the top 20% GGI values are listed in Appendix Table 4.

2.4 Control variables

We include a comprehensive set of controls to account for potential confounding factors. Specifically, we control for firm size (measured by the natural logarithm of total assets), firm age, board independence, CEO-chairperson duality, institutional ownership (shareholding percentage of institutional investors), and a Chairwoman dummy. In addition, we control for financial characteristics that may be related to export activities, including the leverage ratio, labor productivity, and return on equity (ROE). Detailed definitions of all variables are provided in Appendix A, and Appendix Table 1 presents summary statistics for both the outcome and control variables.

3. Empirical Strategy

We employ the following benchmark empirical specification to examine the effects of export exposure to gender equality norms on board gender diversity:

$$diversity_{i,t} = \alpha + \beta exposure_{i,t} + \gamma X_{i,t-1} + \lambda_t + \lambda_i + \epsilon_{i,t} \quad (2)$$

where i and t represent firm and year, respectively. $diversity_{i,t}$ measures firm i's board gender diversity, while $exposure_{i,t}$, the export-weighted gender equality exposure, is our main variable of interest. $X_{i,t-1}$ is a set of lagged firm-level controls, including size, age, board independence, CEO-chairperson duality, institutional ownership, Chairwoman dummy, leverage level, labor productivity, and ROE. We also include year fixed effects, λ_t, to account for common annual shocks and firm fixed effects, λ_i, to control for time-invariant unobserved heterogeneity at the firm level.

Since board gender diversity may also affect firms' export behavior, the weights used to construct the export exposure measure in equation (1) could be endogenous. To address this

concern, we adopt an IV approach.

Specifically, our baseline IV is defined as:

$$\text{exposure}_{i,t}^{IV} = \sum_{c=1}^{k} \frac{exports_{i,c,t-1}}{totalsales_{i,t-1}} \times \left(\frac{TotalImport_{c,t} - ChinaExport_{c,t}}{TotalImpor\ _t - ChinaExport_t}\right) \times HighGEI_{c,t} \quad (3)$$

In this specification, we multiply firm i's lagged export-to-sales ratio by a proxy for destination *c*'s exogenous demand shock in year *t*. This demand shock is measured by country *c*'s total imports from the world (excluding China) as a share of global imports (also excluding China). The product of these two ratios then serves as weights to construct the IV, capturing variation in foreign demand that is plausibly exogenous to firm-level board composition.

We employ IV regressions for all analyses examining the effects of exporting to more gender-equal destinations on board gender diversity. When using alternative gender norm measures, the IV is adjusted accordingly. In Section 4, we will provide first-stage IV regression results and conduct exclusion restriction tests to assess IV validity.

For robustness, we also consider an alternative IV using a different proxy for exogenous demand shocks, following Mayer et al. (2021):

$$\text{exposure}_{i,t}^{IV2} = \sum_{c \in \Omega_c} \sum_{j \in \Omega_{it}} weight_{i,c,j,t-1} \times \ln M_{cjt} \times HighGEI_{c,0} \quad (4)$$

where $weight_{i,c,j,t-1} = \frac{exports_{i,c,j,t-1}}{totalsales_{i,j,t-1}}$ is the lagged share of firm i's exports of product j to country c, and $M_{djt} = TotalImport_{c,j,t} - ChinaExport_{c,j,t}$ denotes total imports of product j into country c from all origins excluding China. Unlike equation (3), this alternative IV does not normalize the import flow by global imports, thus providing an additional robustness check based on different identification variations.

4. Results

4.1 Preliminary patterns

We begin by presenting preliminary patterns that motivate our empirical strategy. Table 1 reports ordinary least squares (OLS) regressions of the female board ratio on firms' export share of total sales. These regressions control for firm-level characteristics, as well as firm and year fixed effects, and distinguish between overall exports, exports to high-GEI countries, and exports to low-GEI countries.

Column (1) examines the full pre-matched sample and shows that firms with a higher export share tend to have a higher female board ratio. To address potential selection bias in firms' export decisions, we employ matching techniques following De Loecker (2007). Specifically, we first estimate a probit model in which the treatment variable is an indicator for exporting firms. Covariates include firm productivity, capital stock, and ownership type, with industry and year fixed effects. Using the estimated propensity scores, we implement one-to-one nearest-neighbor matching and radius matching with a 0.2 caliper to construct two matched samples. The results from these matched samples, presented in columns (2) – (3), are consistent with the findings in column (1).

In columns (4) – (6), we extend the analysis by distinguishing exports to high-GEI and low-GEI destinations.[8] The results indicate that exporting to high-GEI countries has a positive and significant effect on the female board ratio, whereas the export share to low-GEI destinations yields statistically insignificant coefficients with a negative sign.

Finally, columns (7) – (9) replicate this analysis utilizing a subsample restricted to exporting firms only. This more restrictive sample confirms the main findings: exporting to high-GEI

[8] We use the 50% of exporting share as the threshold to distinguish the firms with high-GEI countries as major destinations and the firms with low-GEI countries as major destinations.

destinations consistently has a positive and significant effect on the female board ratio, while exports to low-GEI destinations show no significant effects. Taken together, the results in Table 1 provide robust preliminary evidence that exporting to more gender-equal countries is associated with greater board gender diversity.

[Table 1 is about here]

4.2 Baseline IV regression results

To formally identify the causal effect of export exposure to gender-equal norms on corporate board gender diversity, we estimate equation (2) using a two-stage least squares (2SLS) approach. A key prerequisite for this approach is that our IV satisfies the exclusion restriction. Specifically, the IV should affect board gender diversity only through firms' export exposure to high-GEI countries, and not through any other channel.

To address this, we follow the literature (e.g., Farrell and Hersch, 2005; Gormley et al., 2023; Hillman et al., 2007) and regress firm characteristics that are plausibly related to board gender diversity—such as firm size, board independence, CEO-chairperson duality, institutional ownership, and the chairwoman dummy—on the IV. All regressions include additional firm-level controls as well as firm and year fixed effects.

The results, reported in Table 2, show that the estimated coefficients on the IV are statistically insignificant across all columns, suggesting that the IV is not systematically correlated with these firm characteristics. While it is impossible to rule out all potential channel, the evidence in Table 2 supports the validity of our IV and strengthens the credibility of our 2SLS estimates in identifying the causal effect of export exposure to gender-equal norms on board gender diversity.

[Table 2 is about here]

Table 3 presents the 2SLS regression results. Columns (1) – (3) successively examine the

effects on overall board gender diversity, independent directors, and strategy committees.

Column (1) reveals a significantly positive effect of exporting to high-GEI destinations on board gender diversity. The estimated coefficient on the exposure variable in the second stage is both statistically significant and economically meaningful. For instance, consider two firms each with an export-to-sales ratio of 20%. Firm A exports primarily to high-GEI countries, while Firm B does not. The predicted female board share for Firm A exceeds that of Firm B by 15.8 percentage points—a substantial difference, given the sample mean of $female\_ratio$ is only 12.1%.[9]

The first-stage results confirm that the IV is strongly and positively correlated with export exposure, satisfying the relevance condition. The Kleibergen-Paap rk Wald F-statistic further suggests that weak instrument concerns are not an issue.

Columns (2) and (3) further examine how export exposure affects gender diversity among independent directors and within strategy committees.[10] The significantly positive coefficients in both cases indicate that exposure to gender-equal norms not only increases the share of female independent directors but also enhances gender diversity within key decision-making bodies. These findings reinforce the view that the improvements in board gender diversity reflect substantive organizational changes rather than symbolic gestures.

[Table 3 is about here]

Another concern related to tokenism is that firms might expand their boards and appoint female directors without fundamentally altering existing power structures. To investigate this possibility, Table 4 examines whether exposure to high-GEI destinations influences board size. Columns (1) – (3) present the estimated effects on overall board size, the size of independent

[9] Firm A's exposure is 0.2, while firm B's is 0. With a coefficient of 0.791 on exposure, firm A's proportion of female board members exceeds firm B's by $0.791 \times 0.2 \approx 0.158$.

[10] Since not all firms have strategy committees, the sample size shrinks by about 25% if we use $strategy$ as the dependent variable.

directors, and the size of the strategy committee, respectively, with board size measured as the natural logarithm of the number of directors. For brevity, control variable estimates are omitted from this point onward.

The results indicate that exporting to high-GEI destinations does not significantly affect any of the three measures of board size. This finding alleviates concerns about tokenism, suggesting that firms are not simply adding women to larger boards for symbolic reasons. Rather, the evidence points to substantive changes in leadership composition.

[Table 4 is about here]

4.3 Robustness checks

Our baseline results indicate that exporting to high-GEI destinations significantly promotes female representation on the corporate boards of Chinese firms. In this subsection, we conduct a series of sensitivity analyses to verify that these findings are not driven by measurement choices, policy heterogeneity, or sample composition.

Table 5 examines the sensitivity of our results to alternative measures of gender equality in destination countries. Columns (1) – (3) replicate the baseline using the initial $HighGEI_{c,0}$ dummy to construct both the exposure variable and its IV. Columns (4) – (6) replace the dummy with the continuous GEI values, allowing for finer variation in gender equality across destinations. Columns (7) – (9) employ the narrowly defined $HighGEI_{c,t}^{Narrow}$, which focuses specifically on gender equality in empowerment and the labor market. Finally, columns (10) – (12) uses $HighGGI$, an alternative gender equality index, to construct the exposure variable and its IV.

Across all specifications, the coefficients on the exposure variable remain positive and statistically significant for the overall female ratio, female independent directors, and female participation in strategy committees. These consistent results confirm that our findings are robust

to alternative measures of gender equality norms.

[Table 5 is about here]

Table 6 extends the analysis by leveraging variations in board gender quota policies across export destinations and by utilizing an alternative IV construction. In columns (1) – (3), we decompose the exposure measure into $Exposure\_Quota$ and $Exposure\_NoQuota$ to assess whether quota policies drive the observed effects. The results show that $Exposure\_NoQuota$ significantly raises the female representation among all directors and among independent directors, while $Exposure\_Quota$ has a significant and positive effect both on the overall board and within strategy committees. These patterns suggest that exporting to high-GEI destinations with gender quotas particularly enhances gender diversity in strategic leadership roles. Columns (4) – (6)then use the alternative IV defined in equation (4), following Mayer et al. (2021). The results are consistent with the baseline estimates, reinforcing that our conclusions are not sensitive to the IV construction method.

[Table 6 is about here]

Table 7 assesses robustness to sample restrictions and alternative outcome measures. Columns (1) – (3) restrict the sample to exporting firms only, confirming that the results are not driven by systematic differences between exporters and non-exporters. Columns (4) – (6) further narrow the sample to persistent exporters—firms that have exported for at least five consecutive years—to ensure that the findings are not affected by sporadic or short-term export activities.[11] The results remain unchanged. Lastly, columns (7) and (8) use two alternative outcome variables: the ratio of important female directors ($important$) and an indicator for whether a firm reaches a critical mass of female directors ($critical$). Both measures yield consistent results—export exposure to gender-

[11] Redefining continuous exporters as firms with uninterrupted export records does not change our results.

equal destinations significantly increases women's representation in key decision-making positions and raises the likelihood that firms achieve a critical mass of female directors.

[Table 7 is about here]

4.4 Exporting or FDI?

Existing studies have shown that FDI facilitates cultural spillovers across borders (e.g., Choi and Greaney, 2022; Harrison and Scorse, 2010; Kodama et al. 2018; Tang and Zhang, 2021). To address the concern that our results may be influenced by FDI activities rather than exporting, we conduct additional analyses in Table 8 and Table **9**.

In Table 8, we disentangle the effects of inward FDI from export exposure using two complementary strategies. First, we include a dummy variable for foreign ownership as an additional control in our baseline IV regressions and report the results in columns (1) – (3). The results suggest that controlling foreign ownership status does not alter our findings. Second, in columns (4) – (6), we incorporate additionally an interaction term between the foreign ownership status dummy and the export exposure variable to examine whether the effects of exporting are moderated by inward FDI. The estimated coefficients on the export exposure variables remain significantly positive in all columns, while those on the interaction terms are all insignificant. This indicates that the effect of export exposure is not significantly different between foreign-owned and domestic-owned firms. Taken together, these results confirm that the observed improvements in board gender diversity are driven by export exposure to high-GEI countries, rather than inward FDI activities.

[Table 8 is about here]

In Table 9, we address the potential confounding effects of outward FDI (OFDI). In our sample,

approximately 50% of Chinese listed firms have subsidiaries or joint ventures abroad, and the CSMAR dataset also provides information on the destination countries of these OFDI activities. About 30% of these OFDI projects operate in high-GEI countries. In Panel A, we define an OFDI status dummy as having subsidiaries or joint ventures in any foreign country, while in Panel B, it is defined as having operations specifically in high-GEI countries. We then adopt the same two strategies used in Table 8.

Columns (1) – (3) of Table 9 show that adding controls for OFDI status does not alter our main finding as the coefficients on the export exposure coefficient variable remain significantly positive in both panels. This suggests that OFDI activities do not account for our findings. Furthermore, the interaction terms in columns (4) – (6) are all insignificant, indicating that the impact of export exposure is not significantly different between firms with or without OFDI activities. Overall, the results in Table 8 and Table **9** confirm that the observed improvements in board gender diversity are due to export exposure to high-GEI countries, rather than FDI activities.

[Table 9 is about here]

4.5 Mechanisms

So far, we have shown that exporting to high-GEI destinations significantly enhances gender diversity on corporate boards in Chinese firms. To uncover the underlying mechanisms, we explore two potential channels. The first is the cultural spillover channel, whereby the gender equality values of destination countries influence exporting firms (e.g., Choi and Greaney, 2022; Harrison and Scorse, 2010; Kodama et al. 2018; Tang and Zhang, 2021).

We provide two pieces of evidence supporting this channel. First, we exploit variations in the duration of firms' export exposure to high-GEI destinations. Cultural spillover effects are gradual: if firms learn the benefits of board gender diversity through repeated interactions with foreign

partners, we expect a more pronounced effect for those with longer export experiences in high-GEI destinations. Specifically, we estimate equation (2), incorporating both the number of years of exporting experience to high-GEI destinations and its interaction with the exposure variable as additional regressors.

The IV regression results are presented in Panel A of Table 10. We instrument the interaction term using the interaction between the exposure IV and export experience. In column (1), where the dependent variable is the ratio of female directors, the coefficient on the interaction term ($exposure \times experience$) is significantly positive, indicating that the effect of exporting to high-GEI destinations on overall board gender diversity increases with export experience. Columns (2) and (3) examine the effects on the ratio of female independent directors and female strategy committee members, respectively, and similarly show that prolonged exposure amplifies the cultural spillover effect.

Cultural spillover can arise not only from interactions with foreign partners but also from exchanges among agents located in the same city (e.g., Tang and Zhang, 2021). Local environments may therefore shape the cultural spillover effects of trade. Specifically, the gender equality values of firms' export destinations and those in their localities may act as substitutes. Consequently, we expect weaker cultural spillover effects for firms located in cities with greater openness to trade with high-GEI countries. To test this heterogeneity, we construct a city-year measure of trade openness to high-GEI countries, denoted as $Openness_{j,t}$, defined as the ratio of a city's total trade value with high-GEI countries to its GDP in year t. We include both $Openness_{j,t}$ and its interaction with the exposure variable in our regressions, controlling for city GDP per capita to separate the effect of trade openness from that of general economic development. The outcome variables in Panel B are the same as in Panel A.

The results in Panel B of Table 10 show that city-level trade openness to high-GEI countries significantly attenuates the positive effect of firm exporting on board gender diversity, supporting the interpretation that the cultural spillover channel operates not only at the firm level but also within local business environments.

[Table 10 is about here]

We now turn to investigating the conformance channel. If firms increase female representation on their boards to align with to the values of customers in high-GEI countries, we expect a weaker effect for firms with greater bargaining power. To test this idea, we follow the production classification of Lall (2000) and construct a measure of the share of high-technology exports, denoted as $HighTechRatio_{i,t}$, for each firm i in year t. This ratio captures the proportion of a firm's exports to high-GEI countries that belong to the high-technology group:

$$HighTechRatio_{i,t} = \sum_{pc} \frac{export_{i,p,c,t}}{export_{i,t}^{High\ GEI}} \times HighTech_p \quad for\ c \in High\_GEI$$

where $export_{i,t}^{High\ GEI} = \sum_{c \in High\_GEI} export_{i,p,c,t}$, and $HighTech_p$ is an indicator equal to one if product p is classified as high-technology according to Lall (2000), and zero otherwise.[12] The underlying assumption is that a higher share of high-technology products reflects stronger technological capacity, higher value-added production, and thus greater competitiveness.

We also compute a second measure reflecting each firm's comparative advantage relative to high-GEI destination countries. Following Yu et al. (2009), we first calculate the yearly normalized revealed comparative advantage for each product in each country ($CA_{p,c,t}$) to obtain the relative comparative advantage between China and each destination country for each product and year:

[12] Lall (2000) classifies products into five categories by technological intensity: primary products (PP), resource-based products (RB), low-technology (LT), medium-technology (MT), and high-technology (HT).

$RCA_{p,c,t} = CA_{p,t}^{China} - CA_{p,c,t},\ for\ c \neq China$. We then construct each firm's annual "Comparative Advantage Index" by weighting the relative RCA values with firm-specific export shares to high-GEI countries:

$$CA_{i,t} = \sum_{pc} \frac{export_{i,p,c,t}}{expor_{i,t}^{High\ GEI}} \times RCA_{p,c,t} \quad for\ c \in High\_GEI.$$

Finally, we normalize $CA_{i,t}$ with the Min-Max method to obtain a score between 0 and 1, denoted as $NCA_{i,t}$.

We include both competitiveness measures and their interactions with the exposure variable in the regressions, with results reported in Table 11. Panel A uses the high-technology export ratio, while Panel B employs the comparative advantage index. In each panel, we conduct three IV regressions, using the ratio of female directors on the whole board, the ratio of female independent directors, and the ratio of female strategy committee members as dependent variables, respectively. The results support the conformance channel: all interaction terms are significantly negative, indicating that more competitive firms—those exporting more high-technology products or products with a comparative advantage—experience a smaller impact from exposure to gender-equality-oriented markets than their less competitive counterparts.

[Table 11 is about here]

5. Conclusions

This paper examines the influence of exporting to high-GEI destinations on corporate board gender diversity. Using rich firm-level data from China and an IV approach, we identify a significant causal relationship between export exposure and female representation on boards. Our findings also indicate that improvements in board gender diversity are substantive rather than merely symbolic: exporting to high-GEI destinations increases female representation not only

among independent directors but also among strategy committee members and other key directors, and enhances the likelihood of achieving a "critical mass" of female directors. Importantly, this increase does not rely on expanding board size. Our results are robust to different measures of gender equality norms in destination countries, alternative IVs, sample restrictions, and alternative outcome variables. We also rule out potential confounding influence of FDI. Finally, we provide evidence that both cultural spillover and conformance channels contribute to these effects.

Our study contributes to the literature by demonstrating that exporting to high-GEI destinations can shape corporate culture and leadership within firms. While prior research has mainly focused on the effects of exporting on firm performance or the diffusion of gender-equal norms at the country or regional level, we provide firm-level evidence that national gender norms in export destinations influence board gender diversity in Chinese firms. This highlights a previously underexplored cultural channel through which globalization affects firms, demonstrating that international trade can have meaningful implications for organizational structures beyond traditional economic outcomes. Furthermore, our work identifies a new determinant of board gender diversity: firms engaging with countries that practice stronger gender equality tend to enhance the representation of women not only among independent directors but also in strategy committee. In doing so, we bridge the literatures on trade, corporate governance, and gender equality, showing how cross-border exposure to progressive norms can translate into concrete changes in leadership diversity at the firm level.

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Figure 1. Average Share of Female Directors (2000-2022)

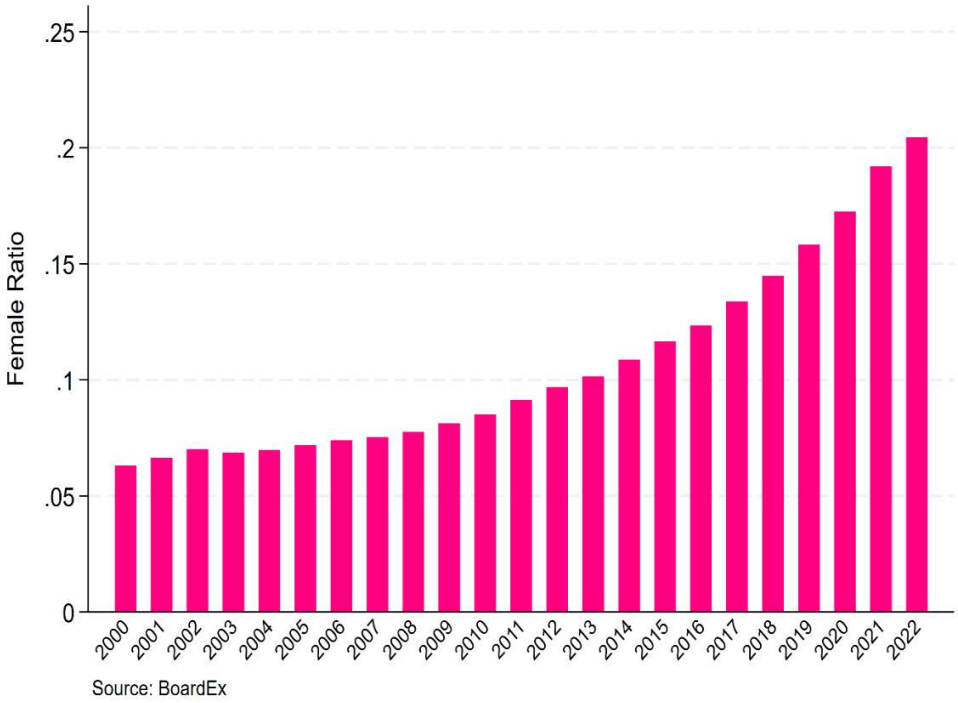

Figure 2. Share of Female Directors: Cross Country Comparison

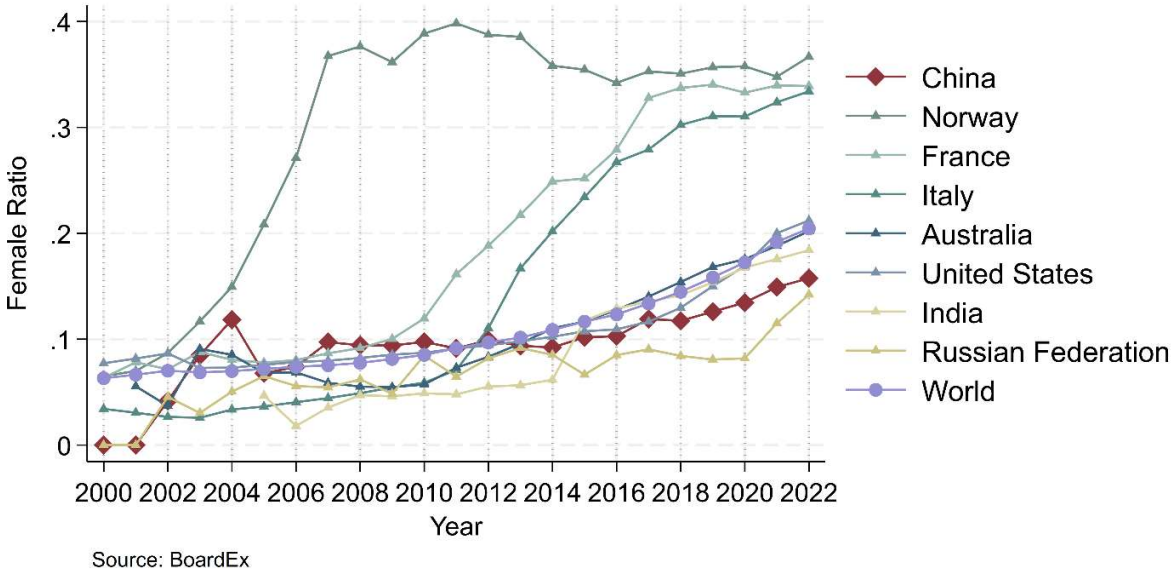

Table 1. Preliminary Patterns

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Exporters and Non-Exporters						Exporters Only		
	Full Sample	1v1 Nearest	Radius	Full Sample	1v1 Nearest	Radius	Full Sample	1v1 Nearest	Radius
ExportShare	0.172**	0.171**	0.135*						
	(0.072)	(0.077)	(0.073)						
HighGEIShare				0.488***	0.475***	0.444***	0.515***	0.438**	0.479***
				(0.141)	(0.144)	(0.145)	(0.135)	(0.196)	(0.143)
LowGEIShare				-0.015	-0.023	-0.046	0.003	-0.231	-0.130
				(0.109)	(0.123)	(0.108)	(0.132)	(0.278)	(0.138)
Constant	0.195***	0.196***	0.176***	0.195***	0.197***	0.176***	0.126*	0.298**	0.193**
	(0.048)	(0.057)	(0.049)	(0.048)	(0.057)	(0.049)	(0.076)	(0.120)	(0.081)
Observations	10,351	8,354	10,349	10,351	8,354	10,351	5,661	2,468	5,661
R-squared	0.701	0.719	0.701	0.701	0.720	0.701	0.747	0.770	0.751
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes: This table reports some preliminary patterns. The dependent variable in all columns is the proportion of female directors on the board. All regressions include firm-level controls, firm fixed effects, and year fixed effects. Columns (1) – (6) include both exporters and non-exporters, whereas columns (7) – (9) are restricted to exporters only. Regressions in columns (1), (4), and (7) use the full samples. Regressions in columns (2), (5), and (8) use a matched sample based on one-to-one nearest-neighbor matching, and those in columns (3), (6), and (9) use a matched sample based on radius matching with a 0.2 caliper. Standard errors clustered at the sector-year level are in parentheses. ***, **, and * indicate significance levels of 1%, 5%, and 10%, respectively.

Table 2 Exclusion Restriction Tests

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Size	Board Independence	Duality	Institutional Share	Chairwoman
Exposure _IV	4.679	2.852	3.120	-230.651	1.853
	(18.738)	(2.522)	(10.004)	(484.426)	(3.976)
Age	0.227***	0.001	-0.055***	2.127**	-0.017**
	(0.036)	(0.005)	(0.021)	(0.988)	(0.008)
Leverage	1.084***	0.001	0.020	1.903	-0.019
	(0.064)	(0.005)	(0.031)	(1.435)	(0.014)
ROE	0.047***	-0.001	0.001	1.008	0.000
	(0.007)	(0.001)	(0.002)	(0.624)	(0.000)
Productivity	0.000*	0.000*	0.000	0.000	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	20.662***	0.363***	0.370***	39.816***	0.085***
	(0.084)	(0.012)	(0.051)	(2.287)	(0.020)
Observations	10,891	10,434	10,891	10,669	10,886
R-squared	0.914	0.533	0.662	0.907	0.709
Firm FE	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y

Notes: This table reports the results from the exclusion restriction tests. All regressions include a set of firm-level controls, firm fixed effects, and year fixed effects. The dependent variables in columns (1) – (5) are firm size, the proportion of independent directors, CEO–chairperson duality, the shareholding percentage of institutional investors, and an indicator for whether the chairperson is female, respectively. Standard errors clustered at the sector-year level are in parentheses. ***, **, and * indicate significance levels of 1%, 5%, and 10%, respectively.

Table 3 Baseline IV Regression Results

	(1)	(2)	(3)
	female_ratio	independent	strategy
SecondStage			
Exposure	0.791***	1.208**	0.386*
	(0.280)	(0.505)	(0.195)
Size	-0.003	-0.006	-0.010**
	(0.002)	(0.005)	(0.004)
Age	-0.005	0.004	-0.013
	(0.008)	(0.013)	(0.011)
Leverage	0.003	-0.007	0.032***
	(0.007)	(0.018)	(0.010)
ROE	-0.000***	-0.000**	-0.000**
	(0.000)	(0.000)	(0.000)
Productivity	0.008	0.051*	0.023
	(0.015)	(0.031)	(0.020)
BoardIndependence	0.003	-0.004	0.001
	(0.002)	(0.005)	(0.003)
Duality	0.001	-0.000	0.001**
	(0.001)	(0.002)	(0.001)
InstitutionalShare	-0.000	-0.000	0.000
	(0.000)	(0.000)	(0.000)
Chairwoman	0.074***	0.012	0.172***
	(0.008)	(0.015)	(0.018)
FirstStage			
Exposure_IV	14.632***	14.632***	14.947***
	(1.738)	(1.738)	(2.161)
Observations	10,351	10,350	7,957
R-squared	0.017	0.001	0.044
Outcome Mean	0.121	0.152	0.075
Kleibergen-Paap rk Wald F statistic	70.885	70.884	47.861
Firm FE	Y	Y	Y
Year FE	Y	Y	Y

Notes: This table reports the baseline IV regression results. All regressions include a set of firm-level controls, firm fixed effects, and year fixed effects. The dependent variables in columns (1) – (3) are the proportion of female directors, female independent directors, and female strategy committee members, respectively. Standard errors clustered at the sector-year level are in parentheses. ***, **, and * indicate significance levels of 1%, 5%, and 10%, respectively.

Table 4. The Effects on Board Size

	(1) Overall Size	(2) Independent Size	(3) Strategy Size
Exposure	0.173	0.419	-0.396
	(0.446)	(0.690)	(0.981)
Observations	10,351	10,350	7,957
R-squared	0.024	0.004	0.003
Kleibergen-Paap rk Wald F statistic	70.885	70.884	47.861
Controls	Y	Y	Y
Firm FE	Y	Y	Y
Year FE	Y	Y	Y

Notes: This table reports the IV regression results for the effects on board size. All regressions include a set of firm-level controls, firm fixed effects, and year fixed effects. The dependent variables in columns (1) – (3) are the overall board size, the size of independent directors, and the size of the strategy committee, respectively. Standard errors clustered at the sector-year level are in parentheses. ***, **, and * indicate significance levels of 1%, 5%, and 10%, respectively.

Table 5. Robustness Checks: Alternative Gender Equality Measures

	(1)	(2)	(3)	(4)	(5)	(6)
		Initial GEI			Numerical GEI	
	female_ratio	independent	strategy	female_ratio	independent	strategy
Exposure	0.793***	1.401**	0.354*	0.448**	1.353***	1.031*
	(0.286)	(0.554)	(0.197)	(0.220)	(0.487)	(0.600)
Observations	10,351	10,350	7,957	10,351	10,350	7,957
R-squared	0.018	0.002	0.044	0.017	0.001	0.043
Kleibergen-Paap rk Wald F statistic	64.006	64.006	47.868	73.946	73.945	56.004
	(7)	(8)	(9)	(10)	(11)	(12)
		Narrowly defined GEI			GGI	
	female_ratio	independent	strategy	female_ratio	independent	strategy
Exposure	0.759**	0.877**	0.683***	0.684**	1.226**	0.752***
	(0.326)	(0.397)	(0.259)	(0.345)	(0.518)	(0.279)
Observations	10,351	10,350	7,957	10,351	10,350	7,957
R-squared	0.017	0.002	0.044	0.017	0.002	0.044
Kleibergen-Paap rk Wald F statistic	67.368	67.368	40.252	55.407	55.406	33.225
Controls	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y

Notes: This table checks the robustness to alternative gender equality measures. All regressions are estimated using 2SLS and include a set of firm-level controls, firm and year fixed effects. Columns (1) – (3) construct the exposure measure using the $HighGEI_{c,0}$ dummy, columns (4) – (6) use the GEI values, columns (7) – (9) use the narrowly defined $HighGEI_{c,t}^{Narrow}$ dummy, and columns (10) – (12) use the $HighGGI$ dummy. Standard errors clustered at the sector-year level are in parentheses. ***, **, and * indicate significance levels of 1%, 5%, and 10%, respectively.

Table 6. Robustness Checks: Quota Policy and Alternative IV

	(1)	(2)	(3)	(4)	(5)	(6)
		Quota Policy			Alternative IV	
VARIABLES	female_ratio	independent	strategy	female_ratio	independent	strategy
$Exposure^{Quota}$	0.702**	1.073	1.091**			
	(0.333)	(0.744)	(0.427)			
$Exposure^{NoQuota}$	0.563**	0.895*	0.131			
	(0.233)	(0.489)	(0.281)			
Exposure				0.836***	1.224**	0.515**
				(0.287)	(0.554)	(0.210)
Observations	10,351	10,350	7,957	10,351	10,350	7,957
R-squared	0.018	0.002	0.044	0.017	0.001	0.044
Kleibergen-Paap rk Wald F statistic	27.479	27.479	34.672	49.02	49.02	41.71
Controls	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y

Notes: This table checks the robustness to quota policies and alternative IV. All regressions are estimated using 2SLS and include a set of firm-level controls, firm and year fixed effects. Columns (1) – (3) decompose the exposure into Exposure with quota policies and Exposure without quota policies. Columns (4) – (6) use the alternative IV as defined in equation (4). Standard errors clustered at the sector-year level are in parentheses. ***, **, and * indicate significance levels of 1%, 5%, and 10%, respectively.

Table 7. Robustness Checks: Alternative Samples and Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Exporters Only			Continuous Exporters Only			Alternative Outcomes	
VARIABLES	female_ratio	independent	strategy	female_ratio	independent	strategy	important	critical
Exposure	0.925**	1.373**	0.602*	0.855**	1.331**	0.624**	0.541**	2.482***
	(0.371)	(0.618)	(0.308)	(0.329)	(0.584)	(0.303)	(0.216)	(0.944)
Observations	5,661	5,660	4,465	5,033	5,033	4,055	10,351	10,351
R-squared	0.022	0.004	0.048	0.023	0.006	0.051	0.031	0.007
Kleibergen-Paap rk Wald F statistic	33.554	33.556	25.482	43.793	43.793	25.727	70.885	70.885
Controls	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y

Notes: This table checks the robustness to alternative samples and outcomes. All regressions are estimated using 2SLS and include a set of firm-level controls, firm and year fixed effects. Columns (1) – (3) restrict the sample to exporting firms, and columns (4) – (6) further restrict the sample to firms with at least five years of continuous exports. Columns (7) and (8) use alternative dependent variables: the proportion of female important directors and a dummy for achieving a critical mass of female directors. Standard errors clustered at the sector-year level are in parentheses. ***, **, and * indicate significance levels of 1%, 5%, and 10%, respectively.

Table 8. The Confounding Effect of Inward FDI

	(1)	(2)	(3)	(4)	(5)	(6)
		Additional Control			Interaction Term	
VARIABLES	female_ratio	independent	strategy	female_ratio	independent	strategy
Exposure	0.778***	1.117**	0.364*	0.791***	1.112**	0.361*
	(0.290)	(0.509)	(0.196)	(0.297)	(0.514)	(0.199)
Exposure*Foreign				-1.153	0.478	2.669
				(1.240)	(2.732)	(2.635)
Foreign	-0.011	-0.022	-0.047***	-0.008	-0.023	-0.054***
	(0.008)	(0.017)	(0.014)	(0.008)	(0.017)	(0.018)
Observations	9,946	9,946	7,881	9,946	9,946	7,881
Kleibergen-Paap rk Wald F statistic	65.626	65.626	46.895	7.072	7.072	2.160
Firm FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y

Notes: This table examines whether the observed effects on board gender diversity are driven by foreign ownership rather than exports to high-GEI countries. Columns (1) – (3) include the foreign dummy as an additional control, while columns (4) – (6) add an interaction between export exposure and the foreign dummy to test heterogeneity. All regressions are estimated using 2SLS and include a set of firm-level controls, firm fixed effects, and year fixed effects. The dependent variables are the ratio of female directors, the ratio of female independent directors, and the ratio of female strategy committee members, respectively. Standard errors clustered at the sector-year level are in parentheses. ***, **, and * indicate significance levels of 1%, 5%, and 10%, respectively.

Table 9. The Confounding Effect of Outward FDI

	(1)	(2)	(3)	(4)	(5)	(6)
	Additional Control			Interaction Term		
VARIABLES	female_ratio	independent	strategy	female_ratio	independent	strategy
	Panel A: OFDI in Any Other Country					
Exposure	0.791***	1.216**	0.382*	0.836***	1.208**	0.163
	(0.283)	(0.508)	(0.197)	(0.317)	(0.518)	(0.208)
Exposure*OFDI				-0.084	0.016	0.390
				(0.295)	(0.603)	(0.309)
OFDI	0.000	0.003	-0.002	0.001	0.003	-0.004
	(0.004)	(0.007)	(0.006)	(0.005)	(0.008)	(0.007)
Observations	10,351	10,350	7,957	10,351	10,350	7,957
Kleibergen-Paap rk Wald F statistic	71.351	71.350	47.845	31.343	31.343	21.093
	Panel B: OFDI in High-GEI Country					
Exposure	0.821***	1.256**	0.388*	0.856***	1.261**	0.391*
	(0.283)	(0.515)	(0.198)	(0.275)	(0.503)	(0.226)
Exposure*OFDI				-0.137	-0.019	-0.012
				(0.258)	(0.535)	(0.213)
OFDI	0.008**	0.012*	0.001	0.009*	0.012	0.001
	(0.004)	(0.007)	(0.006)	(0.004)	(0.008)	(0.006)
Observations	10,351	10,350	7,957	10,351	10,350	7,957
Kleibergen-Paap rk Wald F statistic	70.890	70.889	47.663	27.829	27.828	16.607
Controls	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y

Notes: This table examines whether the observed effects on board gender diversity are driven by OFDI status rather than exports to high-GEI countries. Panel A defines OFDI status as firms with subsidiaries or joint ventures in any foreign country, while Panel B restricts OFDI status to those with operations in high-GEI countries. Columns (1) – (3) include the OFDI dummy as an additional control, while columns (4) – (6) also add an interaction between export exposure and the OFDI dummy. All regressions are estimated using 2SLS and include a set of firm-level controls, firm fixed effects, and year fixed effects. The dependent variables are the ratio of female directors, the ratio of female independent directors, and the ratio of female strategy committee members, respectively. Standard errors clustered at the sector-year level are in parentheses. ***, **, and * indicate significance levels of 1%, 5%, and 10%, respectively.

Table 10. Evidence on the Culture Spillover Channel

	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Export Experience			Panel B: Openness in Firm Locality		
	female_ratio	independent	strategy	female_ratio	independent	strategy
Exposure	0.520*	0.677	-0.388	1.103**	1.785**	0.780***
	(0.269)	(0.451)	(0.286)	(0.432)	(0.773)	(0.287)
Exposure×Experience	0.071**	0.151**	0.216***			
	(0.034)	(0.070)	(0.058)			
Experience	-0.000	0.001	-0.001			
	(0.001)	(0.001)	(0.001)			
Exposure×Openness				-0.078*	-0.141*	-0.099**
				(0.047)	(0.083)	(0.039)
Openness				0.001	-0.001	0.001
				(0.001)	(0.001)	(0.001)
GDP_pc				-0.006	-0.001	0.001
				(0.006)	(0.013)	(0.012)
Observations	7,769	7,768	6,081	10,284	10,283	7,911
R-squared	0.018	0.005	0.048	0.018	0.002	0.044
Kleibergen-Paap rk Wald F statistic	42.599	42.598	31.542	37.098	37.098	26.628
Controls	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y

Notes: This table reports IV regression results examining the cultural spillover channel. Panel A adds exporting experience and its interaction with the exposure variable as additional explanatory variables, while Panel B incorporates city-level trade openness ($Openness$) and its interaction with the exposure variable. All regressions include a set of firm-level controls, firm fixed effects, and year fixed effects. Panel B also controls the city's GDP per capita. The dependent variables are the ratio of female directors, the ratio of female independent directors, and the ratio of female strategy committee members. Standard errors clustered at the sector-year level are in parentheses. ***, **, and * indicate significance levels of 1%, 5%, and 10%, respectively.

Table 11. Evidence on the Conformance Channel

	(1)	(2)	(3)	(4)	(5)	(6)
	Panel: High-Tech Ratio			Panel B: Comparative Advantage		
VARIABLES	female_ratio	independent	strategy	female_ratio	independent	strategy
Exposure	1.745***	3.661**	1.237**	1.653**	2.910**	2.164***
	(0.668)	(1.422)	(0.583)	(0.671)	(1.351)	(0.674)
Exposure×Competitiveness	-1.143*	-3.183**	-0.977*	-1.221*	-2.543*	-2.692***
	(0.683)	(1.390)	(0.538)	(0.681)	(1.382)	(0.900)
Competitiveness	-0.005	-0.018	-0.008	-0.002	-0.032	-0.054
	(0.007)	(0.011)	(0.008)	(0.020)	(0.035)	(0.041)
Observations	5,661	5,660	4,465	5,651	5,650	4,458
R-squared	0.017	-0.002	0.048	0.021	0.003	0.050
Kleibergen-Paap rk Wald F statistic	14.674	14.673	22.500	21.655	21.655	18.056
Controls	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y

Notes: This table reports IV regression results examining the conformance channel. All regressions include a set of firm-level controls, firm fixed effects, and year fixed effects. Competitiveness is measured using the High-Tech Ratio in Panel A and the Normalized Comparative Advantage Index in Panel B. The dependent variables are the ratio of female directors, the ratio of female independent directors, and the ratio of female strategy committee members. Standard errors clustered at the sector-year level are in parentheses. ***, **, and * indicate significance levels of 1%, 5%, and 10%, respectively.

Appendix

A. Variable Definitions

A.1. Outcome Variables

female_ratio is the ratio of the number of female directors over the total number of directors.

independent is the ratio of the number of female independent directors over the total number of independent directors.

strategy is the ratio of the number of female strategy committee members over the size of strategy committee.

important is the ratio of female directors who are neither independent directors nor honorary directors.

critical is the dummy variable that equals one if there are three or more female directors on the firm's board and zero otherwise.

A.2. Control Variables

Overall Size is the total number of directors in the firm (in natural log).

Independent Size is the number of independent directors in the firm (in natural log).

Strategy Size is the number of directors on the strategy committee (in natural log).

Size is the total asset of the firm (in natural log).

Age is the number of years since a firm's founding.

Leverage is the ratio of total debts over total assets.

ROE is the ratio of operational profits over shareholders' equity.

Productivity is the ratio of operating revenue to the total number of employees.

BoardIndependence is the ratio of independent directors over the total number of directors.

Duality is the dummy variable that equals one if the CEO and the Chairperson are the same person and zero otherwise.

InstitutionalShare is the percentage of shareholding of institutional investors to total share capital.

Chairwoman is an indicator for whether the chairperson is female.

Experience is the number of years that the firm has an export record to the high GEI countries.

Competitive^{Tech} is Share of a firm's exports classified as high-technology products (HT) in Lall's (2000) taxonomy, measured over its exports to high-GEI destinations.[13]

Competitive^{CA} is the measure of competitiveness based on the share of the firm's export products to high GEI destinations and the corresponding comparative advantage of China in each product relative to the destination.

Openness is the ratio of a city's total trade value with high GEI countries to its GDP.

GDP (per capita) is the GDP per capita of the city that the firm is located in (in natural log).

[13] See UNCTAD website (https://unctadstat.unctad.org/EN/Classifications.html) for the detailed classification.

Appendix Table 1. Summary Statistics

Panel A: Outcome Variables						
Variables	Obs.	Mean	SD	Min	Max	Median
female_ratio	10351	0.121	0.113	0.000	0.833	0.111
independent	10350	0.152	0.195	0.000	1.000	0.000
strategy	7991	0.075	0.132	0.000	1.000	0.000
important	10351	0.104	0.134	0.000	0.750	0.000
critical	10351	0.127	0.333	0.000	1.000	0.000
Overall Size	10351	2.286	0.226	1.386	3.219	2.197
Independent Size	10350	1.283	0.278	0.000	2.565	1.099
Strategy Size	7991	1.482	0.374	0.000	2.890	1.609
Panel B: Exposure Measures						
Variables	Obs.	Mean	SD	Min	Max	Median
$Exposure^{GEI}$	10351	0.004	0.011	0.000	0.179	0.000
$Exposure^{GEI,IV}$	10351	0.000	0.000	0.000	0.008	0.000
$Exposure^{GEI,Num}$	10351	0.008	0.017	0.000	0.173	0.000
$Exposure^{GEI,Num,IV}$	10351	0.000	0.001	0.000	0.012	0.000
$Exposure^{NarrowGEI}$	10351	0.002	0.008	0.000	0.174	0.000
$Exposure^{NarrowGEI,IV}$	10351	0.000	0.000	0.000	0.008	0.000
$Exposure^{GEI_{initial}}$	10351	0.004	0.011	0.000	0.179	0.000
$Exposure^{GEI_{initial},IV}$	10351	0.000	0.000	0.000	0.008	0.000
$Exposure^{GEI,NewIV}$	10351	0.043	0.132	0.000	2.500	0.000
$Exposure^{GGI}$	10351	0.002	0.007	0.000	0.174	0.000
$Exposure^{GGI,IV}$	10351	0.000	0.000	0.000	0.008	0.000
$Exposure^{Quota}$	10351	0.001	0.005	0.000	0.117	0.000
$Exposure^{Quota,IV}$	10351	0.000	0.000	0.000	0.005	0.000
$Exposure^{NoQuota}$	10351	0.003	0.008	0.000	0.127	0.000
$Exposure^{NoQuota,IV}$	10351	0.000	0.000	0.000	0.009	0.000
$ExportShare$	10351	0.011	0.023	0.000	0.224	0.000
$HighGEIShare$	10351	0.004	0.011	0.000	0.179	0.000
$LowGEIShare$	10351	0.007	0.015	0.000	0.224	0.000
Panel C: Control Variables						
Variables	Obs.	Mean	SD	Min	Max	Median
Size	10351	21.664	1.116	18.760	26.961	21.503
Age	10351	2.411	0.491	0.000	3.850	2.485
Leverage	10351	0.396	0.191	0.008	0.995	0.397
ROE	10351	0.074	0.458	-45.551	0.749	0.074
Productivity	10351	1.18e+06	6.95e+06	47678.504	3.60e+08	6.44e+05
BoardIndependence	10351	0.367	0.072	0.077	0.750	0.333
Duality	10351	0.253	0.435	0.000	1.000	0.000
InstitutionalShare	10351	47.033	25.904	0.001	100.000	51.895
Chairwoman	10351	0.037	0.189	0.000	1.000	0.000
Experience	7769	4.376	3.518	0.000	17.000	4.000

$Competitive^{Tech}$	5733	0.209	0.384	0.000	1.000	0.000
$Competitive^{CA}$	5722	0.431	0.133	0.000	1.000	0.390
Openness	10285	1.868	1.370	0.009	3.629	1.596
GDP(per capita)	10291	10.867	0.678	7.771	12.281	10.978
FixedAsset	10351	1.77e+09	5.70e+09	103.000	1.18e+11	4.92e+08
SOE	10351	0.549	0.498	0.000	1.000	1.000

Appendix Table 2. High GEI Country List

Rank	2000	2008	2016
1	Sweden	Sweden	Netherlands
2	Denmark	Netherlands	Norway
3	Finland	Denmark	Denmark
4	Netherlands	Switzerland	Sweden
5	Norway	Finland	Switzerland
6	Switzerland	Norway	Finland
7	Spain	Singapore	Singapore
8	Germany	Belgium	Iceland
9	Belgium	Germany	Slovenia
10	Iceland	Luxembourg	Belgium
11	Japan	Iceland	Luxembourg
12	Austria	South Korea	Spain
13	Canada	Austria	Italy
14	Australia	Spain	Portugal
15	Luxembourg	Cyprus	Austria
16	South Korea	Italy	Germany
17	Czechia	Japan	South Korea
18	Italy	France	Canada
19	New Zealand	Portugal	France
20	Slovenia	Slovenia	Ireland
21	Croatia	Australia	Australia
22	Israel	Canada	Cyprus
23	Poland	Belarus	Israel
24	France	Czechia	Japan
25	Portugal	Croatia	United Arab Emirates
26	Ireland	Israel	Belarus
27	Greece	Greece	Greece
28	United Kingdom	North Macedonia	United Kingdom
29	Slovakia	Poland	Estonia
30		Ireland	Montenegro
31		New Zealand	New Zealand
32		Slovakia	Poland
33		United Arab Emirates	Czechia
34			Lithuania

Note: The number of countries covered by the GEI expands over time, so the top 20% list includes more countries in later years. Rankings reflect relative performance across the index's dimensions, and in some cases a strong score in one component can lift a country's overall position. For instance, the United Arab Emirates appears among the top 20% of countries in both 2008 and 2016, even though it is not typically perceived as a gender-equal country. A closer look at the subcomponents reveals that its relatively high GEI ranking is largely driven by the sharp increase in female's share of parliamentary seats during this period.

Appendix Table 3 Countries with Gender Quota in Board before 2016

Country	Policy Year	Target
Austria	2011	SOEs (supervisory boards), 25% (increase to 35% later)
Belgium	2011	Both PTFs and SOEs, 1/3
Denmark	2013	Large Firms, self-set
Finland	2008	PTFs, diversity encouragement
France	2011	PTFs, 40%
Germany	2015	PTFs, 30%
Iceland	2010	Large Firms, 40%
Italy	2011	Both PTFs and SOEs, 1/5 (increase to 1/3 later)
Netherlands	2011	Large Firms, 30%
Norway	2003	PTFs, 40%

Source: Hand collected.

Appendix Table 4. High GGI Country List in 2006

Rank	Country Name
1	Sweden
2	Norway
3	Finland
4	Iceland
5	Germany
6	Philippines
7	New Zealand
8	Denmark
9	United Kingdom
10	Ireland
11	Spain
12	Netherlands
13	Sri Lanka
14	Canada
15	Australia
16	Croatia
17	Moldova
18	South Africa
19	Latvia
20	Belgium
21	Lithuania
22	Colombia

Source: The World Economic Forum, Global Gender Gap Report (2006)