A growing body of literature suggests that greater gender diversity in leadership contributes to firm performance. But despite steady progress, women remain grossly underrepresented in corporate leadership. Indeed, at the current rate of change, it would take more than a generation to reach gender parity—25 years for directors and 31 years for executive officers.¹ Women chief executive officers (CEOs) remain rare (figure 1). At the current rate of progress, gender equity in CEOs would not be reached until 2063.

If emerging evidence is correct and gender diversity contributes to superior firm performance, then progress in this area could help boost productivity globally. Supportive public and private policies should be considered. They could include more gender-neutral tracking in education, firm protocols that encourage gender balance in hiring and promotion, enforceable antidiscrimination laws, public support for readily available and affordable high-quality childcare and maternity and paternity leave, and quotas.

¹ These figures are based on simple projections using the average yearly growth rates in the share of female executive officers (3.5 percent) and directors (5.2 percent) in 58 economies from 1997 to 2017. The share of female CEOs grew at an average annual rate of 4.7 percent over this period. As discussed later, the increase in female board members is driven in part by legal quotas in some countries, making extrapolation hazardous.
Figure 1
Despite steady progress, women remain grossly underrepresented in corporate leadership worldwide
Share of female executive officers, directors, CEOs, and chairs, 1997–2017

Note: For shares of female directors and executive officers, the average of the firm-level shares is displayed. For shares of firms with female CEOs and chairwomen, the number of firms with women in CEO-equivalent/chairperson positions is divided by the total number of firms with CEO-equivalent/chairperson positions data. Source: Refinitiv and authors’ calculations.

HOW WELL ARE WOMEN REPRESENTED IN CORPORATE LEADERSHIP?

This Policy Brief reports results derived from financial records of about 62,000 publicly listed firms in 58 economies over the period 1997–2017, which together account for more than 92 percent of global GDP (see appendix A for details).2

The results reveal that women have held a larger share of executive officer positions on average than directorships, although the average share of female directors has caught up to that of female officers in Europe and Africa, in part as a result of legal quotas on board membership in some European countries (figure 2). Latin America stands out as a region where progress appears particularly slow. The share of female corporate leadership varies across sectors. The financial, healthcare, and utilities sectors lead, while technology and energy lag (figure 3).

Similarly, the share of female board members and executive officers varies across economies (figure 4). The formerly socialist Eastern Europe, Southeast Asia, and the Nordic countries tend to do best. Bulgaria leads, with a share of female executive officers of 53 percent. Norway, which has quotas, has the largest share of female directors. At the other end of the spectrum, in Saudi

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2 Because of the unavailability of data, GDPs for Bermuda, Guernsey, and Taiwan were not included in the calculation. (Source: World Bank, “GDP (current prices, US$);” World Development Indicators, https://data.worldbank.org/indicator/NY.GDP.MKTP.CD [accessed on March 9, 2020].)
Arabia, only 1 percent of corporate officers and less than 1 percent of directors are women. Japan stands out among industrial countries for the small share of female corporate leaders (just 2 percent of officers and 3 percent of directors).³

If women gravitate toward certain sectors, or some industries are seen as more welcoming to women, it is possible that differences in the composition of economic activity might explain some of the cross-country variation. There are indeed differences in the presence of women in corporate leadership across sectors, but these differences do not appear to be large enough to explain a large share of cross-country variation.

³ The lack of gender diversity in Japan appears to come at a cost: “Firms with more female outside directors exhibit higher performance. On average the market reacts positively to a firm’s decision to bring a new female outside director on the board. Overall, the results show that female outside directors are beneficial to Japanese firms” (Tanaka 2019).
Figure 3
Financial, healthcare, and utilities sectors lead in female corporate leadership, while technology and energy lag

Average share of women in corporate leadership positions by sector, 1997–2017

Figure 3 shows the average shares of female executive officers and directors in each sector, defined by the Thomson Reuters Business Classification two-digit codes, over 1997–2017. The increase in the shares of female leaders is evident across industries. As in the cross-regional comparison, the share of female executive officers tends to be larger than that of directors in all industries.

In 2017 the financial and healthcare industries were among the sectors with the most gender-diverse groups of executive officers, with shares of 19 and 18 percent, respectively. The utilities sector also had a relatively large share of women both in executive officer positions (18 percent) and on boards of directors (15 percent). The technology sector had the smallest share of female executive officers (13 percent), and the energy sector had the smallest share of female directors (10 percent). A country with, say, a large financial sector might tend to employ more female executives than a country with a large energy sector, but cross-industry variation cannot explain the magnitude of observed cross-country differences.

Source: Refinitiv and authors’ calculations.
Figure 4
Women are better represented in corporate leadership in Eastern Europe, Southeast Asia, and Nordic countries

Percent share of female executive officers and directors by country, 2017

a. Share of female executive officers

b. Share of female directors

Note: Only countries with dark boundaries are examined in this study.
Source: Refinitiv and authors’ calculations.
WHY DOES INCLUSION OF WOMEN IN CORPORATE LEADERSHIP MATTER?

The literature suggests a variety of channels through which the inclusion of women in corporate leadership can affect firm performance. First, including women on corporate boards can promote functional skill diversity within the board, improving the quality of board monitoring of management and, by extension, contributing to higher profitability and stock market valuation.\footnote{For example, several studies find that greater gender balance among corporate leaders is associated with higher stock values, Tobin’s Q (the ratio of a firm’s stock market value to its asset replacement costs), and greater profitability in US firms (Carter, Simkins, and Simpson 2003; Erhardt, Werbel, and Shrade 2003; Carter et al. 2007; and Kim and Starks 2015). Christiansen et al. (2016) obtain a similar result for the European Union (see also Campbell and Minguez-Vera [2008] on Spain, Julizaerna and Sori [2012] on Malaysia, and Tanaka [2019] on Japan). In their analysis of US banks, Owen and Temesvary (2018) find that including women on boards had a positive impact on well-capitalized banks once the share of women reached a critical threshold.}

Second, if ability is uniformly distributed across the population and one set of firms discriminates against half of the available talent, it will be disadvantaged in competition with peers that do not discriminate. The costs of discrimination can be large. In the United States, research on the increase in the shares of women and African Americans in highly skilled occupations over the last 50 years suggests that 20 to 40 percent of productivity growth can be explained by the improved matching of talent to jobs (Hsieh et al. 2019). This talent reallocation is a pure efficiency gain.

Third, female representation in top management may yield informational and social diversity benefits, improve the performance of other managers, and help motivate women in middle management. Such effects may be particularly significant in the technology sector (see Dezsö and Ross 2011; Christiansen et al. 2016); in firms with large female workforces (see Lindstädt, Wolff, and Fehre 2011; Christiansen et al. 2016; Flabbi et al. 2019); and in firms with weak governance structures (see Adams and Ferreira 2009; Jurkus, Park, and Woodward 2011). Christiansen et al. (2016) find that in the technology sector, the addition of a woman to the board or the executive suite was associated with higher returns on assets of roughly 30 basis points. Flabbi et al. (2019) find that having a female CEO take over a formerly male-managed firm with a 25 percent female labor force increased sales by an average of more than 3 percent. Noland, Moran, and Kotschwar (2016) find that increasing the share of women in corporate leadership from 0 to 30 percent was associated with a 1 percentage point increase in the net profit margin, or about 15 percent increase in profitability.\footnote{Such findings are mounting, but the evidence is not unambiguous. Adams and Ferreira (2009), for example, find that board diversity improves performance for firms characterized by weak governance structures, that, on average, gender diversity has a negative impact on firm performance insofar as firms with more gender-diverse boards have fewer takeover defenses. In a study of German companies, Lindstädt, Wolff, and Fehre (2011) find no overall relationship between female board membership and stock performance. After studying 2,000 US firms, O’Reilly and Main (2008) find no evidence that adding women to boards enhances corporate performance and conclude that such appointments are generally undertaken for normative rather than profit-seeking motives.}

Figure 5 documents yearly median values of net profit margin and return on assets for firms with and without female representatives (median rather than average values are examined because of the presence of extreme outliers in firm performance measures). The median value of both firm performance...
indicators was consistently higher for firms with at least one female director or officer than for firms with no female leaders during most of the sample period. Whether this relationship is causal is an open issue that is beyond the scope of this Policy Brief.

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The differences in medians are statistically significant at the 1 percent level for the presence of female director comparison. The differences in medians are statistically significant at the 1 percent level for the presence of female executive officer comparison, except the following: differences in the net profit margin in 2001 and in the return on assets from 1999 to 2001 are statistically insignificant. The difference in medians of the return on assets is statistically significant at 10 percent level in 1998. While these results hold at the aggregate level, it is possible that they may not hold for every country and sector.
WHAT DRIVES THESE TRENDS?

The drivers of cross-country differences in the incidence of female corporate leadership fall into three broad categories (Noland, Moran, and Kotschwar 2016). The first might be termed “personal preparation.” Countries that exhibit relatively narrow male-female gaps in math performance on standardized tests of students tend to generate more female corporate executives. Countries that produce a large share of female college graduates—particularly in fields like business, economics, and accounting, which might be considered preparatory for a career in management—also tend to have more women in corporate leadership positions. In short, educational systems that promote female education and do not steer female students toward traditionally female fields of study facilitate women’s corporate advancement.

The second category is public policy, which can provide both direct and indirect support. Enforceable antidiscrimination laws are a starting point. But even in environments without overt discrimination, the careers of men and women diverge when they have children. The availability of maternity and, importantly, paternity leave, along with high-quality childcare, can shorten periods in which mothers leave the labor force and ease their reentry when they return (Noland, Kotschwar, and Moran 2016; Nagase 2018).

Quota systems for board membership, which have been adopted in some countries (and in the state of California), are a more direct, and controversial, way to recalibrate outcomes. Quotas take various forms. Some mandate a percentage of seats that must be held by women. Others mandate a minimum number of positions (usually one). Some countries, including Belgium, India, and Norway, impose sanctions in case of noncompliance. Some quotas apply only to firms that meet certain conditions, such as firm size. The Netherlands’ quota law contains a sunset provision.

Not surprisingly, in 2017 countries with gender quotas had a larger share of female directors (18 percent) than countries that did not (12 percent). Countries that imposed sanctions for noncompliance with quotas had a larger share of female directors (20 percent) than those that did not (14 percent).

Although quotas achieved their first-order objective of increasing the average share of female directors, evidence of the impact on corporate performance is still unclear. If adding women to boards contributes to skill or functional diversity among board membership, one might expect firm performance to improve. However, if there is a limited pool of female candidates for board positions, mandating their presence could force the recruitment of less qualified and/or less experienced candidates or the appointment of the same small number of qualified women to multiple boards (the so-called golden skirts phenomenon), thereby reducing the effort they devote to any one board.

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7 A 2018 California law requires publicly traded corporations headquartered in the state to include at least one woman on their boards of directors by the end of 2019; at the end of July 2021, that mandate increases to two women on boards with five members and three women on boards with six or more members. Companies that fail to comply face fines. Nearly all firms (96 percent) were in compliance at the end of 2019 (KPMG 2020).

8 In 2013 India introduced a quota under which firms were to have at least one female director by 2015. The share of female directors jumped between 2013 and 2015. However, concerns about tokenism became an issue. Since April 2019, the top 1,000 listed firms have been required to employ “independent” (i.e., nonfamily) female directors.
Figure 6

Appointing the same small number of qualified women to multiple boards does not appear to be a major problem globally

Share of male and female board members holding more than one seat, 1997–2017

Historically, “golden skirts” have been less prevalent than “golden pants,” though the rates have converged (figure 6). In Norway, the share of “golden skirts” (18 percent) is now higher than the share of “golden pants” (16 percent), both of which are above global averages. But the Norwegian figures generally lie below those of neighboring Sweden, which does not have a quota. It is hard to conclude based on these data that “golden skirts” are important, much less a major problem. The most honest assessment is probably that the jury is still out: Enough time has not elapsed to assess these policies, the impact of which probably varies from firm to firm and from country to country depending on the pool of candidates and other aspects of corporate governance.

A subset of our data includes information on CEO-equivalent positions and chairpersonship of corporate boards. The share of firms that hire women for their top positions increased between 1997 and 2017 (figure 1). However, the average share of firms with female leaders hovered around 6 percent in 2017, which is still very low. Firms were slightly more likely to hire women for CEO-equivalent positions than for chairperson positions.

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9 In Norway—the country with the most stringent and long-standing quota (40 percent, introduced in 2003)—introduction of the quota coincided with a collapse of oil prices, making it difficult to disentangle the impact of the change in corporate governance from the macroeconomic shock. Ahern and Dittmar (2012) conclude that the quota led to younger and less experienced boards and a deterioration in firm performance across a variety of metrics. Eckbo, Nygaard, and Thorburn (2016) argue that Ahern and Dittmar did not characterize the introduction of the quota correctly and that when modeled correctly all of their negative results disappear. Bertrand et al. (2014) find no trickle down from the introduction of the quota on other women’s career paths within the firm or on the career preparation decisions of Norwegian women more generally. In a multicountry setting, Noland, Moran, and Kotschwar (2016) could discern no impact, good or ill, of board quotas on firm performance.
As a gender quota on corporate boards is a recent development and only a few countries have introduced such legislation, it is difficult to detect any spillover effects of quotas on the chairperson position (figure 7). Countries started implementing gender quotas on corporate boards in the 2000s, mostly in the 2010s, following Norway’s example. As time goes by, it will be interesting to see whether quotas create a pipeline of potential chairwomen.

Public policy has its limits. The third category, social attitudes, plays a role as well. It is unsurprising that countries with relatively open attitudes toward women tend to have more female executives (Noland, Kotschwar, and Moran 2016). Those differences may help explain why some firms unilaterally adopt policies such as including both men and women in recruiting committees, using applications or resumés that are non-gender-specific in applying for positions within the firm (internal job markets), and requiring a gender-diverse list of candidates for open positions.

CONCLUSIONS

The prevalence of women in corporate leadership positions varies across industries and enormously across countries. More than half of Bulgarian executive officers are women, but the figure is just 2 percent in Japan and only 1 percent in Saudi Arabia.

The share of women executive officers and board members increased between 1997 and 2017, but progress was not uniform. Partly in response to quotas, the shares of female board members have risen rapidly in some countries while lagging elsewhere. Latin America stands out as a region where progress has been particularly slow.
Remedies could take a variety of forms. Educational programs could encourage girls to pursue courses of study that would prepare them for management positions rather than jobs traditionally performed by women. Firms could adopt initiatives to support the hiring and internal promotion of women. In terms of public policy, enforceable antidiscrimination laws and support for high-quality childcare and maternity and paternity leave are advisable. Quotas on board memberships are the most direct and controversial response. They have changed board composition where introduced; whether they contribute to improved firm performance is context-dependent and may not be uniform across settings.
APPENDIX A
DATA COLLECTION AND CLEANING

The dataset consists of approximately 62,000 publicly listed industrial firms in 58 economies for the period from 1997 to 2017. Utility providers and insurance firms and banks are not part of the dataset. The data come from the General Information, Officers and Directors, and Standardized Financials databases of Refinitiv, a provider of financial market data and infrastructure. We dropped countries with fewer than 100 firms during the sample period for which information on officers, directors, and financial data were available.

Rather than using the country of incorporation (which can reflect tax evasion), we used the location of the firm’s headquarters to link all firms with a country. We used the two-digit Thomson Reuters Business Classification (TRBC) to identify the 10 industries in the dataset. Data on the type of firm (public or private) were not available annually; Refinitiv provides only the most recent status of a firm. We used the most recent company status, the date of the initial public offering, the date since the firm has been public, and the date of delisting to categorize firms into a public or private firm each year.

When there were multiple financial statements for a firm in a year, we selected a statement based on the circumstance. In the case of dual listing, we used the financial statements of the primary issue. In the case of year-end changes, we used the most recent statements that covered the longest period in a year.

The gender of an individual and the start/end dates of his or her tenure are the most critical information for computing the firm-level shares of female executive officers/directors. The Officers and Directors database provides a list of firms’ executive officers and directors. Gender was unavailable for 8.5 percent of these entries. Using GenderAPI, which identifies a person’s gender based on his or her first name, we obtained gender information on 94 percent of the individuals for whom this information was missing, reducing the share of individuals on whom we had no gender information to less than 1 percent. We removed firms associated with these individuals from our analysis.

Data on both start and end dates of their tenures were not available for all executive officers and directors. Three percent of individuals lacked both dates; we dropped the firms that these individuals were associated with from our dataset. Either the start or the end date was missing for 38 percent of executive officers and 31 percent of directors. In these cases, we used the gender of the individual, the location of the headquarters, the industry classification (the TRBC two-digit code), and the average length of tenure of executive officers/directors

10 The economies are Argentina, Australia, Austria, Belgium, Bermuda, Bulgaria, Brazil, Canada, Chile, China, Colombia, Croatia, Cyprus, Denmark, Egypt, Finland, France, Germany, Greece, Guernsey, Hong Kong, Indonesia, India, Ireland, Israel, Italy, Japan, Jordan, Kuwait, Luxembourg, Malaysia, Mexico, the Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Peru, the Philippines, Poland, Romania, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, Thailand, Turkey, Ukraine, the United Kingdom, the United States, and Vietnam.

11 The utilities industry, one of the 10 industries included in the analysis, includes waste management service companies, energy traders, natural resource exploration companies, and oil/gas exploration companies. The utilities firms that are excluded from the dataset are firms that provide utility services, such as public utility companies.
of the firm, when available, to predict the individual’s length of tenure. We could then identify the start (end) date of the tenure of the individual if the end (start) date was not available, using the predicted tenure length.

Position titles were available for only some individuals. We identified individuals with the following titles as top-level executive officers: chairman–management, chief executive officer, director general, general director, president, and managing director. We identified individuals with the titles of chairman or chairman–supervisory as chairs of the board of directors. When both men and women were identified as occupying a top-level executive position or chairpersonship for a firm in a year, we dropped them from the analysis. As a result, approximately 75 percent of firms had CEO or chairperson-equivalent position information at least one year. In other words, 25 percent of firms had no CEO or chairperson-equivalent information. Approximately 57 percent of firms had both CEO and chairperson-equivalent positions at least one year.

In the dataset, some net profit margin and return on assets (ROA) figures had unrealistic ranges. We addressed this issue by first identifying firm-year observations that did not make economic sense. We dropped firm-year observations for which the denominator of the financial ratios was in the bottom 10 percent of the distribution and the numerator in the top 10 percent of the distribution. In the case of operating margins, for example, we first computed the percentile of absolute values of revenue and operating income. If the absolute value of revenue (the denominator) fell in the bottom 10 percent of the distribution and the absolute value of operating margin (numerator) fell in the top 10 percent of the distribution, the corresponding observation was dropped from the dataset. Less than 0.1 percent of firm-year observations were dropped as a result of this procedure. Guernsey, Kuwait, and Nigeria stand out as economies with large shares of censored data. The years with the most censored data were 2008, 2015, and 2016.

REFERENCES


