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Representation and Firm-Level Outcomes

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Abstract¹

This paper collects an original database of publicly listed companies to determine prevailing gender ratios among board members and executives in Latin America and the Caribbean region (LAC). Women are as under-represented in LAC as in the United States, but much less so in the Caribbean. It is then estimated whether companies with women board members are more likely to appoint women executives. This is the case in LAC, but the results are driven strongly by Caribbean companies. The paper finally estimates whether measures of female leadership at the firm are correlated with company performance, finding this to be the case only for board membership and only when the proportion of women on the board is greater than 30 percent. Again composition effects are important, with average results driven by Caribbean and Southern Cone companies. Overall, it is concluded that the LAC regions empirical regularities in under-representation of women in firm leadership positions are very similar to those found for high-income countries in Europe and North America.

JEL Classification: J16, J7, M12, M5

Keywords: Executive gender, Women board members, Gender quotas, Glass ceiling, Glass cliff, Gender gap

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1 Introduction

Women are an increasingly important resource in the labor market: they participate in the market in higher numbers than at any time in history and they are now acquiring education at a higher rate than men. This is a well-known fact in high-income economies. For example, in the United States women make up nearly 50% of the work force, and the proportion of women with a college degree has been higher than the proportion of men since the generation born in the mid-1950s.² These facts are also becoming increasingly true for middle-income economies with well-developed labor markets. In the Latin America and the Caribbean region (LAC), the average work force is 42% women³ and since the early 1990s more women than men are enrolled in school both at the secondary and tertiary education level.⁴

Despite this growing gender parity in the general working population, the higher up one looks in ranks within the firm the fewer women one finds. For example, 2012 U.S. data show that women make up more than 50% of white collar workers but under 5% of high-level executives.⁵ The handful of high-income countries with available data show similar patterns.⁶ This already large under-representation of women in top positions at firms is purportedly even more acute in Latin America. The Latin Business Chronicle reported in 2012 that 433 of the top 500 Latin American companies had no women senior executives, and only nine had a woman CEO ([Bamrud and Calderon, 2012](#)). In 2013, Credit Suisse found that 56% of companies in Latin America had no women board members at all and only 2% had a woman CEO ([Dawson, Kersley and Natella, 2014](#)). However, if we consider a broader set of professions including all management positions across both the public and the private sector (legislators, senior officials, corporate managers, and general managers) and if we focus on Caribbean countries, the picture is more nuanced. Several countries in the region have comparatively high shares of women when considering all management positions, and Jamaica, Colombia, and Saint Lucia are the only three countries out of the 128 surveyed with a higher share of women than men. Yet, once those shares are broken out by management level, we observe that women are best represented in middle management but heavily under-represented at the level of general managers and chief executives ([International Labour Organization, 2015](#)).

This is the management level at which we want to focus our analysis. LAC is a large

² Data from Current Population Survey.

³ International Labour Organization, using World Bank population estimates.

⁴ According to the UNESCO Institute for Statistics (2012, accessed via the World Development Indicators) there are 107 females for every 100 males enrolled in secondary education in the LAC region, and 128 females for every 100 males enrolled in tertiary education.

⁵ Data from Current Population Survey and ExecuComp.

⁶ See for example, [Smith, Smith and Verner \(2006\)](#) on Denmark; [Flabbi, Macis, Moro and Schivardi \(2014\)](#) on Italy; [Ahern and Dittmar \(2012\)](#) and [Matsa and Miller \(2013\)](#) on Norway; [Cardoso and Winter-Ebmer \(2010\)](#) on Portugal.

and increasingly important region of the world where women are well-represented in the work force and are comparatively better educated than men. Documenting if this resource is utilized at full potential is therefore of crucial importance. Yet, no systematic study exists which is able to document the level of female representation at the executive level in the region. Moreover, by focusing on a region where corporate gender diversity is less frequently studied than Europe and the United States, we can show whether the important empirical regularities found in a small group of Western countries are actually valid on a larger scale.

By taking advantage of a previously unexplored dataset of publicly listed companies, we are able to circumvent the main obstacle that has been preventing progress in this area: the lack of representative and comparable data for a large number of LAC countries. Our data cover very well the universe of listed firms in the region, reporting the name and title of top executives for each company. As a result, we are able to build hierarchical executive rankings at the firm level and we are able to assign gender to the listed executives. The data also include information on board membership, allowing us to study whether companies with more women on the board also have more women executives. Finally, our data include a relatively rich list of balance sheet information, allowing us to estimate whether companies with more women in leadership positions exhibit higher profits, conditional on region, sector, and firm characteristics. In addition to most countries in LAC, we can extract from the same source data for the United States, which we use as a high-income comparison country. We wish to clarify up front that our data do *not* allow for a causal analysis of the impact of board membership on the proportion of female executives or of the impact of female leadership on firm performance. Our regression analysis should be considered descriptive, albeit describing a phenomenon never before documented in the LAC region.

What we find is that women are in fact under-represented in LAC, with an average of 8.5% women board members and 9.2% women executives per company, and 4.2% women CEOs in the region. Interestingly, these numbers are highly comparable to those in the United States, where we find 9% women board members, 12% women executives, and 4.2% women CEOs. Moreover, once we separate LAC into sub-regions, we find that women are extremely well-represented in the Caribbean relative to its neighbors, albeit still under-represented relative to their share in the general labor force.⁷

Recent policy interventions in Europe [Bertrand, Black, Jensen and Lleras-Muney \(2014\)](#) and previous work on the *critical mass* hypothesis ([Kanter, 1977](#)) suggest that the lack of enough women among companies' board members may be an important factor in explaining the lack of women among top executives. Thanks to the board membership information reported in our data, we are able to study this relationship for the large number of LAC countries present in our sample.

⁷ Table 6 in the Web Appendix ([Flabbi, Piras and Abrahams, 2015](#)) reports the share of women in the labor force by country, for each country in our sample.

We find that companies with at least one woman on the board are more likely to have at least one woman executive by about 13 percentage points.

Finally, thanks to the balance sheet information linked to our data, we are able to tie back female leadership to measures of firm performance. Unconditionally, companies with female representation at the executive and board membership level are more profitable than those with no women leaders. Yet, once we control for firm-level characteristics, we do not find any statistically significant correlation between female leadership measures and firm performance measures.⁸

The paper is organized as follows. Section 2 describes the data and the sample selection process. Section 3 presents descriptive statistics for the level of female representation among corporate leaders in LAC. Section 4 estimates the relationship between representation of women on the board of directors and representation of women in executive management. Section 5 estimates the relationship between representation of women and company performance. Section 6 concludes. A Web Appendix (Flabbi et al., 2015) where we collect country-level summary information and robustness checks estimates is also available.⁹

2 Data

Aggregated information about the top management of individual firms is scarce, especially outside the United States and Europe. Although some firms may list their top executives and members of the board in their annual reports, such reports can be cumbersome to obtain and onerous to examine for leadership information, making it extremely difficult to collect a sample of companies large and representative enough to conduct a meaningful empirical analysis.

A preferable approach is to find an existing information source in which such information has already been collected. For this reason, many studies of gender balance in firms work with databases such as ExecuComp,¹⁰ which lists the top five highest earners of each firm in the S&P 1500, or otherwise restrict their scope to a set of major firms such as those in the Fortune 500. Drawbacks of this method are that the sample is skewed toward large firms and it is not a representative sample of the entire universe of firms.

By working with an expansive database of public companies which lists both financial information and the names of up to 50 top executives and board members, we are able to collect an exhaustive sample of listed companies where we can assign a gender to each top executive. We can conduct the exercise only for listed firms, and therefore we are also unable to collect a sample

⁸ This is the most common finding in the literature: for the United States, Albanesi and Olivetti (2009) do not find significant effects when controlling for firm fixed effects; for Italy, Flabbi et al. (2014) do not find significant effects when using a similar specification but they find significant effects when interacting with the proportion of female workers at the firm.

⁹ See <https://sites.google.com/site/lucaflabbi/home/research>

¹⁰ Examples include: Bertrand and Hallock (2001), Wolfers (2006), and Gayle, Golan and Miller (2012).

which is representative of the entire population of firms. Still, listed firms in most of the region are very relevant in terms of their contribution to GDP, and they represent at least as well, if not better, the economic activity of their country as ExecuComp does for the US.

Another advantage of our data is the presence of reliable indicators for board membership and, on many firms, for the senior executive who is considered the top executive at the firm. The same data source also covers non-LAC countries, making the comparison with other regions in the world very robust. In the current paper we present only comparisons with the United States since it is the high-income country closest to the region both in terms of geographic distance and trade volumes.¹¹ Finally, the raw data also report balance sheet information, allowing us to introduce firm-level controls and to perform the analysis on firm performance.

2.1 Data Source and Sample Extraction

Our data source is *Osiris*, a database maintained by *Bureau Van Dijk* containing information for about 70,000 publicly listed companies worldwide. The aim of the database is to include all publicly listed companies in the world and to report financial and background information for each of them. Specifically, we subscribed to a one-time cross-sectional extraction of all the listed companies available in *Osiris*. The extraction was conducted in September 2013; therefore the sample we work with consists of companies with financial statements reported in either 2012 or 2013. In addition to financial information, *Osiris* contains a contacts section where companies list the names and titles of board members and of managers holding high-level executive positions at the firm.

We cross-checked the Bureau Van Dijk claim that they could guarantee very good coverage of LAC and U.S. listed firms by comparing the total market cap of companies in our data to the reported market cap for the exchanges on which they are listed. The results, reported in Table 3 of the Web Appendix (Flabbi et al., 2015), corroborate the claim: we are very close to having the entire population of listed companies in both regions.

To obtain the sample we use in our analysis, we began with all companies listed on exchanges in Latin America, the Caribbean, and the United States. From that set we removed companies with no reported contacts or missing sector information, leading to a loss of about 7.4% of the companies in the sample. We also removed companies from Bermuda, the Cayman Islands, and the Virgin Islands (British), as their corporate legal codes are such that listed companies might not reflect local conditions. In other words, they are countries where some firms may decide to incorporate for tax planning reasons and not because they are actually operating in these countries.¹² After this cleaning, the resulting sample held 7,446 total companies, including 1,259 from

¹¹ We have also run comparison analysis with other regions in the world, including some European and Asian countries. While the comparison with European countries is credible, the comparison with Asian countries is hindered by our inability to assign the female dummy to a large number of the listed contacts.

¹² For example, *Osiris* records 851 listed companies in the Cayman Islands and 673 in Bermuda, compared to 378 for

31 countries in LAC.

2.2 *Female Executives and Firm Leadership Indicators*

The way the data are collected presents two challenges for our analysis. First, at the time our sample was drawn, Osiris did not directly identify the gender of reported board members and executives. We have therefore built our own indicator to identify whether the listed contact was male or female. We started by relying on the listed salutation, such that *Mr.* was recorded as male and *Miss* and *Mrs.* as female. When no salutation was reported, we searched for all other people in the database with the same first name as that person. If an overwhelming majority of those people shared the same gender, we assigned that gender to the person with missing data. For people with missing data who did not share the same first name as others in our sample, we applied a similar procedure using the online database of names and gender hosted at genderize.io. People with missing or ambiguous first names were removed from the sample, leading to a loss of about 15 firms. In total we identified 75,709 contacts: 66,379 men and 9,330 women, including 10,642 men and 1,248 women from companies in LAC countries.¹³

The second challenge, common to all the literature using similar data sources, is the construction of indicators of the actual leadership structure at the firm. We are interested in three categories: board members, senior executives, and the the top-ranked executive in each company (from now on, the company's *CEO*). Starting from the raw data, we use the following definitions to build each category. Anyone noted as being on the board of directors, the advisory board, the supervisory board, the executive board, or any board committees is considered a *board member*. Any reported contact listed as a member of senior management as well as anyone holding a senior executive position in an operational area of the company, such as the legal department or finance and accounting is considered a (*senior*) *executive*. In total we identified 8,710 board members and 4,958 executives in LAC countries.

Identifying the company's CEO is more challenging. The Osiris data contains specific job titles, yet because titles vary by region and company, further work was necessary to determine the top executive. We determined it on an iterative basis, searching for a series of terms such as *chief executive officer* or *president* in each person's job title. When this process resulted in multiple CEOs or no CEOs being identified, we assigned the CEO title to the people identified by Osiris as the *highest executive*. For companies where we could not determine a unique CEO we recorded that information as missing. We were able to identify a CEO for 6,489 (87%) of the companies in

all of Brazil.

¹³In many cases, a company listed the same person multiple times, once for each position held. To avoid double counting, whenever the same full name appeared more than once on a company's list we condensed that person into one observation by combining all titles and positions. In the few cases where it was impossible to determine whether two listed contacts were the same person we removed them from the sample.

the sample, including 853 companies in LAC.¹⁴

A complete list of descriptive statistics on the sample we use in our analysis is reported in Tables 2-5 in the Web Appendix (Flabbi et al., 2015). We aggregate the statistics by region and subregions. Interestingly, profit margins and returns on total assets are on average much higher in LAC. For example, the mean profit margin in the United States is 5% compared to nearly 17% in LAC. One possibility to consider is that there may be differences in underlying methods of accounting across the regions, which we will control for with regional fixed effects. In the next section of the paper we present in more detail descriptive statistics on female leadership at the firm, providing the first contribution of the paper: measuring the degree of representation of women in executive positions in LAC.

3 Descriptive Statistics for Female Leadership

According to our estimations based on the Osiris data, overall levels of women board members and executives in LAC are low, yet at the same time they are at or near those found in the United States (Appendix Figure 1). In LAC, an average of 8.5% of board members and 9.2% of executives per company are women, and 4.2% of companies have a female CEO. By comparison, the averages for the United States are 9% board members and 12% executives. As in LAC, 4.2% of CEOs are women. When the numbers are broken out into sub-regions, the notable outlier is the Caribbean, where on average 18% of board members and 29% of executives are women.¹⁵ The divergence does not, however, carry over into the CEO position, where we find only 3.1% women.

These average shares of women leaders in the region may be highly influenced by the fact that the majority of companies have no women at all: as reported in Appendix Figures 2 and 3, 63% of companies in LAC and 56% in the United States have no women board members, and 73% of companies in LAC and 56% in the United States report no women executives. Again the notable exception is the Caribbean, where 74% of companies have at least one woman board member and 64% have at least one woman executive.

Another reason to look not simply at the presence of female leaders at the firms but also at their proportion is the theory that the effect of women leaders is not monotonic, owing to a perception of a sole women being a mere “token” board member and thus being treated in a way

¹⁴ An alternative and promising procedure used in the literature to build firm leadership rankings is to follow transitions and career progressions between different job titles (Gayle et al., 2012). However, we cannot implement this procedure here because we do not observe panel data on individual executives.

¹⁵ We present most of our results aggregating the LAC countries in one group (which we call LAC) or in the four sub-regions most frequently used in the literature: Caribbean, Andes, Central America, Southern Cone. The list of countries included in the final sample are: *Caribbean*: Anguilla, Bahamas, Barbados, Curacao, Dominica, Dominican Republic, Grenada, Guyana, Jamaica, Saint Kitts and Nevis, Saint Lucia, Trinidad and Tobago; *Andes*: Bolivia, Colombia, Ecuador, Peru, Venezuela; *Central America*: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama; *Southern Cone*: Argentina, Brazil, Chile, Paraguay, Uruguay.

that impedes the effective execution of her responsibilities. The *critical mass* hypothesis suggests that boards need multiple women, theorized to be a share of around 30%, in order for those women to be perceived as regular board members as opposed to women board members (Kanter, 1977). Appendix Figures 2 and 3 report not only firms with a positive proportion of executives and board members but also if those proportions are above the 30% threshold. By this metric, LAC performs better than the U.S. and, as shown by the disaggregation by sub-regions, the result is not simply a composition effect driven by the Caribbean. While the Caribbean has the highest proportion — 22% of companies have more than 30% female executives — both the Andes and the Southern Cone have values higher than the 6.5% reported for the United States.

The levels of under-representation found by our analysis generally align with previous rough estimates based on small samples of large companies in the region. For example, looking at the 100 largest companies in the region, Corporate Women Directors International reported that 6.4% of board members in Latin America were women, and about 50% of companies had no women board members (Godoy and Sambo, 2015). An ILO survey of 29 companies found that half had fewer than 30% women board members, though only two reported having no women at all (International Labour Organization, 2015).

On a per-sector basis, Appendix Figure 4 shows a quite large variation in the proportion of both female executives (ranging from 0% in IT in the Andes to almost 50% in the financial sector in the Caribbean) and female board members (ranging from 0% in IT in Central America to more than 25% in the financial sector in the Caribbean). In many cases, the differences across sectors parallel the different proportions of women in the overall labor force of the sector. For example, health care has traditionally a very high proportion of female workers, and it is also a sector with a relatively high proportion of female executives and board members. We confirm this fact for all the regions and sub-regions in the sample. The financial sector is another good example of this, showing a high proportion of female firm leaders for most regions. The proportion is very high in the Caribbean, where almost 50% of the executives are women: this is the highest proportion registered in any of the regions. Another interesting sector is IT. Traditionally, it experiences low participation by women, probably reflecting choices of college majors and education tracks.¹⁶ As expected, most of the regions report a very low proportion of female executives and board members in IT. However, the Southern Cone creates a big exception: there, IT is the sector with the highest proportion of female executives (but not of female board members.) It is not clear if this is the result of different participation rates in the sector or of gender asymmetries in human capital accumulation. It seems an interesting case study to be investigated further on a country-by-country basis.

The main conclusion we draw from our systematic analysis of female representation among senior executives and board members in LAC listed companies is the clear split between Latin

¹⁶ See Gemici and Wiswall (2014) for an example on the United States.

American companies and Caribbean companies. While the share of female leaders in the Caribbean is among the highest in the world, with values higher than the United States across the board, the share in Latin America is much lower. Even given this dichotomy, the overall trend is one of under-representation, with the majority of firms having no female executives and no female board members among their ranks. A second important conclusion is that the average for the region is quite comparable to values found for the United States. Although some countries, in particular in the Central American sub-region, register extremely high levels of under-representation, the overall picture is of a region where under-representation of women in leadership positions at the firm is comparable to levels experienced by the closest neighboring high-income country.

4 Board Representation and Women Executives

Motivated by the hypothesis that a more balanced board of directors is more likely to appoint a more balanced executive management team, we next compare the gender composition of boards to the gender composition of executive management. One of the arguments in favor of policies to promote greater representation of women on corporate boards of directors is the potential for spillover effects (Armstrong and Walby, 2012). In particular, because the board of directors is responsible for monitoring and hiring senior management, one hypothesis is that boards with more women are more likely to appoint more women as executives.

Many channels may create this correlation, including mentoring, role modeling, and some form of the critical mass hypothesis mentioned above. In support of this hypothesis, a study of board members and executives in the United States associated a 10 percentage point greater share of women on the board of directors with a 1.4 percentage point greater share of female executives in the following year (Matsa and Miller, 2011). Controlling for industry and bank-level fixed effects they still found a small impact of about half a percentage point. For context, a 2.8 percentage point increase in the share of female executives represented an 86 percent increase over the initial level observed. Focusing specifically on female CEOs, the study found that a 10 percentage point increase in the share of women on the board corresponded to a 0.2 to 0.4 percentage point increase in the likelihood of a company having a female CEO in the following year.

Similarly, companies in the top 25% as far as share of female board members were found to have 33% more female executives five years later than the companies in the bottom 25%. The effect was increasing with the number of female board members: companies with two or more women on the board had 28% more female executives five years later than those with only one female board member. Proposed channels for the linkage include the presence of role models for lower-level employees, the likelihood that more inclusive boards will promote more inclusive policies, and the stereotype-reducing potential of successful female directors (Joy, 2008).

Another possibility is that hiring decision-makers are more adept at determining the ability

and performance of workers of the same gender, in particular if some form of statistical discrimination in promotion and job assignment is present (Flabbi et al., 2014). In such an environment, highly skilled women are more likely to benefit from being evaluated by other women, creating a potential link between female board membership and promotion of women to executive positions.

Even if these channels may be at work, it is not clear from these previous studies if there is a causal relationship between the proportion of women on the board and the proportion of female executives. A few recent studies have used the introduction of mandatory quotas in some European countries to identify a causal effect, but the results are still preliminary due to the relatively recent implementation of the legislation. So far, they have been unable to conclude that the impact of a quota mandating at least 40% female board members in Norway had any effect on positions in the companies aside from seats on the board (Bertrand et al., 2014).

Because we are working with cross-sectional data, we also will be unable to identify causal links between female representation on the board and female representation among executives. Nonetheless, we can contribute to the empirics of the debate by examining whether the two measures appear to be associated and whether the empirical regularities found for high-income countries in North America and Europe are also present in a relevant and under-studied region of the world such Latin America and the Caribbean.

We study the correlation between female board members and female executives by estimating a series of probit models where the dependent variable equals 1 if there is at least one female executive in the company.¹⁷ Results are reported in Tables 1 to 3. The main regressors of interest in each specification are the indicators of female participation in boards. We use three different indicators: i) dummy equals 1 if there is at least one woman on the board; ii) a set of three dummies indicating if there are no women, one or two women, or more than two women on the board (with no women used as the excluded category); and iii) a set of three dummies indicating if there are 0% of women; between 1 and 30% of women; and more than 30% of women on the board (with 0% used as the excluded category). The last two specifications are inspired by the critical mass hypothesis and by the recent mandatory quota policies implemented in numerous European countries.

In addition to the regressors of interest, we add controls for region, sector and other firm-level characteristics such as total assets, profit margin and solvency ratio. We run three specifications for each measure of female board participation, and we run the entire set of estimation models separately for LAC, the United States, and each one of the four LAC sub-regions.

Table 1 shows the estimated marginal effects for the aggregated LAC sample.¹⁸ Columns

¹⁷ We have also estimated models with different definitions of the dependent variable (overall proportion, dummies at different proportions) but the results were qualitatively very similar and are not presented in the current version of the paper.

¹⁸ Tables with the probit coefficients are reported in the Web Appendix (Flabbi et al., 2015).

(1), (4) and (7) show that, without adding any controls, companies with women on the board are far more likely also to have non-board member women executives. The marginal effect is statistically significant in each specification and the magnitude is substantial, with values around 20%. Introducing controls for region, sector and total assets (columns (2), (5), and (8)) reduces the magnitude by up to 10 percentage points but still returns statistically significant effects. Adding the whole set of controls for firm characteristics has a very limited effect on the magnitudes and reduces a bit the precision of the estimates in a few specifications. Results on the critical mass hypothesis are mixed. We do not estimate a clear monotonicity at the 30% threshold level, but we estimate a significant increase when moving from 1 to 2 female board members. In conclusion, we estimate that the conditional correlation between proportion of female board members and female executives is positive and significantly different from zero in all the specifications for the overall LAC sample.

We first compare these results with those for the United States, reported in Table 2. Qualitatively, we find the same empirical regularity in the sample of U.S. companies as we have found in the sample of LAC companies: the higher the female board membership the higher the probability of observing female executives at the firm, with marginal effects statistically significant in all the specifications. The magnitude of the correlation, however, is much smaller: the presence of at least one woman on the board has a 6.5% marginal effect when all controls are factored in (column (9)) compared to a 13.5% effect for the LAC sample. Another difference is the sensitivity to the controls, which is much higher for the U.S. sample: as we move from the specification without additional controls to the one with the full range of controls the magnitude of the effects is reduced by about half. Another difference with the LAC sample is the monotonicity in the proportion of female board members: with controls, the impact of having more than 30% female board members is about twice as much as the impact of having some but fewer than 30% board members.

We then compare the aggregated LAC results with results for each of the four sub-regions. For concision, we report in Table 3 only one board membership measure: dummies for one or for one or more board members. Complete results are available upon request. Conditional correlations are again positive, but significance when controls are factored in is achieved only for the Caribbean sample. We argue that one of the reasons for the lack of significance is the small sample size: once we introduce the full set of controls, both the Andes and Central American samples have less than a hundred observations. At the same time, the point estimates are far enough from zero, with marginal effects of more than 10% on the Andes sample (column (3)) and of more than 8% on the Central American sample (column (6).) The Southern Cone region, however, seems to be a genuine outlier. Since we estimate a relatively parsimonious set of coefficients, sample size should not be a major issue here: with the intermediate set of controls we have the full 600 observations and when all the controls are included we still have a sample of about 400 companies. Moreover, the

point estimates themselves are quite small, so we definitely cannot impute the lack of significance simply to large standard errors.

The main conclusion we draw from estimating the relationship between female board membership and the probability of female executives at the firm is that LAC companies exhibit the same empirical regularity found in high-income countries. Moreover, the correlation is positive and significant, even when conditioning on firm-level controls. A specific comparison with respect to the United States using the same data source and the same specifications indicates that the effects for LAC are relatively large. LAC estimates are also less sensitive to the specification than the U.S. ones and they are not monotonically increasing with the proportion of female board members. Finally, the aggregated LAC effects exhibit relevant composition effects: Caribbean companies are an important driver of the average effects but most of the other regions' companies also exhibit positive effects with magnitudes of economic significance. The notable exception is the Southern Cone companies, for which we do not estimate any systematic relationship between female board members and female executives.

5 Female Leadership and Firm's Performance

With policies promoting gender quotas on boards of directors becoming increasingly common,¹⁹ there is a compelling interest in identifying significant links between boardroom diversity and corporate performance. No published studies have yet found a clearly causal relationship.

A first set of evidence comes from advocacy groups such as Catalyst. A frequently cited study conducted one-tailed t-tests comparing differences in means of performance measures between the top quartile and the bottom quartile of Fortune 500 companies by share of women on the board (Carter and Wagner, 2011). Results for two measures were statistically significant at the 10% level (return on sales and return on investment capital) but there was no evidence that return on equity differed by boardroom gender diversity. A second set of tests comparing companies with no women on the board to those with three or more women likewise found tentative evidence that average returns were higher when women were better represented. In another comparison of means, a study by Credit Suisse found that companies with at least one woman on the board had a 4 percentage-point higher return on equity than those with no women, controlling for sector (Curtis, Schmid and Struber, 2012).

A second set of evidence comes from academic studies looking at a wide range of firm performance measures. Wolfers (2006) found weak evidence that there are no differences in returns to

¹⁹In March 2015, Germany established a 30% quota for women on supervisory boards. Norway, Spain, Iceland, and France have laws requiring at least 40% women on the boards of public companies. Austria, Belgium, Denmark, Ireland, Italy, and the Netherlands have quota legislation as well. Penalties for non-compliance range from nothing (Austria, Spain, Netherlands) to dissolution of the corporation (Norway) (European Parliament - DG Internal Policies, 2013).

holding stocks of companies led by women vs. men. Analyzing the effect of the quota in Norway, [Matsa and Miller \(2013\)](#) found that firms with more women on the board exhibited lower short-term profits because they were less likely to undergo work force reductions. Using a firm-level fixed effects model, [Dezso and Ross \(2011\)](#) found that S&P 1500 firms did perform better when women were better represented, but only in cases where the firm’s strategy was focused on innovation. A study of Danish firms did find a positive conditional relationship between representation of women on the board and firm performance, with results varying depending on the qualifications of those women ([Smith et al., 2006](#)). Another study of Danish firms found no evidence that the share of women on the board was linked to firm performance as measured by Tobin’s Q ([Rose, 2007](#)). A similar study for U.S. firms found no significant relationship between board gender diversity and firm return on assets or Tobin’s Q ([Carter, D’Souza, Simkins and Simpson, 2010](#)). Finally, [Flabbi et al. \(2014\)](#) look at matched employer-employee data from Italy to show the impact of female executives and female CEOs on long-term measure of firm performance. Their regressions — controlling for firm fixed effects and for unobserved executive heterogeneity — show no impact on firm performance unless the proportion of female workers at the firm is high enough.

Our reading of this previous literature is that existing empirical studies on high-income countries have found mixed or no evidence of a link between representation of women and firm performance. Out of these studies, none is able to estimate a causal impact of female executives, and only studies on Northern European countries are able to identify causal impacts of board membership. Their identification strategy uses the implementation of mandatory quota policies. Given this environment, we think we can provide a valuable contribution by estimating straightforward performance regressions on our sample of companies, even if our procedure does not allow for the identification of causal effects. Compared to some previous studies running performance regressions,²⁰ we have the drawback of lacking panel data and therefore we cannot estimate firm fixed-effects models. We still have the advantage of running our estimates on an original sample of companies covering a relevant and under-studied region of the world.

We study the correlation between female leadership and firm performance by estimating a series of OLS models where the dependent variable is equal to the profit margin, expressed as profit before tax divided by operation revenue²¹ The main regressors of interest in each specification are the indicators of female leadership at the firm. In Tables 4 and 6, we use the same leadership indicators we have presented in Section 4: a dummy for at least one woman on the board; dummies

²⁰ See for example [Albanesi and Olivetti \(2009\)](#) for the United States and [Flabbi et al. \(2014\)](#) for Italy.

²¹ We have also estimated models with different definitions of the dependent variable. As an example and robustness check, the same set of estimates presented in the main text for profit margin is presented in the Web Appendix ([Flabbi et al., 2015](#)), for return on total assets. A benefit of this additional measure is that it is available for more companies in the sample and is thus potentially more representative. A drawback is that summary statistics for the measure exhibit odd tendencies, making it potentially less reliable.

indicating if there at least one or two or more women on the board; and dummies indicating if there are up to 30% female board members or more than 30% female board members. In Tables 5 and 7, we repeat the analysis focusing on leadership at the executive level. Columns (1) to (4) split the proportion of female executives at the firm using the 0% and 30% thresholds, using the same dummy definitions used for board membership. Columns (5) to (8) use a dummy = 1 if any female executive is present at the firm. Finally, columns (9) to (13) exploits our measure of company's *CEO*, i.e., the regressor of interest is a dummy equal to 1 if the top executive at the firm is a woman. Exactly as in the probit models estimated in section 4, we add controls for region, sector and other firm-level characteristics, and we run the entire set of estimation models separately for LAC, the United States, and each one of the four LAC sub-regions.

Tables 4 and 5 show the estimated coefficients for the aggregate LAC sample. The correlation between board membership and a firm's profit margin is significant and positive only above the 30% threshold. The magnitude of the point estimates is economically significant: a more than 5 percentage point increase if at least 30% of board member are women, out of a dependent variable with a mean of about 13%. The result is robust to adding controls for sub-region, sector, total assets, and other firm-level characteristics (columns (1) to (4)). In the specification with the entire set of controls (column (4)) — which incidentally delivers a quite high R^2 — the coefficient is actually larger, reaching almost a 7 percentage point impact. As mentioned, the 30% threshold is crucial to obtain any significant results. Estimates using the other measures of female representation on boards are very imprecise and, even if generally positive, they never reach point estimates of economically significant magnitudes. Table 5 reports results on the correlation between female representation among executives and firm profit margins. The correlation is positive, significant, and of relevant magnitude only above the 30% threshold and only *without* any additional controls. In all the other specifications, the point estimates are too imprecisely estimated to deliver statistical significance. However, they are positive and of an economically relevant magnitude. The exception is the coefficient on the *any women executive* dummy which becomes close to zero and negative when the full set of controls is included. Overall, our estimates confirm the quite weak link between firm performance and female leadership found by the previous academic literature. We have only found some evidence supporting the critical mass hypothesis on boards: the 30% threshold dummy is positive and significant in all specifications.

As in section 4, we first compare the results with those on the sample of U.S. companies. They are reported in Tables 6 and 7. With respect to female leadership on boards, the United States shows a very different pattern than LAC: the point estimates are positive, significant, and large only when we do not add any controls (columns (1), (4) and (7)). When controls are added, the coefficients are generally not significant and occasionally negative and significantly different from zero. When the coefficients are negative, however, the magnitude is generally smaller, albeit not

negligible. Results on executives are similar: positive without controls but not significant when controls are added.

Regressions by LAC sub-region are reported in Tables 8 and 9. Again, we just report one female leadership measure and we have chosen to report the one including the 30% female proportion threshold. This leadership measure is the one delivering the most stable results on the LAC sample among the three measures used. We are therefore interested in checking if the positive and significant result at the aggregate level is due to some composition effects at the regional level. Estimation results on female representation on boards confirm the strong positive effect of the 30% threshold for Caribbean and Southern Cone companies (Columns (1), (2), (5) and (6) in Table 9.) On the samples for Andean and Central American companies, instead, the dummy is not significantly different from zero, with point estimates switching from positive to negative (Columns (1), (2), (5) and (6) in Table 8.) Estimation results on female representation among executives confirm the aggregate patterns: the correlation is weak, with point estimates generally negative but too imprecisely estimated to generate any conclusive inference. When the full set of controls is introduced no coefficient in the executives regressions is estimated to be significantly different from zero.

The main conclusion we draw from our estimates of the conditional correlation between female leadership at the firm — measured both as proportion of female board members and as proportion of female executive — and firm performance is that the relation is quite weak, a result in line with previous evidence on the United States and Europe. The strongest result is on the impact of crossing the 30% threshold in female representation on boards: this coefficient is estimated to be positive and significant on the whole sample of LAC companies. Estimates by sub-region indicate that this aggregate result is driven by the positive coefficient estimated on the sample of Caribbean and Southern Cone companies.

6 Conclusion

Taking advantage of a previously unexplored aspect of a data set collecting firm-level observations, we estimated the degree of representation of women in leadership positions at the firm for a relevant and under-studied region of the world: Latin America and the Caribbean (LAC.) The analysis is of interest not only for scholars and policy makers focusing on LAC but also for the general understanding of the under-representation of women at the executive level. A quite large set of empirical evidence now exists for the United States and European countries and it is important to understand if the empirical regularities found with these high-income regions persist in a middle-income region such as LAC.

The data we use guarantee very good coverage of the universe of listed companies, allow for good identification of rank within the firm by gender, include relevant firm-level controls, and

allow for a direct comparison with the United States. We looked at three empirical regularities: i) the proportion of female leaders at the firm; ii) the link between female representation on boards and the proportion of female executives; and (iii) the link between female leadership at the firm and firm performance.

First, we found that women are under-represented in corporate leadership positions in LAC but that the extent of the under-representation is very comparable to the one observed for the United States using the same sample selection mechanism and the same data source. In the region, an average of 8.5% of board members and 29% of executives are female. We also found that women tend to be well-represented in the Caribbean relative to other regions: an average of 18% of board members and 29% executives are female for the sample of Caribbean companies. Still, these proportions indicate that women are less well represented compared to their share of the population and work force.

Second, when we looked at the connection between women on the board and women executives, we found that companies with more women on the board also tended to have a higher probability of hiring at least one woman executive. However, our data cannot determine whether those appointments occurred concurrently or consequentially, and our estimates cannot identify any causation mechanism. Still, these results indicate that LAC companies exhibit the same empirical regularity found with high-income countries: a positive and significant correlation between the presence of women board members and women executives, also when conditioning on firm-level controls. Compared with the United States, the estimated coefficients are relatively large and less sensitive to the specification. The aggregate results for LAC exhibit relevant composition effects: Caribbean companies are an important driver of the average effects, but companies in most of the other sub-regions also exhibit positive effects with magnitudes of economic significance.

Third, when we looked at the link between women in leadership position at the firm and firm performance, we estimated weak, mixed, and imprecisely estimated relations. Again, these results confirm empirical regularities found for high-income countries in Europe and North America. The strongest result we found is on the impact of crossing the 30% threshold in female representation on boards: this coefficient is estimated to be positive and significant on the whole sample of LAC companies. But again, the aggregate result is driven by composition effects, in this case the impact of Caribbean and Southern Cone companies. Although this result may give some support to the so-called critical mass hypothesis, we caution that in this set of regressions our data do not allow for the identification of any causal relationship.

The main conclusion we draw from our empirical investigation is that LAC companies on average exhibit very similar empirical regularities, both in signs and magnitudes, as those found for companies in high-income countries. With respect to the general issue of under-representation of women in leadership positions at the firm, the result confirms that the scale of the problem is truly

global. These results may support the implementation of policies and solutions already attempted in high-income economies since the scale of the problem is comparable. There are exceptions to this general picture: Caribbean companies exhibit empirical regularities much closer to the most gender-balanced countries in the world than to the average high-income country, whereas the opposite is true for Central American companies.

References

- Ahern, K. R. and A. K. Dittmar. 2012. "The changing of the boards: The impact on firm valuation of mandated female board representation." *The Quarterly Journal of Economics*. 127(1): 137–197.
- Albanesi, S. and C. Olivetti. 2009. "Home Production, Market Production and the Gender Wage Gap: Incentives and Expectations." *Review of Economic Dynamics*. 12 80–107.
- Armstrong, J. and S. Walby. 2012. *Gender quotas in management boards*: European Parliament.
- Bamrud, J. and G. Calderon. 2012. "Latin America: Few Female CEOs." *Latin Trade*.
- Bertrand, M., S. E. Black, S. Jensen, and A. Lleras-Muney. 2014. *Breaking the glass ceiling? The effect of board quotas on female labor market outcomes in Norway*: National Bureau of Economic Research.
- Bertrand, M. and K. F. Hallock. 2001. "The Gender gap in top corporate jobs." *Industrial and Labor Relations Review*. 55(1): 3–21.
- Cardoso, A. R. and R. Winter-Ebmer. 2010. "Female-Led Firms and Gender Wage Policies." *Industrial and Labor Relations Review*. 61(1): 143–63.
- Carter, D. A., F. D'Souza, B. J. Simkins, and W. G. Simpson. 2010. "The gender and ethnic diversity of US boards and board committees and firm financial performance." *Corporate Governance: An International Review*. 18(5): 396–414.
- Carter, N. M. and H. M. Wagner. 2011. *The Bottom Line: Corporate Performance and Women's Representation on Boards (2004–2008)*: Catalyst.
- Curtis, M., C. Schmid, and M. Struber. 2012. *Gender diversity and corporate performance*: Credit Suisse Research Institute.
- Dawson, J., R. Kersley, and S. Natella. 2014. *The CS Gender 3000: Women in Senior Management*: Credit Suisse Research Institute.
- Dezso, C. L. and D. G. Ross. 2011. "Does female representation in top management improve firm performance? A panel data investigation." *Strategic Management Journal*. 33(9): 1072–1089.
- European Parliament - DG Internal Policies. 2013. *Legal Instruments for Gender Quotas in Management Boards*: European Parliament - Policy Department.
- Flabbi, L., M. Macis, A. Moro, and F. Schivardi. 2014. "Do Female Executives Make a Difference? The Impact of Female Leadership on Gender Gaps and Firm Performance." *CEPR Discussion Paper No. DP10228*.
- Flabbi, L., C. Piras, and S. Abrahams. 2015. "Female Corporate Leadership in Latin America and the Caribbean Region: Representation and Firm-level Outcomes. Web Appendix." <https://sites.google.com/site/lucaflabbi/home/research/>

[Female%20Corporate%20Leadership%20in%20LAC%20Web%20Appendix.pdf?attredirects=0&d=1.](#)

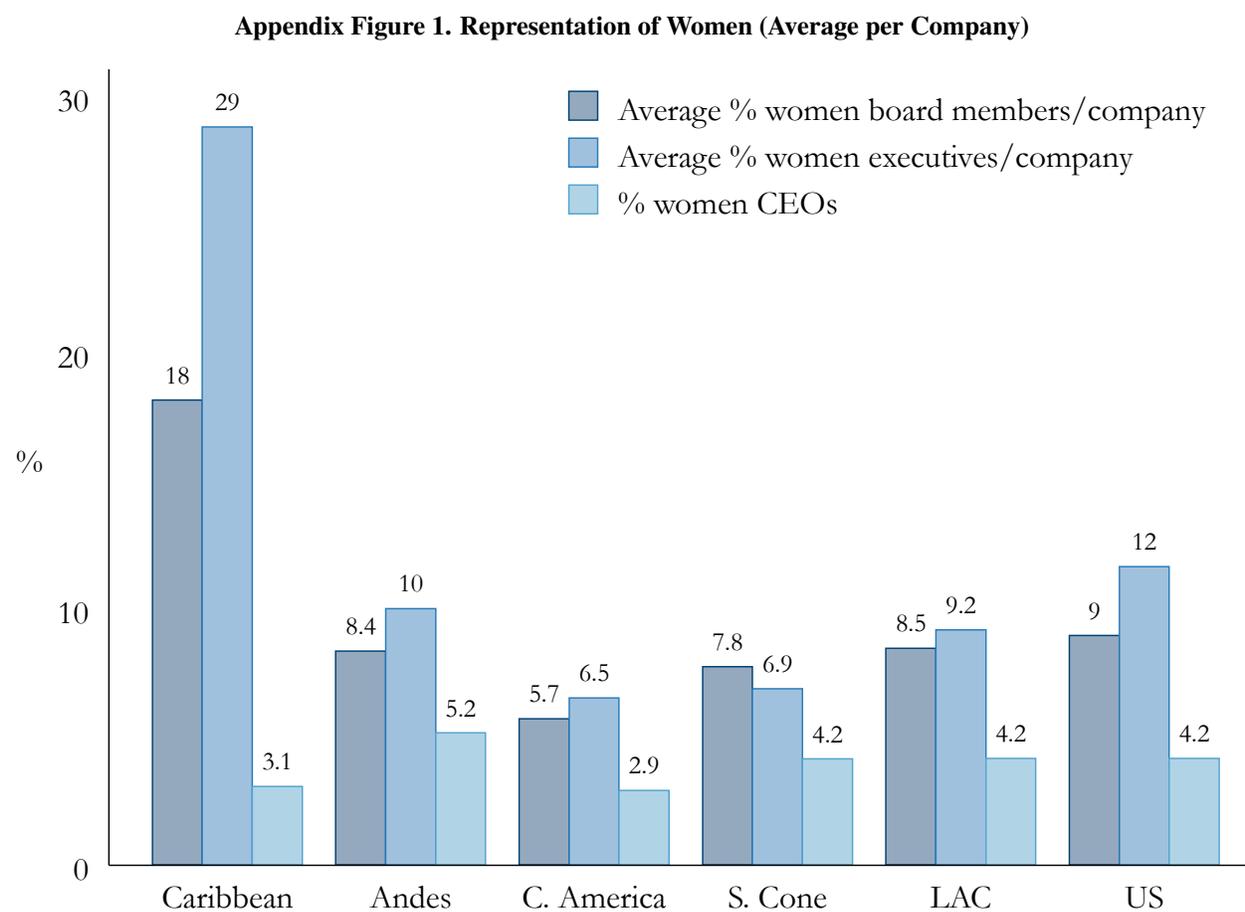
- Gayle, G.-L., L. Golan, and R. A. Miller. 2012. "Gender Differences in Executive Compensation and Job Mobility." *Journal of Labor Economics*. 30(4): 829–872.
- Gemici, A. and M. Wiswall. 2014. "Evolution of Gender Differences in Post-Secondary Human Capital Investments: College Majors." *International Economic Review*. 55(1): 23–56.
- Godoy, D. and P. Sambo. 2015. "Latin American Women Locked Out of Boardrooms Trail Peers." *Bloomberg Business*.
- International Labour Organization. 2015. *Women In Business and Management: Gaining Momentum*: International Labour Office.
- Joy, L. 2008. *Advancing women leaders: The connection between women board directors and women corporate officers*: Catalyst.
- Kanter, R. M. 1977. "Some effects of proportions on group life: Skewed sex ratios and responses to token women." *American Journal of Sociology* 965–990.
- Matsa, D. A. and A. R. Miller. 2011. "Chipping away at the glass ceiling: Gender spillovers in corporate leadership." *RAND Working Paper No. WR-842*.
- . 2013. "A Female Style in Corporate Leadership? Evidence from Quotas." *American Economic Journal: Applied Economics*. 5(3): 136–169.
- Rose, C. 2007. "Does Female Board Representation Influence Firm Performance? The Danish Evidence." *Corporate Governance: An International Review*. 15(2): 404–413.
- Smith, N., V. Smith, and M. Verner. 2006. "Do women in top management affect firm performance? A panel study of 2,500 Danish firms." *International Journal of Productivity and Performance Management*. 55(7): 569–593.
- Wolfers, J. 2006. "Diagnosing discrimination: Stock returns and CEO gender." *Journal of the European Economic Association*. 4(2-3): 531–541.

Appendices

A Figures for this Working Paper

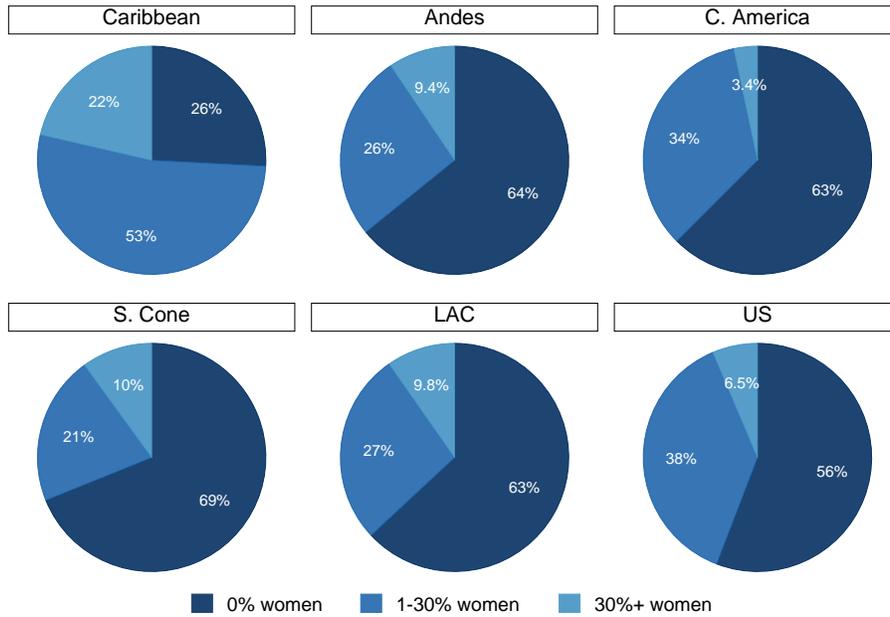
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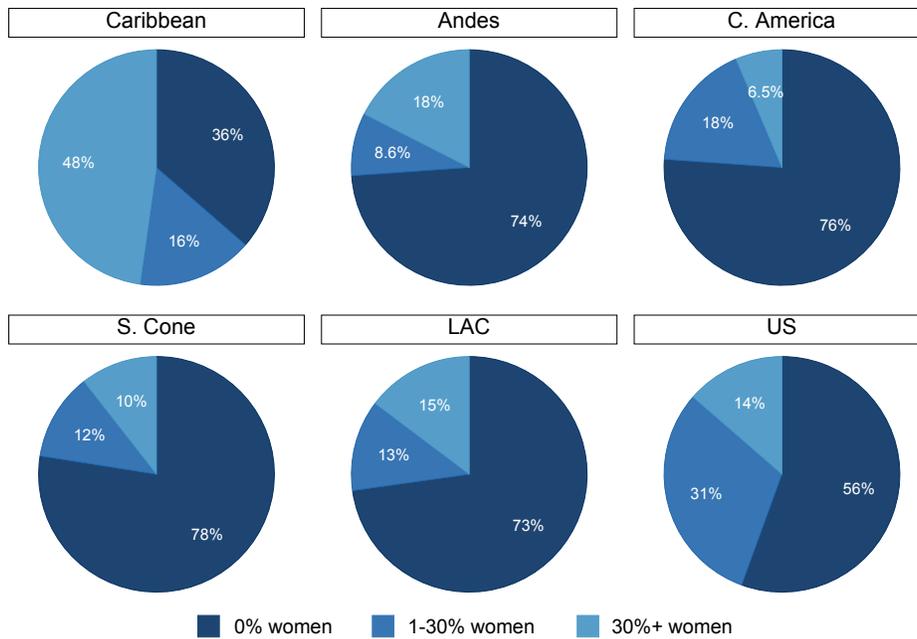
Source: Authors' estimations based on data from Bureau van Dijk's Osiris (accessed September 2013).

Appendix Figure 2. Average Share of Women Board Members per Company



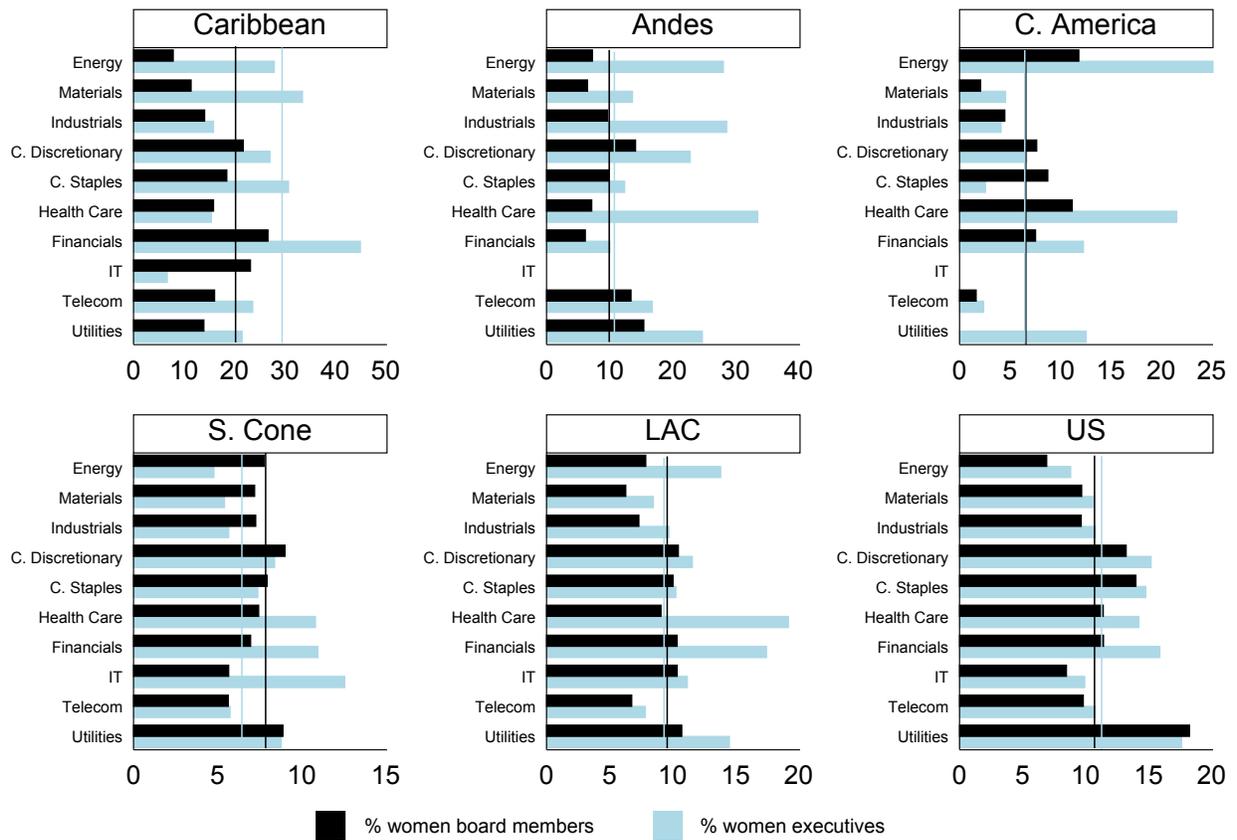
Source: Authors' estimations based on data from Bureau van Dijk's Osiris (accessed September 2013).

Appendix Figure 3. Average Share of Women Executives per Company



Source: Authors' estimations based on data from Bureau van Dijk's Osiris (accessed September 2013).

Appendix Figure 4. Representation of Women in Each Sector



Source: Authors' estimations based on data from Bureau van Dijk's Osiris (accessed September 2013).

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Appendix Table 1. Probability of at Least One Woman Executive as a Function of Share of Women on the Board (LAC)

Specifications:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mean of dep. var.	0.230	0.230	0.250	0.230	0.230	0.250	0.230	0.230	0.250
1-30% women on board	0.240 [‡] (0.036)	0.152 [‡] (0.038)	0.157 [‡] (0.045)						
30%+ women on board	0.128 [‡] (0.048)	0.092* (0.048)	0.066 (0.065)						
One woman on board				0.174 [‡] (0.037)	0.120 [‡] (0.037)	0.124 [‡] (0.045)			
Two+ women on board				0.251 [‡] (0.046)	0.154 [‡] (0.048)	0.155 [‡] (0.060)			
Any women on board							0.204 [‡] (0.031)	0.132 [‡] (0.032)	0.135 [‡] (0.040)
Controls									
subregion (LAC)	no	yes	yes	no	yes	yes	no	yes	yes
sector	no	yes	yes	no	yes	yes	no	yes	yes
total assets (log)	no	yes	yes	no	yes	yes	no	yes	yes
market cap (log)	no	no	yes	no	no	yes	no	no	yes
turnover ratio	no	no	yes	no	no	yes	no	no	yes
current ratio	no	no	yes	no	no	yes	no	no	yes
solvency ratio	no	no	yes	no	no	yes	no	no	yes
profit margin	no	no	yes	no	no	yes	no	no	yes
Observations	963	945	609	963	945	609	963	945	609

Note: Standard errors in parentheses. ‡ p<0.01, † p<0.05, * p<0.1. Estimated Marginal Effects from Probit models reported. *Executive* is restricted to people not also on the board. Those with dual appointments are considered board members.

Appendix Table 2. Probability of at Least One Woman Executive as a Function of Share of Women on the Board (US)

Specifications:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mean of dep. var.	0.460	0.460	0.480	0.460	0.460	0.480	0.460	0.460	0.480
1-30% women on board	0.162 [‡] (0.014)	0.051 [‡] (0.016)	0.055 [‡] (0.020)						
30%+ women on board	0.205 [‡] (0.030)	0.131 [‡] (0.030)	0.104 [‡] (0.037)						
One woman on board				0.092 [‡] (0.016)	0.026 (0.016)	0.022 (0.021)			
Two+ women on board				0.282 [‡] (0.018)	0.140 [‡] (0.021)	0.141 [‡] (0.025)			
Any women on board							0.167 [‡] (0.014)	0.061 [‡] (0.015)	0.061 [‡] (0.019)
Controls									
subregion (N/A)	no								
sector	no	yes	yes	no	yes	yes	no	yes	yes
total assets (log)	no	yes	yes	no	yes	yes	no	yes	yes
market cap (log)	no	no	yes	no	no	yes	no	no	yes
turnover ratio	no	no	yes	no	no	yes	no	no	yes
current ratio	no	no	yes	no	no	yes	no	no	yes
solvency ratio	no	no	yes	no	no	yes	no	no	yes
profit margin	no	no	yes	no	no	yes	no	no	yes
Observations	5106	5075	3352	5106	5075	3352	5106	5075	3352

Note: Standard errors in parentheses. ‡ p<0.01, † p<0.05, * p<0.1. Estimated Marginal Effects from Probit models reported. Executive is restricted to people not also on the board. Those with dual appointments are considered board members.

Appendix Table 3. Probability of at Least One Woman Executive as a Function of Share of Women on the Board (LAC Subregions)

Regions:	Andes			Central America			Caribbean			Southern Cone		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Mean of dep. var.	0.320	0.320	0.330	0.240	0.240	0.300	0.590	0.590	0.620	0.170	0.170	0.170
1 woman on board	0.204 [†]	0.005	0.108	0.241 [†]	0.124	0.086	0.355 [†]	0.416 [†]	0.297*	0.082*	0.063	0.066
	-0.097	-0.073	-0.098	-0.104	-0.100	-0.108	-0.148	-0.147	-0.180	-0.043	-0.042	-0.052
2+ women on board	0.452 [‡]	-0.010	0.079	0.119	0.150	0.055	0.280*	0.283*	0.059	-0.020	-0.022	0.042
	-0.087	-0.074	-0.114	-0.128	-0.144	-0.145	-0.146	-0.156	-0.187	-0.053	-0.054	-0.077
Controls												
country	no	yes	yes	no	yes	yes	no	yes	yes	no	yes	yes
sector	no	yes	yes	no	yes	yes	no	yes	yes	no	yes	yes
total assets (log)	no	yes	yes	no	yes	yes	no	yes	yes	no	yes	yes
market cap (log)	no	no	yes	no	no	yes	no	no	yes	no	no	yes
turnover ratio	no	no	yes	no	no	yes	no	no	yes	no	no	yes
current ratio	no	no	yes	no	no	yes	no	no	yes	no	no	yes
solvency ratio	no	no	yes	no	no	yes	no	no	yes	no	no	yes
profit margin	no	no	yes	no	no	yes	no	no	yes	no	no	yes
Observations	179	179	97	113	113	81	71	71	47	600	600	395

Note: Standard errors in parentheses. [†] p<0.01, [‡] p<0.05, * p<0.1. Estimated Marginal Effects from Probit models reported. *Executive* is restricted to people not also on the board. Those with dual appointments are considered board members.

Appendix Table 4. Company Profitability (Profit Margin) as a Function of Share of Women on the Board (LAC)

Specifications:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Mean of dep. var.	13.400	13.400	13.400	13.500	13.400	13.400	13.400	13.500	13.400	13.400	13.400	13.500
1-30% women on board	-0.712 (1.670)	-1.028 (1.701)	-1.723 (1.645)	-3.180* (1.637)								
30%+ women on board	5.130† (2.476)	5.199† (2.496)	5.636† (2.348)	6.987† (2.738)								
One woman on board					1.148 (1.832)	1.240 (1.835)	0.436 (1.723)	-0.489 (1.757)				
Two+ women on board					0.458 (2.037)	-0.238 (2.107)	0.373 (2.000)	-1.927 (2.123)				
Any women on board									0.851 (1.511)	0.637 (1.547)	0.411 (1.469)	-1.021 (1.530)
Controls												
subregion (LAC)	no	yes	yes	yes	no	yes	yes	yes	no	yes	yes	yes
sector	no	no	yes	yes	no	no	yes	yes	no	no	yes	yes
total assets (log)	no	no	yes	yes	no	no	yes	yes	no	no	yes	yes
market cap (log)	no	no	no	yes	no	no	no	yes	no	no	no	yes
turnover ratio	no	no	no	yes	no	no	no	yes	no	no	no	yes
current ratio	no	no	no	yes	no	no	no	yes	no	no	no	yes
solvency ratio	no	no	no	yes	no	no	no	yes	no	no	no	yes
Constant	13.080‡ (0.933)	13.300‡ (2.848)	-6.137 (6.515)	-32.190‡ (7.783)	13.080‡ (0.935)	13.640‡ (2.882)	-3.993 (6.503)	-28.990‡ (7.792)	13.080‡ (0.934)	13.400‡ (2.854)	-4.001 (6.493)	-28.850‡ (7.786)
Observations	1,086	1,086	1,086	754	1,086	1,086	1,086	754	1,086	1,086	1,086	754
R-squared	0.005	0.019	0.182	0.401	0.000	0.015	0.176	0.391	0.000	0.014	0.176	0.391

Note: Standard errors in parentheses. ‡ p<0.01, † p<0.05, * p<0.1. Estimated coefficients from OLS models reported. Profit margin defined as profit before tax/operating revenue.

Appendix Table 5. Company Profitability (Profit Margin) as a Function of Share of Women Executives (LAC)

Specifications:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Mean of dep. var.	13.500	13.500	13.500	13.900	13.500	13.500	13.500	13.900	12.700	12.700	12.700	13.200
1-30% women execs	1.377 (2.241)	1.945 (2.228)	1.011 (2.214)	-1.438 (2.074)								
30%+ women execs	3.784* (2.203)	3.057 (2.284)	1.580 (2.178)	0.991 (2.396)								
Any women execs					2.605 (1.690)	2.484 (1.721)	1.301 (1.662)	-0.430 (1.688)				
Female CEO									4.883 (5.007)	3.675 (4.961)	3.084 (4.702)	3.194 (5.710)
Controls												
subregion (LAC)	no	yes	yes	yes	no	yes	yes	yes	no	yes	yes	yes
sector	no	no	yes	yes	no	no	yes	yes	no	no	yes	yes
total assets (log)	no	no	yes	yes	no	no	yes	yes	no	no	yes	yes
market cap (log)	no	no	no	yes	no	no	no	yes	no	no	no	yes
turnover ratio	no	no	no	yes	no	no	no	yes	no	no	no	yes
current ratio	no	no	no	yes	no	no	no	yes	no	no	no	yes
solvency ratio	no	no	no	yes	no	no	no	yes	no	no	no	yes
Constant	12.820 [‡] (0.882)	11.470 [‡] (2.946)	-1.688 (6.865)	-31.630 [‡] (8.234)	12.820 [‡] (0.881)	11.650 [‡] (2.908)	-1.364 (6.664)	-30.000 [‡] (7.999)	12.490 [‡] (0.919)	14.630 [‡] (3.183)	-16.670 [‡] (7.985)	-44.100 [‡] (9.957)
Observations	1,088	1,088	1,088	755	1,088	1,088	1,088	755	771	771	771	553
R-squared	0.003	0.027	0.162	0.386	0.002	0.027	0.162	0.386	0.001	0.026	0.182	0.383

Note: Standard errors in parentheses. ‡ p<0.01, † p<0.05, * p<0.1. Estimated coefficients from OLS models reported. Profit margin defined as profit before tax/operating revenue.

Appendix Table 6. Company Profitability (Profit Margin) as a Function of Share of Women on the Board (US)

Specifications:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mean of dep. var.	4.700	4.700	4.600	4.700	4.700	4.600	4.700	4.700	4.600
1-30% women on board	7.807 [‡] (0.794)	-1.130 (0.813)	-1.748 [†] (0.779)						
30%+ women on board	5.276 [‡] (1.614)	0.926 (1.507)	-1.320 (1.428)						
One woman on board				4.965 [‡] (0.892)	-0.845 (0.855)	-1.785 [†] (0.818)			
Two+ women on board				10.860 [‡] (0.976)	-0.863 (0.991)	-1.498			
Any women on board							7.501 [‡] (0.770)	-0.851 (0.788)	-1.692 [†] (0.757)
Controls									
subregion (N/A)	no	no	no	no	no	no	no	no	no
sector	no	yes	yes	no	yes	yes	no	yes	yes
total assets (log)	no	yes	yes	no	yes	yes	no	yes	yes
market cap (log)	no	no	yes	no	no	yes	no	no	yes
turnover ratio	no	no	yes	no	no	yes	no	no	yes
current ratio	no	no	yes	no	no	yes	no	no	yes
solvency ratio	no	no	yes	no	no	yes	no	no	yes
Constant	0.724 (0.562)	-41.460 [‡] (2.391)	-50.520 [‡] (2.515)	0.724 (0.560)	-41.250 [‡] (2.439)	-50.340 [‡] (2.557)	0.724 (0.562)	-41.240 [‡] (2.386)	-50.480 [‡] (2.511)
Observations	4,253	4,248	3,581	4,253	4,248	3,581	4,253	4,248	3,581
R-squared	0.022	0.204	0.271	0.029	0.203	0.271	0.022	0.203	0.271

Note: Standard errors in parentheses. ‡ p<0.01, † p<0.05, * p<0.1. Estimated coefficients from OLS models reported. Profit margin defined as profit before tax/operating revenue.

Appendix Table 7. Company Profitability (Profit Margin) as a Function of Share of Women Executives (US)

Specifications:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mean of dep. var.	5.000	5.000	4.600	5.000	5.000	4.600	4.400	4.400	4.300
1-30% women execs	6.143 [‡] (0.848)	-0.309 (0.822)	-0.252 (0.772)						
30%+ women execs	2.162* (1.208)	0.537 (1.117)	0.100 (1.060)						
Any women execs				5.088 [‡] (0.781)	-0.059 (0.744)	-0.151 (0.701)			
Female CEO							0.302 (1.986)	0.398 (1.803)	0.099 (1.667)
Controls									
subregion (N/A)	no	no	no	no	no	no	no	no	no
sector	no	yes	yes	no	yes	yes	no	yes	yes
total assets (log)	no	yes	yes	no	yes	yes	no	yes	yes
market cap (log)	no	no	yes	no	no	yes	no	no	yes
turnover ratio	no	no	yes	no	no	yes	no	no	yes
current ratio	no	no	yes	no	no	yes	no	no	yes
solvency ratio	no	no	yes	no	no	yes	no	no	yes
Constant	2.482 [‡] (0.549)	-35.860 [‡] (2.381)	-47.900 [‡] (2.499)	2.482 [‡] (0.550)	-35.550 [‡] (2.342)	-47.770 [‡] (2.465)	4.337 [‡] (0.413)	-40.940 [‡] (2.413)	-48.060 [‡] (2.552)
Observations	4,286	4,281	3,585	4,286	4,281	3,585	3,892	3,888	3,256
R-squared	0.012	0.188	0.266	0.010	0.188	0.266	0.000	0.198	0.261

Note: Standard errors in parentheses. ‡ p<0.01, † p<0.05, * p<0.1. Estimated coefficients from OLS models reported. Profit margin defined as profit before tax/operating revenue.

Appendix Table 8. Company Profitability (Profit Margin) as a Function of Share of Women Executives or Board Members (Andes and Central America)

Regions: Specifications:	Andes				Central America			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mean of dep. var.	18.300	18.700	20.700	22.100	13.500	12.200	12.800	12.000
1-30% women on board	-5.274 (3.439)	-3.056 (4.478)			-3.610 (3.698)	-1.653 (3.962)		
30%+ women on board	-2.171 (4.719)	3.203 (7.582)			-6.312 (10.300)	-3.701 (17.540)		
1-30% women execs			7.051 (6.067)	4.500 (6.311)			-1.154 (4.674)	-6.602 (4.293)
30%+ women execs			-3.045 (4.546)	-3.975 (5.390)			-2.262 (7.385)	-0.489 (10.160)
Controls								
country	yes	yes	yes	yes	yes	yes	yes	yes
sector	no	yes	no	yes	no	yes	no	yes
total assets (log)	no	yes	no	yes	no	yes	no	yes
market cap (log)	no	yes	no	yes	no	yes	no	yes
turnover ratio	no	yes	no	yes	no	yes	no	yes
current ratio	no	yes	no	yes	no	yes	no	yes
solvency ratio	no	yes	no	yes	no	yes	no	yes
Constant	16.730 [‡] (4.489)	-56.810 [†] (23.050)	17.010 [‡] (4.847)	-45.350 [†] (21.940)	-0.525 (14.690)	-160.800 [‡] (29.950)	-2.330 (14.840)	-168.500 [‡] (28.480)
Observations	255	137	246	138	143	96	148	99
R-squared	0.032	0.427	0.116	0.565	0.165	0.549	0.044	0.541

Note: Standard errors in parentheses. [‡] p<0.01, [†] p<0.05, * p<0.1. Estimated coefficients from OLS models reported. Profit margin defined as profit before tax/operating revenue.

Appendix Table 9. Company Profitability (Profit Margin) as a Function of Share of Women Executives or Board Members (Caribbean and Southern Cone)

Regions:	Caribbean				Southern Cone			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Specifications:								
Mean of dep. var.	13.900	14.000	13.200	13.900	11.200	12.200	10.900	11.800
1-30% women on board	1.543 (5.553)	-5.994 (6.082)			1.555 (2.618)	-0.985 (2.225)		
30%+ women on board	17.410 [†] (6.727)	15.430 [†] (6.748)			7.521 [†] (3.502)	7.877 [†] (3.443)		
1-30% women execs			-12.660* (7.277)	-10.680 (9.136)			3.575 (3.129)	0.060 (2.665)
30%+ women execs			-3.282 (5.456)	-4.663 (6.413)			8.001 [†] (3.582)	2.866 (3.364)
Controls								
country	yes	yes	yes	yes	yes	yes	yes	yes
sector	no	yes	no	yes	no	yes	no	yes
total assets (log)	no	yes	no	yes	no	yes	no	yes
market cap (log)	no	yes	no	yes	no	yes	no	yes
turnover ratio	no	yes	no	yes	no	yes	no	yes
current ratio	no	yes	no	yes	no	yes	no	yes
solvency ratio	no	yes	no	yes	no	yes	no	yes
Constant	-19.960 (20.630)	-31.120 (41.830)	-2.550 (20.480)	-12.400 (51.990)	4.833* (2.834)	-24.720 [‡] (9.458)	5.006* (2.769)	-25.810 [‡] (9.930)
Observations	86	55	83	54	602	466	611	464
R-squared	0.394	0.680	0.357	0.568	0.023	0.436	0.024	0.406

Note: Standard errors in parentheses. [‡] p<0.01, [†] p<0.05, * p<0.1. Estimated coefficients from OLS models reported. *Profit margin* defined as profit before tax/operating revenue.