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Boards of a Feather: Homophily in Foreign Director Appointments Around the World

September 28, 2021

Abstract: We examine how *similarity* in institutional, legal, and social characteristics between a firm's and its directors' home countries, i.e., country-pair homophily, affects foreign director appointments. We estimate a gravity model that includes economic and geographic proximity and find that country-pair homophily is a significant determinant of foreign director appointments to corporate boards. We also find that country-pair homophily affects the appointments of foreign directors originating from high at firm located in low governance countries, which may limit the role of board internationalization in the global convergence of governance practices. We utilize the international IFRS adoption and Norway's gender-quota rule to observe variation in foreign director appointments and assess the importance of country-pair homophily to explain that variation. We find that both events led firms to appoint more foreign directors originating from countries that are institutionally, socially, and culturally more similar to their own domicile country, attesting to the importance of homophily in foreign director appointments.

Keywords: corporate governance; foreign directors; gravity model; homophily; culture; IFRS; Gender quota

JEL Classification: F16, F66, G30, G34, J60

1. Introduction

We examine how *similarity* in institutional, legal, and social characteristics between a firm's and its directors' home countries, i.e., country-pair homophily, affects foreign director appointments. The composition of the corporate board has long been viewed as a critical governance characteristic (Adams, Hermalin, and Weisbach 2010) and board diversity has become one of the most significant governance issues facing executives and shareholders. For example, gender and ethnic diversity in boards have been mandated by governments and institutions around the world (e.g., Organization for Economic Co-operation and Development (OECD), 2015). While the ethnic and gender composition of the board attracts considerable media and political attention, firms consider other dimensions of diversity when selecting the composition of their boards (e.g., Bernile, Bhagwat, and Yonker 2018). The demand for diversity and the need to keep up with business globalization has led firms to increasingly appoint foreign directors, i.e., individuals domiciled in other countries.

Foreign directors can bring diversity of thought and country-specific expertise (Masulis, Wang, and Xie 2012; Miletkov, Poulsen, and Wintoki 2016). Moreover, board internationalization has been singled out as a mechanism for propagating corporate governance practices across countries (Iliev and Roth 2018; Giannetti, Liao, and Yu, 2015; Bouwman 2011; Hansmann and Kraakmann 2001; Khanna, Kogan, and Palepu 2006; Davies and Hopt 2013; OECD 2017).² Despite the perception that foreign directors enhance board diversity and promote the propagation of governance, evidence on the drivers of cross-country director appointments remains sparse. We

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¹ For example, governments in Norway, France, Germany, Italy and Iceland have passed laws imposing quotas for women on boards of publicly listed companies. In the US, California laws requires public companies to have at least one female director and one director from an underrepresented community by the end of 2021. Examples of non-governmental initiatives promoting board diversity include The Alliance for Board Diversity and the Catalyst Institute.

² For example, the German Corporate Governance Code encourages the appointment of foreign members to supervisory boards.

provide evidence on the determinants of cross-border director appointments highlighting the role of *shared* institutional and social conditions between the firm's country and the directors' home country, i.e., *country-pair homophily*.

Prior governance work shows that firms' selection of governance policies, including board structure, are influenced by institutional, economic, and sociocultural conditions of their domicile country (e.g., Lel and Miller 2019; Levit and Malenko 2016; Durnev and Kim 2005; Doidge, Karolyi, and Stulz 2007; Black 2001). Prior studies also conclude that similarities between countries are significant determinants of cross-country transfer of knowledge, labor, and finance (Bloomfield, Brüggerman, Christensen, and Leuz 2017; Aggarwal, Erel, Ferreira, and Matos 2011; Guiso, Sapienza, and Zingales 2009; Khanna et al. 2006). Consequently, we posit that both the supply of and the demand for foreign directors are not only affected by firms' country characteristics but also by the *similarities* in institutional, economic, legal, and sociocultural characteristics between a firm's and its directors' home country. Existing studies on cross-country director appointments are informative about firm-level governance choices (Iliev and Roth 2018; Giannetti et al. 2015; Masulis et al. 2012; Bouwman 2011), but largely ignore the role of shared country-level characteristics.³ We supplement this inquiry by examining whether shared characteristics, country-pair homophily, affect foreign director appointments.

Homophily is the tendency of individuals to associate, interact, and bond with others with similar characteristics and backgrounds and is construed as inhibiting diversity. Homophily has been identified as affecting social networks based on inter-personal relationships (McPherson, Smith-Lovin, and Cook 2001), group formation, and social connections in a wide array of settings,

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³ Further, firm-level studies capture the marginal effect on firms' governance rather than the aggregate effect on country-level governance. Micro estimates equal aggregate estimates only if the micro estimates are proportional to the aggregate estimate. In the case of firm-level governance within a country the proportionate assumption rarely holds (i.e. the marginal firm does not always equal the average firm).

such as school, work, and marriage (e.g., Rivera 2012, McPherson et al. 2001, DiMaggio and Powell 1983). Since inter-personal relationships and networking are key elements of director selection and retention, we expect that homophily at the country-pair level affects the supply of and demand for foreign directors. When selecting foreign directors, firms likely consider their background and experiences that are shaped by the conditions in their home countries. Homophilly would lead firms to prefer directors who share institutional and sociocultural values with its domicile country to increase board diversity but reduce the risk of frictions and lack of cooperation with the other board members. Homophily also affects directors' preferences. Directors likely prefer geographically and culturally proximate firms to minimize information-gathering costs, uncertainty, and personal conflicts (Alam, Chen, Ciccotello and Ryan 2014).

Our motivation to study homophily in foreign director appointments at the country-pair level is threefold. First, by its very nature, the notion of a "foreign" director is a country-level construct, i.e., a director is classified as "foreign" if the director's domicile country is different from that of the firm's. Second, modeling homophily using individual director characteristics in a cross-country setting is an empirical challenge given the broad cross-sectional variation within countries.⁵ In contrast, country characteristics serve as parsimonious proxies for individual values and firms' features. Third, prior literature shows that country characteristics are more important than firm characteristics in explaining international variation in governance (Lel and Miller 2019;

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⁴ In the case of the marriage market, positive assortative mating along observable inheritable traits (e.g., intelligence, race, and height) as discussed by Becker (1973) can be viewed as the micro foundation of homophily in which choosing a partner with similar characteristics increases the certainty about the quality of one's offspring.

⁵ Proxies of homophily at the individual level (traits and characteristics) cannot capture the aggregate country shared characteristics. Director characteristics such as age and education, are not unique to foreign directors. What is unique in the cross-country setting is the commonalities between firm and director countries. Further, studying individual similarity represents a theoretical and empirical challenge.

Levit and Malenko 2016; Doidge et al. 2007)⁶; and aggregate commonalities determine economic exchange, over and above individual country characteristics (Bloomfield et al. 2017; Karolyi, Sedunov, and Taboada, 2018; Karolyi and Taboada 2015).⁷

To operationalize *country-pair homophily* between the firms and the directors' countries we focus on first-order similarity measures previously identified in the literature. We use *Cultural proximity*, *Common religion*, *Common language* (Inglehart and Welzel 2005; Hofstede 2001), *Colonial link*, *Common legal origin*, financial *Reporting proximity*, and *Governance proximity* to capture similarities associated with the corporate sector and the director labor market. These commonalities have been shown to influence cross-country exchange and tend to persist over time (e.g., Ahern, Daminelli, and Fracassi 2015; Guiso et al. 2009; Head and Mayer 2013; Banerjee and Iyer 2005).⁸ Since these characteristics are strongly intertwined, we perform a factor analysis to identify the underlying factors of country-pair homophily. We obtain two distinct factors of country-pair homophily: *Cultural and institutional proximity* and *Colonial ties*.

To empirically examine the effect of country-pair homophily on foreign director appointments, we estimate a gravity model using a sample of 169,472 directors appointed to 26,940 corporate boards in 38 countries from 2000 to 2013.9 We include all country-pair observations in our dataset to account for both potential and realized cross-country director appointments. We find that firms located in economically significant countries (in terms of GDP)

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⁶ For example, research in international accounting and finance documents that cultural and social proximity promotes trade, foreign investment, household equity ownership, and cross-border M&A (Christensen, Maffett and Vollon 2019; Ahern et al. 2015; Aggarwal, Kearney and Lucey 2012; and Guiso, Sapienza, and Zingales 2009).

⁷ We test the relative importance of firm-level and country-level determinants for our foreign director setting (see Appendix 2, Table A2.1).

⁸ The similarity in financial reporting practices is relevant for foreign director appointments because financial information can enhance governance and directors' effectiveness in performing their duties (Armstrong, Guay and Weber 2010).

⁹ The gravity model has been widely used to explain cross-country trade and investment (Karolyi et al. 2018; Anderson 2011; Guiso et al. 2006, 2009; Berkowitz, Moenius, and Pistor 2006; Anderson and Marcouiller 2002; Anderson 1979).

appoint a larger number of foreign directors originating from other economically significant countries, while geographic distance decreases, and a shared border increases cross-country director appointments. More importantly, our country-pair homophily factors, *Institutional and cultural proximity* and *Colonial ties*, are significant determinants of foreign director appointments, incrementally to the economic and geographic similarities. The impact of country-pair homophily on foreign director appointments is about 20% of the impact of economic factors (GDP) and is similar in magnitude to geographic proximity.

We next investigate the importance of country-pair homophily over time. Improvements in transportation and communication technologies and an increase in business globalization have potentially altered foreign director appointments around the world, relaxing impediments related to geographic, sociocultural, and institutional factors. While both the number of foreign directors and international trade increased significantly during our sample period, we observe that the effect of country-pair homophily on foreign director appointments remains important.

We also study the differential effect of country-pair homophily in weak and strong governance countries. While firms in weak governance countries have incentives to attract directors from superior governance countries to facilitate improvements in governance, directors with strong governance experience likely prefer board positions in other strong governance countries to maximize the return on their skills and reputation. We find that most directors from strong governance countries are appointed to boards of equally strong-governance countries and that both *Cultural and institutional proximity* and *Colonial ties* explain director movements between high and low governance countries. These results provide suggestive evidence on the limits of relying on foreign directors to facilitate governance convergence.

Given the sticky nature of country-pair homophily identification is particularly challenging in our setting. To provide further insight on the importance of country-pair homophily for the international director market, we exploit two policy interventions affecting firms' and directors' board choices: the international adoption of IFRS and the adoption of the gender quota in Norway. Specifically, we examine whether changes in foreign director appointments associated with the two interventions are explained by country-pair homophily.

The adoption of common accounting standards (IFRS) improves financial reporting comparability, thereby facilitating the transferability of directors' financial reporting skills between adopting countries and increasing the likelihood of foreign director appointments. Consistent with this prediction, we find an increase in foreign director appointments in countries adopting IFRS. We also find that the increase is higher when a firm's and a director's domicile country are institutionally and culturally similar.

The gender-quota rule potentially leads Norwegian firms to appoint female directors originating from outside Norway, since the supply of local female directors is likely inelastic in the short run. As expected, the gender quota rule increased the proportion of female directors and most of them originate from foreign countries given the inelastic supply of domestic female directors. However, we find that this increase is stronger for female directors from countries that are more similar to Norway. Our results suggest that while IFRS and the gender quota rule increased foreign director appointments, these directors originate from similar countries, reinforcing the importance of country-pair homophily in director appointments.

Our findings inform several areas of inquiry. First, we extend the corporate board governance literature. Prior studies on firm-level director choice indicate that firms prefer to hire directors located geographically proximate to the firm (e.g., Alam, et al. 2014; Knyazeva,

Knyazeva and Masulis 2013). We extend this research by showing that institutional and sociocultural similarities between the firm and the director countries are additionally important for board
structure over and above geographic factors. Second, our study adds to a growing literature on the
role of board internationalization for global governance policies. We contribute to this literature
by identifying country-pair factors that influence both the demand for and the supply of directors
between countries. Our work suggests that country-pair homophily complements the effect of trade
and financial globalization in the globalization of governance quality (Doidge et al. 2007) and
draws attention to the limits of relying on foreign appointments for convergence in governance
practices across countries. Our study also adds insights to the board diversity debate. The
internationalization of boards need not result in enhanced cognitive diversity in the boardroom, as
firms select foreign directors that share the firm's institutional and social values.

The remainder of the paper is organized as follows: the next section presents the data and variables used in our empirical analyses. Section 3 examines the determinants of foreign director appointments and the role of country-pair homophily. Section 4 explores variation in foreign director appointments around two regulatory interventions and provides early evidence on firm value effects. We conclude in Section 5.

2 Sample and Data

We use the BoardEx database to collect detailed historical information on the board membership and individual characteristics of directors and senior executive officers of public companies in 38 countries.¹⁰ We use several BoardEx data files ("Director Characteristics,"

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¹⁰ For example, Sergio Marchionne was the CEO of Fiat Daymler Crysler in 2013 and independent director of Philip Morris. In our sample Marchionne represents, at the company level, a connection between Fiat Daymler Crysler and Philip Morris, whereas at the country pair-level, he represents a connection between Italy and the US. We note that

"Director Employment," "Director Network" and "Director Other Activities") to compile our sample, tracking each director's employment history using the start and end dates of their appointments along with other relevant information. Our sample consists of 169,472 directors appointed to 26,940 corporate boards in 38 countries over the period 2000 to 2013.

We rely on information available in BoardEx to define director domicile throughout the sample period. We caveat that BoardEx does not provide information on a director's primary employer's country. 12 To overcome this limitation, we use each director's country of citizenship (44 percent of sample cases), and, if unavailable, use the domicile country of the firm on whose board they received their first director appointment reported in BoardEx (56 percent of sample cases). Our inferences do not change if we use either nationality or the country of the first appointment to classify director domicile, as shown in Appendix 3, Table A3.1. We drop observations with incomplete information about director domicile (country of origin i) and company domicile (country of destination j). We compile our sample by each firm's domicile country (destination), director's domicile country (origin), and year to form all possible combinations of country pairs and for each country-pair, we calculate the number of directors domiciled in country i appointed to companies domiciled in country j. The final sample comprises 19,684 observations, representing all possible combinations of pairs among 38 countries over the period of 2000 to 2013. 13

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our inferences do not change if we exclude senior executive officers from our analyses (please see Appendix 3, Table A3.3).

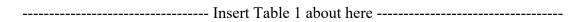
¹¹ Our sample period is determined by our access to BoardEx international data. BoardEx provides data in different modules that can be linked through companies and individuals' identifiers.

¹² For instance, Masulis et al. (2012) rely on a specific field in RiskMetrics to identify information about the country of a director's primary employer. This field is not available in BoardEx.

¹³ Our inferences do not change if we restrict the analysis to 2013 to account for the fact that BoardEx has poorer data coverage in the earlier sample years. This analysis is shown in Appendix 3, Table A3.2 Panel A, Column 3.

We supplement the BoardEx data with country-level data from several sources. The gross domestic product (GDP) data is obtained from the World Development Indicators (World Bank 2014). Data for *geographic distance*, *common borders*, *colonial link*, *common religion*, and *common language* is from Rose (2004) and the CIA Worldfact Book (CIA 2016). We use data from Inglehart and Welzel (2005) for *cultural proximity*; Global Competitiveness Report for *reporting proximity* (World Economic Forum 2013); and Karolyi (2015) for *governance proximity*. *Common legal origin* is obtained from La Porta, Lopez-de-Silanes, and Shleifer (2006). The United Nations' Comtrade Database provides trade data. Migration data are obtained from OECD (2014), and foreign direct investment (FDI) data are from United Nations' UNCTAD database. Firm-level data are from the Thompson Reuters (now Refinitiv) Worldscope database.

In Table 1, Column 1, we show that the percentage of foreign directors increased from 10.61 percent in 2000 to 19.47 percent in 2013, which supports the general perception of increasing board internationalization (e.g., Giannetti et al. 2015; Masulis et al. 2012). ¹⁴ Table 1 also shows that, on average, 63 percent of foreign directors originate from countries with the same legal origin as their firms, 27 percent originate from a contiguous country, and 38 percent from a geographically proximate country. These preliminary results suggest that despite the increase in foreign directors over time, country-pair similarities and geographic constraints are important factors affecting foreign director appointments.



In Figure 1, we show the distribution of foreign directors by country. We observe large differences among countries. In 2013, Luxembourg had the largest percentage of foreign directors (78 percent), followed by South Korea (68 percent), and Ireland (57 percent), while Japan has the

¹⁴ Globalization of corporate boards and discussions about the trend toward more internationally diverse boards have been frequently cited in the media (e.g., Lublin 2005, in The Wall Street Journal)

smallest percentage of foreign directors (six percent), preceded by the U.S. (nine percent), and India (11 percent).

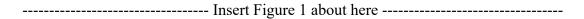


Table 2 reports sample means for the number of foreign directors and other country-level variables. The U.S. stands out as the country with the largest number of foreign directors (3,607), average GDP, trade, and the number of listed firms. Other countries with relatively high number of foreign directors are Canada (2,389), the U.K. (1,887), and Hong Kong (1,466), which are all countries with developed capital markets. Interestingly, with a high number of listed firms, India, Japan, and Spain have relatively few foreign directors, suggesting that the development of capital markets is not the sole driver of cross-country director appointments. The countries with the fewest foreign directors are the Philippines (32), Thailand (48), and Turkey (50).

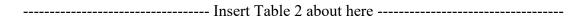


Table 3 tabulates average director appointments between all country pairs during the period 2000 to 2013. The numbers below the diagonal present the average number of directors that are domiciled in country *i* (column) and appointed to companies domiciled in country *j* (row), and the numbers above the diagonal present the average number of directors that are domiciled in country *j* (row) and appointed to companies located in country *i* (column). The U.S. is the largest source with 7,054 directors (among them 2,246 appointed in Canada, 724 in the U.K. and 517 in Ireland), followed by the U.K. with 5,240 directors (among them 2,075 appointed in the U.S., 746 in Canada, and 444 in Australia), and Canada with 1,129 (638 directors appointed in the U.S., 106 in the U.K., and 93 in Australia). This descriptive evidence suggests that proximity of countries' legal structures, language and cultural values are associated with country-pair director appointments. Among the continental European countries, Germany provides the most directors on boards in

other countries with 962 directors (162 in the U.S. and 134 in Switzerland), followed by France with 824 directors (129 in the U.S., 100 in the U.K., and 67 in Belgium). Of the Asian countries, China has the largest number of directors appointed to boards in other countries with 1,907 directors (1,464 in Hong Kong and 107 in Singapore) and Hong Kong is second with 513 (283 in China and 92 in Singapore).

------ Insert Table 3 about here

3. Determinants of foreign director appointments

3.1. Country-pair homophily

To measure country-pair homophily, we consider country similarities along several institutional, legal and socio-cultural characteristics that are commonly used in prior international economics work to explain economic exchange (Karolyi et al. 2018; Karolyi and Taboada, 2015; Karolyi 2016). We use *Cultural proximity* to capture the extent to which shared norms, and individual socio-cultural values in one country differ from those of individuals in another (Inglehart and Welzel 2005; Hofstede 2001). *Cultural proximity* is measured as in Tadesse and White (2010) as follows:

Cultural proximity_{i,j} =
$$[-\sqrt{(TSR_i - TSR_i)^2 + (SSE_i - SSE_i)^2}]$$
,

where *TSR* and *SSE* are the mean values of cultural dimensions *Traditional* versus *Secular-Rational authority* (TSR) and *Survival versus Self-Expression values* (SSE), which are obtained from Inglehart and Welzel (2005). Subscript *i* indicates country of origin, and subscript *j* indicates country of destination.

We also include indicator variables for countries that have a colonial link (*Colony*), the same legal origin (*Common legal origin*), share a main religion (*Common religion*), and speak the

same language (*Common language*). These cultural, social and legal ties persist over time and greatly influence economic exchange between countries.¹⁵

We include *Reporting proximity* to capture similarity in financial reporting practices between countries. Financial reporting is important in improving governance and in facilitating directors' effectiveness in performing their duties (Armstrong et al. 2010). Reporting proximity is calculated as follows:

Reporting proximity_{i,j} =
$$[-\sqrt{(ReportingIndex_j - ReportingIndex_i)^2}]$$
,

where Reporting Index is the mean value of the index measuring a country's auditing and reporting quality from 1995-2012, obtained from the Global Competitiveness Report (World Economic Forum 2013). Finally, we also include *Governance proximity* to measure similarity in governance practices. We use the country governance quality measure developed by Karolyi (2015, 2016). Karolyi (2015) constructs six time-varying country-level governance factors (market capacity, operational inefficiency, foreign accessibility, corporate opacity, legal protection, and political stability). Consistent with Karolyi (2016), we first perform a principal component analysis of these six measures at the country-level and obtain a common factor that we label *Governance Quality* and then calculate *Governance proximity* as follows:

Governance proximity_{i,j} =
$$[-\sqrt{(GovernanceQuality_j - GovernanceQuality_i)^2}]$$
.

A country's institutional legal, socio-cultural and historical characteristics are complementary and highly correlated (e.g., Isidro, Nanda and Wysocki 2020; Stulz and Williamson 2003). Table 4 Panel A displays descriptive statistics for the similarity variables and Panel B presents correlations. To deal with this complementarity and to obtain a parsimonious

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¹⁵ For example, Head and Mayer (2013) document that the impact of these social commonalities on trade are as strong as of a free trade agreement.

¹⁶ We thank Andrew Karolyi for sharing his data.

country-pair homophily measure, we perform a factor analysis applying the principal components method. We obtain two distinct factors capturing country-pair homophily: *Cultural and institutional proximity*, and *Colonial ties*. Table 4, Panel C shows the rotated factor loadings using varimax rotation (for parsimony and readability, we only print factor loadings higher than 0.2); and Panel D shows the variation explained by each country-pair homophily factor. The two-factor solution represents a balance between (i) explaining a large proportion of the variation, (ii) retaining factors with substantial incremental explanatory power, and (iii) finding a parsimonious solution (Isidro et al. 2020).¹⁷

The first factor accounts for 30 percent of the total variation and represents *Cultural and institutional proximity* between two countries (high loading of variables *Cultural proximity*, *Common religion, Reporting proximity* and *Governance proximity*). Institutional and cultural similarities are complementary (e.g., Stulz and Williamson 2003) and strongly determine foreign investment, corporations' internationalization strategies, and other cross-country economic exchanges (Christensen et al. 2019; Ahern et al. 2015; and Guiso et al. 2009; Xu and Shenkar 2002).

The second factor, *Colonial ties*, accounts for about 20 percent of the total variation and captures colonial heritage between destination and origin country (*Colony*, *Common legal origin*, and *Common language*). Colonial ties represent countries' psychic distances that affect perceptions of familiarity with a particular country based on collectively shared beliefs about that country (Makino and Tsang 2011). Similarity between countries does not only depend on actual knowledge about the other country (e.g., due to similarities in the institutional setting) it also depends on beliefs and assumptions that take a more collective dimension. This effect is stronger

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¹⁷ In selecting factors, we rely on the commonly used criteria of eigenvalues larger than one (Kaiser 1960).

in the presence of colonial ties (van Veen, Sahib and Aangeenbrug 2014). Historical colonial connections create deep-rooted beliefs that shape countries' cultural and institutional features and have long-lasting effects on economic outcomes (Banerjee and Iyer 2005; La Porta et al. 1998).

----- Insert Table 4 about here -----

We further illustrate our two measures of country-pair homophily with some examples. In Figure 2, we plot a two-dimension graph displaying the scores of Cultural and institutional proximity and Colonial ties for a selection of few countries (United States, Germany, Norway, France, China, and Russia). Relative to the United States, the United Kingdom is positioned at the top right of both axes, i.e., high country-pair homophily (Cultural and institutional proximity is 1.06 and Colonial ties is 4.24); while Russia is positioned at the bottom left of both axes, i.e., low country-pair homophily (Cultural and institutional proximity is -2.42 and Colonial ties is -0.32). Relative to Germany, Austria is positioned at the top right of both axes (Cultural and institutional proximity is 0.60 and Colonial Ties is 4.15), while Russia lies at the bottom left (Cultural and institutional proximity is -1.43 and Colonial ties is -0.56). Relative to Norway, three Scandinavian countries are positioned at the top right of both axes: Finland (Cultural and institutional proximity is 2.00 and Colonial ties is 0.33), Sweden (Cultural and institutional proximity is 2.18 and Colonial ties is 0.39), and Denmark (Cultural and institutional proximity is 2.17 and Colonial ties is 0.28); while Russia is in the bottom left (Cultural and institutional proximity is -2.18 and Colonial ties is -0.45). Relative to France, Belgium is positioned at the top right of both axes (Cultural and institutional proximity is 2.00 and Colonial Ties is 1.61), while China is at the bottom left (Cultural and institutional proximity is -1.18 and Colonial ties is -0.51). Relative to China, Japan is positioned at the top right of both axes (Cultural and institutional proximity is 0.74 and Colonial ties is 0.56), while Canada at the bottom left (Cultural and institutional proximity is -2.30 and

Colonial ties is -0.35). Finally, relative to Russia, Greece is positioned at the top right of both axes (Cultural and institutional proximity is 0.43 and Colonial ties is 0.49), while Canada is at the bottom left (Cultural and institutional proximity is -2.88 and Colonial ties is -0.33).

----- Insert Figure 2 about here -----

3.2. Gravity model

To examine the role of country-pair homophily in foreign director appointments, we estimate a gravity model on our 38-country sample. The traditional gravity model (Anderson 1979) relates trade flows between countries as a function of its chief facilitators and impediments. The model predicts that a mass of goods supplied by the origin country i (GDP origin) is attracted to a mass of demand for these goods at the destination country j (GDP destination). In our foreign director model, the attraction force is reduced by geographic distance and is increased by country-pair homophily. Empirically we estimate the following model:

Foreign Directors_{i,j,t} =
$$\gamma_0 + \gamma_1 Cultural institutional proximity_{i,j} + \gamma_2 Colonial ties_{i,j}$$
 (1)
+ $\gamma_3 GDP \ destination_{j,t} + \gamma_4 \ GDP \ origin_{i,t} + \gamma_5 \ GeographicDistance_{i,j}$
+ $\gamma_6 \ Contiguous_{i,j} + + \varepsilon_{i,j,t}$

Where *Foreign Directors* is the number of directors domiciled in the origin country *i* appointed at firm boards in the destination country *j* in year *t*. Given that our dependent variable has a large proportion of zeros, as many country-pairs do not have director appointments, we supplement our OLS gravity model with the Poisson pseudo-maximum likelihood (PPML) estimator as proposed and been shown to perform well when a sample consists of a large proportion of zeros by Santos Silva and Tenreyro (2006) and used in several studies that estimate gravity equations (e.g., Karolyi and Taboada 2015).

In our gravity model, we include GDP of destination country j and GDP of origin country i to account for the two countries' mass. In alternative specifications, we use the logarithm of the

Number of listed firms in the two countries which proxies for the size of capital markets; we also substitute GDP per capita and Human capital for GDP. 18 We include Geographic distance in the model because: (i) cultural and institutional differences and information barriers increase in distance; and (ii) despite technological and policy improvements, it remains influential in affecting international exchange (Head and Mayer 2013). We calculate Geographic distance as the logarithm of the distance between the two countries' capitals, which is expected to reduce trade relations between two countries. We also include an indicator variable for *Contiguous* countries, which takes the value of one if country *j* and country *i* border each other and zero otherwise (CIA 2016; Rose 2004).¹⁹

Following prior literature, we also include country fixed effects for the origin country (DD) and the destination country (CD) to account for persistent country characteristics (Anderson 2010; Subramanian and Wei 2007; Baldwin and Taglioni 2006; Feenstra 2004; Rose and Van Wincoop 2001). The country-of-origin fixed effects capture systematic differences in foreign directors from a particular country, whereas the country-of-destination fixed effects capture the demand for directors from the destination country, which derives from economic activity, capital market development, and institutional quality. Finally, we include year fixed effects, and we adjust standard errors for group correlation at the country-pair level.²⁰ Detailed variable definitions and measures are provided in Appendix 1.

Table 5 presents the gravity model estimation results using the two country-pair homophily factors described in section 3.1. Our first analysis estimates the baseline gravity model including

¹⁸ We use the human capital index per country developed by the World Economic Forum (2013). Results with these alternative proxies for country masses are shown in Appendix 3, Table A3.2, Columns 4 and 5.

¹⁹ As a sensitivity analysis, we have included in the gravity model controls for economic factors other than GDP that potentially facilitate director appointments between two country-pairs (Bilateral trade and Cross-listings). Results are shown in Appendix 3, Table A3.2. Our conclusions do not change.

²⁰ Our inferences do not change if we cluster standard errors by country of destination.

and destination country. Results presented in Column (1) show that our baseline model explains a significant portion of the global variation in foreign corporate director appointments, with an R-squared of 0.847.²¹ Consistent with extant gravity model estimates, we find a positive association with the two GDP measures, a negative association with *Geographic distance*, and a positive association with *Contiguous*. These results confirm that economic significance and geographic distance remain important determinants of director appointments between countries.

The economic size of the country-pair, measured by GDP origin and GDP destination, is the most important factor explaining foreign director appointments between the two countries. A combined increase of one standard deviation in the two GDPs is associated with a 4.8 times total increase in the mean foreign director appointments or an increase of 43.7% of its standard deviation (79.68).

In Column (2), we augment the baseline model by including our two country-pair homophily measures. The country-pair homophily factors increase the model's explanatory power by approximately 6 percent (from 0.847 to 0.901). The importance of the homophily factors is economically meaningful. An increase of one standard deviation in *Cultural and institutional proximity* (*Colonial ties*) is associated with an increase of 15 (16.61) foreign directors or an increase of 3.4 (5.4) percent of the standard deviation of *Foreign Directors*.²² The joint increase of one standard deviation in both country-pair homophily factors results in an increase of 8.8% of the standard deviation of *Foreign Directors*, which is more than the 8.0% increase generated by

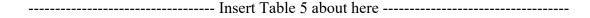
²¹ The R-square of a model with country of origin, country of destination, and year fixed effects is 0.758.

²² The PPML coefficients should be interpreted as if the dependent variable is in logs (Karolyi and Taboada 2015). For instance, given the coefficient on *Cultural institutional proximity* (0.20), a one standard-deviation increase (1; homophily variables are standardized latent factors with zero mean and one standard deviation) is associated with 1.22 times ($e^{0.20 \times 1}$) increase in the mean *Foreign directors* from 12.30 to 15, or an increase of 3.42 per cent of its standard-deviation (79.68).

a similar change in geographic factors (geographic distance and contiguous), and about 20% of the increase generated by the same change in countries' GDPs (8.8% / 43.7%).

Our findings suggest that firms and directors balance the benefits of internationalization with the costs of diversity in the director-firm matching process. Having directors from similar institutional and sociocultural environments leads to foreign expertise and diversity in the board, while reducing the risk of frictions and lack of cooperation with other board members.

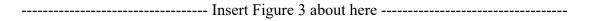
We perform several sensitivity tests. To verify that our results are not unduly affected by including large countries, in Column (3) we estimate the gravity model excluding the U.S. and the U.K. as both destination and origin. In Columns (4) and (5) we re-tabulate results from Columns (2) and (3) using an OLS model. We also re-estimate Equation (2) excluding company executives from *Foreign Directors* (see Appendix 3, Table A3.3). Furthermore, in untabulated analyses, we cluster standard errors at the country of destination level, or alternatively at the year level. Our inferences remain unchanged.



3.3. Country-pair homophily over time

The past two decades have seen: (i) the rapid emergence and adoption of transportation and communication technologies, and (ii) global governance institutionalization, intensified by the growth of multinational organizations (Zhou 2011). These two significant changes have potentially increased director appointments across countries by decreasing travel and employment barriers, perhaps ameliorating country-pair homophily's effect on these appointments. Consequently, we examine the changes in the effect of country-pair homophily on foreign director appointments over our sample period.

We estimate Equation (1) for each year and compute the coefficient on *Cultural and institutional proximity* and *Colonial Ties*. In Figure 3, Panel A, we plot the coefficients by year. The coefficient of *Colonial ties* remains unchanged over our sample period, which is not surprising as colonial heritage and language result from long-gone historical events and tend to remain fixed. The coefficient of *Cultural and institutional proximity* shows a slight but insignificant decrease from 2000 to 2013. In Panel B, we compare country-pair homophily *changes* with changes in the aggregate level of *Foreign Directors* and *International trade*. We find that relative to 2000, *Foreign Directors* have increased by 180 percent while *International trade* has increased by 144 percent. Collectively, these results suggest that barriers to both director mobility and international trade have decreased over time. Nevertheless, we find that the association between country-pair homophily and foreign director appointments remains significant.



3.4. Country-pair homophily and country-level governance quality

We compare the importance of country-pair homophily in foreign director appointments across weak and strong governance countries. Given that firms in countries with weak governance derive larger benefits from directors with superior governance experience, country-pair homophily may be less important in affecting foreign directors' demand in these countries (Miletkov et al. 2016; Levit and Malenko 2016; Lel and Miller 2019). However, directors from strong governance countries are potentially less willing to move to weak governance regimes. Directors in strong governance countries likely prefer board positions in other strong governance countries with similar institutional and social conditions, to maximize capital accumulation and skill acquisition

(Hall and Jones 1999). We examine how country-pair homophily affects the demand and supply of foreign directors in different governance regimes.

We partition our sample into below/above the median country *Governance quality* (Karolyi 2015) and identify the likelihood of appointments of foreign directors originating from high/low governance countries to firms in high/low governance countries. Table 6 displays our results. Panel A shows an uneven distribution of foreign director appointments across governance regimes. Most directors with superior governance experience are appointed at firms in other strong governance environments (69.06%). Directors from low governance environments prefer to move to high governance quality countries (14.97%) than to low governance quality countries (1.66%), possibly to benefit from higher returns to their human capital and expertise. In Panel B we examine the relation between country-pair homophily and these across-governance regime director appointments. Regardless of supply and demand preferences in director appointments, we find that the two country-pair homophily factors affect foreign director appointments in practically all cross-governance settings.²³ Our results suggest that shared institutional, sociocultural, and historical backgrounds are significant determinants of director appointments between high and low governance countries.

Insert T	Table 6 about here
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3.5. Estimating gravity model with pair fixed effects

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²³ When governance is low at both origin and destination *Cultural and institutional proximity* is negative and not significant; when governance is low at origin and high at destination *Cultural and institutional proximity* is positive but not significant.

Our primary analysis uses two sets of country fixed effects (i.e., origin and destination) to account for bilateral resistance to trade and other transaction costs and to allow the estimation of the coefficients' time-invariant characteristics. Following prior work, we adopt a two-step fixed effects model (Bussière and Schnatz 2009; Cheng and Wall 2005).²⁴ Specifically, we first estimate the following model:

Foreign Directors_{i,j,t} =
$$\alpha_{ij} + \gamma_t + \gamma_t GDP$$
 destination_{j,t} + $\gamma_t GDP$ origin_{i,t} + $\varepsilon_{i,j,t}$ (2)

The term α_{ij} represents the country-pair individual effects covering all unobservable factors affecting the dependent variable, and the term γ_t is the time-specific effects accounting for any variables affecting the dependent variable that vary over time. These terms are constant across country-pairs (e.g., global changes in transportation and communication costs). We then purge the fixed effects from the effects of the time-invariant variables and estimate the following model:

$$\alpha_hat_{i,j} = \beta_0 + \beta_1 Cultural institutional proximity_{i,j} + \beta_2 Colonial ties_{i,j} + \beta_3 Geographic distance_{i,j}$$
(3)
+ \beta_4 Contiguous_{i,j} + \mu_{i,j}

Where α_-hat is the estimated country-pair effect from Equation (2). All variables are from Equation (1) and variable definitions are provided in Appendix 1. The analysis level is the country-pair. Table 7, Column 1, presents the first stage results, while Column 2 tabulates the second stage results. Consistent with our primary results, we find that *Geographic distance* is negatively associated, whereas *Contiguous*, *Cultural and institutional proximity* and *Colonial ties* are positively related with the estimated country-pair effects.

----- Insert Table 7 about here -----

22

²⁴ Egger and Pfaffermayr (2004), however, show that country-pair fixed effects are preferable than origin and destination country fixed effects to obtain efficient estimators. Relatedly, Micco, Stein, and Ordoñez (2003) suggest that the inclusion of country-pair fixed effects potentially mitigate endogeneity problems.

4. Two policy interventions and firm value analysis

In this section we explore two policy interventions that potentially change foreign directors' appointments: the staggered adoption of IFRS and the adoption of the gender quota in Norway. Given the sticky nature of country-pair homophily identification is particularly challenging in our setting. To provide some insight on the importance of country-pair homophily for the international director market, we examine whether the time-series variation in foreign directors' appointments around the two interventions is a function of country-pair homophily. We provide preliminary evidence on the firm value consequences of country-pair homophily.

4.1 Staggered adoption of IFRS worldwide

Recent studies suggest that the adoption of common accounting standards (IFRS) plausibly increased financial reporting proximity between adopting countries. IFRS represents a common financial language that is supposed to improve international reporting comparability (De George, Li, and Shivakumar 2016; Cox 2014; Jayaraman and Verdi 2013; Barth, Landsman, Lang, and Williams 2012; Daske, Hail, Leuz, and Verdi 2008). IFRS improvement in reporting comparability has encouraged cross-country investment (Francis, Huang, and Khurana 2016), foreign institutional holdings (DeFond, Hu, Hung and Li 2011) and equity cross-listings (Chen, Ng and Tsang 2015). Common financial reporting rules have also increased the transferability of financial skills across countries (Bloomfield et al. 2017), suggesting that IFRS adoption potentially facilitates appointments of foreign directors across adopting countries. We examine the possibility that IFRS improvement in reporting proximity resulted in increased cross-country director appointments. We then examine whether that increase is affected by country-pair homophily among adopting countries.

Following Christensen, Hail, and Leuz (2013) we restrict our analysis to the 2001-2009 period to obtain a similar group of IFRS adopter and non-adopter countries, and employ the following model at the country-pair level:

```
Ln(Foreign\ Directors)_{i,j,t} = \gamma_0 + \gamma_1 Cultural\ institutional\ proximity_{i,j} + \gamma_2\ Colonial\ ties_{i,j} + \gamma_3\ Both\_IFRS \qquad (3) \\ + \gamma_4\ Both\_IFRS\ x\ Cultural\ institutional\ proximity_{i,j} \\ + \gamma_5\ Both\_IFRS\ x\ Colonial\ ties_{i,j} + \gamma_6\ GDP\ destination_{j,t} + \gamma_7\ GDP\ origin_{i,t} \\ + \gamma_8\ Geographic\ distance_{i,j} + \gamma_9\ Contiguous_{i,j} + \varepsilon_{i,j,t}
```

The variable Both IFRS is a dichotomous variable equal to one if both origin and destination countries require IFRS at time t. We include in the model interaction terms between Both IFRS and the two country homophily factors. All other variables are defined in Equation (1) and Appendix 1. The model includes country of destination and year fixed effects and standard errors are clustered at the country-pair level. Table 8 presents the results. In Column (1), the positive and significant coefficient on Both IFRS suggests that when reporting proximity between two countries improves through the adoption of same reporting rules, the number of foreign director appointments between the two countries increases post-adoption period.²⁶ Importantly, this increase is stronger when the adopting countries also share cultural and institutional backgrounds (Both IFRS x Cultural and Institutional proximity is significantly positive). This result suggests that IFRS facilitated the transfer of directors across adopting countries, and that movement is stronger when countries have cultural and institutional similarities. Country homophily remains a significant factor affecting international director appointments, even after improvements in reporting comparability through IFRS adoption. Sharing colonial ties does not seem to increase foreign directors' appointments for IFRS adopters, perhaps because homophily

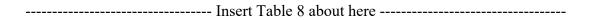
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²⁵ For example, both Italy and Spain adopted IFRS in 2005, hence *Both_IFRS* takes the value of one for the country pair Italy-Spain from 2005 through 2009, and zero from 2001 through 2004.

²⁶ In Appendix 3, in Table A3.4, we aggregate observations at the country level and confirm that foreign director appointments increase in the post adoption period for IFRS adopters (Panel A). The plots in Panel B confirm an upward trend in the percentage of foreign directors around the adoption of IFRS.

between adopting countries (most notably European countries) is best captured by institutional and cultural similarities. In Column (2), we exclude the U.S. as both country of destination and country of origin and find similar results.

Arguably, the increased comparability of financial information resulting from IFRS adoption could have affected other economic outcomes, which in turn could lead to an increase in foreign directors after IFRS, particularly directors from institutionally and culturally similar countries. One plausible outcome is cross-border acquisitions (Francis et al. 2016), which could lead to board integration between merging companies - potentially headquartered in different countries. To test this possibility, in Column (3) of Table 8, we exclude all firm-year observations where the change in board size with respect to year *t-1* is larger than zero.²⁷ The term *Both_IFRS x Cultural and Institutional proximity* remains significantly positive.



4.2 Adoption of gender quota rule in Norway

To further examine country-pair homophily's effect on foreign director' appointments, we exploit the change in female director appointments in Norway around its adoption of the gender quota rule. Prior studies have used the Norwegian case as a natural experiment to examine firm-level consequences of the quota introduction, such as firm value (Eckbo, Nygaard, and Thorburn 2019; Ahern and Dittmar 2012), firm performance (Matsa and Miller 2013), board efficiency (Bøhren and Staubo 2014), and gender disparity in earnings (Bertrand, Black, Jensen, and Lleras-

Appendix 3, Table A3.5).

25

 $^{^{27}}$ Francis et al. (2015) show that GAAP similarity can influence the volume of cross-country M&A's. We include *GAAP similarity* in Equation (1) and show results in Appendix 3, Table A3.2, Column (2). We find a positive although not significant coefficient on *GAAP similarity*. We thank Jere Francis for sharing his data. We also exclude all firm-year observations where the change in board size with respect to year t-I is larger than zero (results are reported in

Muney 2017). We extend this research by examining how the gender quota impacts the effect of country-pair homophily on foreign director appointments.

Our use of the Norwegian regulatory intervention assumes that *local* directors' supply is inelastic in the short run since it plausibly gives Norwegian firms a smaller pool of *local* qualified female candidates to select directors. The short-run supply of domestic qualified female directors in Norway potentially led Norwegian companies to appoint female directors from foreign countries. To understand the role of country-pair homophily in these appointments, we study whether the newly appointed foreign female directors increasingly originating from countries with more similar characteristics to Norway.

The Norwegian parliament passed the rule in December 2003 and compliance was mandatory by January 2006, with a two-year transition period. We adapt the Ahern and Dittmar (2012) research design and restrict our sample to the 2001 to 2009 period. We also restrict our sample to observations where the country of destination is Norway and estimate the following model:

```
Ln(Foreign\ Female\ Directors)_{i,j,t} = \gamma_0 + \gamma_1 Cultural\ and\ institutional\ proximity_{i,j} + \gamma_2\ Colonial\ ties_{i,j} + \gamma_3\ Quota_t \qquad (4)
+ \gamma_4\ Quota\ x\ Cultural\ and\ institutional\ proximity_{i,j} + \gamma_5\ Quota\ x\ Colonial\ ties_{i,j}
+ \gamma_6\ GDP\ origin_{i,t} + \gamma_7\ Geographic\ distance_{i,j} + \gamma_8\ Contiguous_{i,j}
+ \varepsilon_{i,j,t}
```

All variables are defined in Equation (1), except the dependent variable, which is the natural logarithm of the number of female foreign directors originating from country j in year t, Quota is a dichotomous variable equal to one after 2003 zero otherwise and we include the interaction between Quota and our two country-pair homophily factors. This model includes country of origin and year fixed effects and standard errors are clustered at the country-pair level. We include all female directors in our analysis (executive and independent).²⁸

26

²⁸ Our inferences do not change if we exclude executive female foreign directors from our definition of *Female Foreign Directors*.

Table 9 displays our results. In Column (1), we find a positive and significant coefficient on *Quota*, suggesting that the number of non-Norwegian female directors increased in the post-quota period. We use male foreign directors' appointments as a placebo test and do not observe a significant effect of *Quota* on foreign male directors (Column 2). This result further supports the idea that, Norwegian firms appointed more foreign female directors after the rule, consistent with the short-run inelastic supply of Norwegian female candidates. The positive and significant coefficients for the interaction terms *Quota* and country-pair homophily factors indicate that the newly appointed female directors more likely originate from countries that share similar institutional, cultural, and historical backgrounds with Norway. Hence, country-pair homophily is an important determinant of Norwegian firms' selection of female foreign directors to their boards.²⁹ This finding suggests that the quota-induced increase in gender diversity may lead Norwegian firms to minimize changes in international diversity, potentially to reduce conflict and disruption in the board's functioning.

Columns (3) and (4) exclude Finland, Spain, and Switzerland as countries of origin because they adopted similar gender quota rules during the same period. Our results remain similar. Finally, in Columns (5) and (6), we report the following placebo test. To rule out the possibility that the results are not associated with the rule adoption in Norway, we exclude Norway as both country of origin and country of destination and estimate Equation (4) for each individual country in our sample and calculate the average coefficients, *t*-statistics, and R-squared. We find no significant results for *Quota* and the interaction terms of *Quota* and the country-pair homophily factors.

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²⁹ In Appendix 3, Table A3.6, we aggregate the sample at the country level and follow Abadie, Diamond, and Hainmueller (2014) to construct a "synthetic" Norway with weights chosen so that the resulting synthetic Norway best reproduces the values of the predictors for GDP and female foreign director percentage during the three-year period before the gender quota introduction. Table A3.6, Panel A, shows the percentage of female foreign directors for Norway and its synthetic counterpart. Panel B presents results from OLS regressions that test the differences in percentage of female foreign directors (Column 1) between Norway and the rest of the sample countries. In column (2), we repeat the analyses excluding Finland, Spain, and Switzerland.

----- Insert Table 9 about here

4.3 Foreign director appointments and firm value

The above sections provide evidence that country-pair homophily is an important determinant of foreign director appointments. This section presents a first attempt to analyze the economic consequences of country-pair homophily by examining the potential firm value implications of appointing foreign directors from different homophily environments. Masulis et al. (2012) find that investors react negatively to firms' decisions to bring a foreign independent director to the board but react positively to the appointments of domestic directors. We replicate their analyses by comparing the mean and median stock market reactions between foreign and domestic directors' appointments. We then observe whether the market reaction to hiring foreign directors varies between high and low country-pair homophily appointments. Specifically, we compute standardized cumulative abnormal returns (CAR) for the three-day window around foreign director appointments for high and low country-pair homophily appointments. 30 We restrict our analysis to firms listed in the U.S. because market liquidity and efficiency vary significantly across the world and because the coverage of announcement dates in BoardEx for non-U.S. firms is limited. We obtain a sample of 7,284 director appointment announcements, of which 1,342 are foreign directors. Table 10 displays the results. In Panel A.1, we show the firm value effect of foreign and domestic director appointments announcements, for all directors and independent directors. Consistent with Masulis et al. (2012), we observe a negative investor

³⁰ We use the BoardEx Announcement database. To avoid confounding events, we drop announcements preceded by other director appointments within a seven-day window, and multiple appointments of domestic and foreign directors Abnormal returns are obtained from a market model that uses value-weighted returns for the period -210 days to -11 days.

reaction to firms' decision to appoint a foreign director to the board (the mean and median cumulative abnormal returns are negative and statistically significant at the 0.01 and 0.05 level, respectively). We also find a positive investor reaction to the announcement of domestic director appointments (the mean cumulative abnormal return is positive and statistically significant at the 0.05 level). The mean (median) differences in announcement returns between domestic and foreign directors is significant with a p-value of 0.001 (0.051).

In Panel A.2, we restrict the analysis to foreign directors to exploit the variation in the firm value response to appointments between high and low country-pair homophily. We partition our two country-pair homophily factors, *Cultural and institutional proximity* and *Colonial ties*, by their median to identify *High* and *Low* country-pair homophily. For the first factor (Panel A.2), *Cultural and Institutional Proximity*, we find that investors react negatively to appointments of foreign director from countries with *Low* country-pair homophily (i.e., less homophilic countries). But the reaction to foreign director appointments from *High* country-pair homophily (i.e., more homophilic countries) is not statistically different from zero. The mean and median differences in announcement returns between *High* and *Low country-pair homophily* are statistically significant. We obtain similar results for the second country-pair homophily factor, *Colonial ties* in Panel A.3. The univariate results suggest that the negative investor response to foreign director appointments is largely for directors from countries with *Low* country-pair homophily. A plausible interpretation for this result is that investors anticipate higher costs of international diversity in the board when directors are less familiar with the firms' legal, social and cultural environment.

In Panel B, we conduct multivariate tests. We estimate an OLS regression of cumulative *abnormal* returns on *High* country-pair homophily measures controlling for firm profitability (*ROA*) and *Size*. We add year, industry, country of origin, and country of destination fixed effects.

In Columns 1 and 2, we use all director appointments, while in Columns 3 and 4 we use only independent directors. After including firm-level covariates and fixed effects we do not find significant results for the country-pair homophily variables.

Our analysis of short-term firm value implications of country-pair homophily in foreign director appointments provides marginal evidence that investors view foreign appointments from *less homophilic* countries less favorably than those from *more homophilic* countries. However, we caution that inferences from our investors' response tests do not provide sufficient evidence about firm value effects or welfare consequence of country-pair homophily. Welfare is a broad concept that goes beyond short-term stock market reaction and incorporates economic and social development at the country level. Thus, there are potentially many welfare implications of country-pair homophily that our current tests are unable to capture. We view our tests as a first attempt to study the economic consequences of country-pair homophily. Our results suggest that additional research is required to improve our understanding of the social dynamics of the director labor market.

Insert Table 10 about here

5. Conclusion

We examine the effect of common or shared country characteristics between a firm's country and the director's country, i.e., country-pair homophily, on foreign director appointments. Our work is motivated by extant research documenting that country-level features play a first-order role in the effectiveness and propagation of corporate governance practices. But while country-level institutional, economic, and sociocultural features are expected to influence foreign director appointments, we posit that commonalities between firms' and the directors' domicile countries are likely to further shape corporate boards' internationalization.

Our examination of the shared country characteristics relies on the principle of homophily. Homophily is the tendency of individuals to associate, interact, and bond more with others who possess similar characteristics and backgrounds. In the international director labor market, country-pair homophily is operationalized by institutional, sociocultural, legal, and historical similarities between the directors' and the firms' domicile countries. For a large sample of director-firm appointments across 38 countries, we find that country-pair homophily increases director appointments between countries. Our findings suggest that country-pair similarities that are deeply rooted in societies such as *institutional and cultural proximity* and *colonial ties* have a significant effect in the international director market.

We use the staggered adoption of IFRS and Norway's gender quota as events that potentially alter forces that affect foreign director appointments to examine the effect of country-pair homophily. We find an increase in foreign director appointments around the two events but the increase in foreign directors is mostly caused by directors originating from countries that are like the adopting countries. Our analysis shows that changes in foreign director appointments around these two events are affected by country homophily. We also provide marginal evidence that investors view foreign director appointments from less homophilic countries less favorably than those from more homophilic countries. But we caution that our investors' response tests do not provide conclusive evidence about valuation effects or welfare consequences.

Our findings that country-pair homophily affects the composition and internationalization of corporate boards are relevant to policymakers interested in promoting foreign director appointments as a primary mechanism for global governance convergence. For example, despite the view that firms located in low-quality governance countries can improve governance by recruiting directors from superior governance countries, we find that foreign directors originating

from strong governance countries are more likely and directors from low-quality governance environments are less likely to be appointed to firms in other strong governance countries. Our findings indicate that country-pair homophily affects the cross-country transfer of governance and complements the effect of trade and financial globalization in the global convergence of governance quality. Our study also adds insight to the board diversity debate. As firms prefer foreign directors that share the firm's institutional and social values the natural appointment of foreign directors need not result in board diversity and governance convergence around the world.

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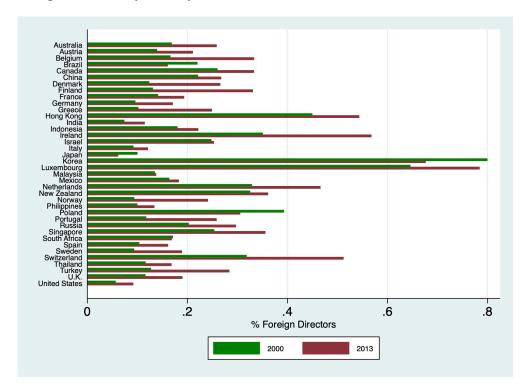
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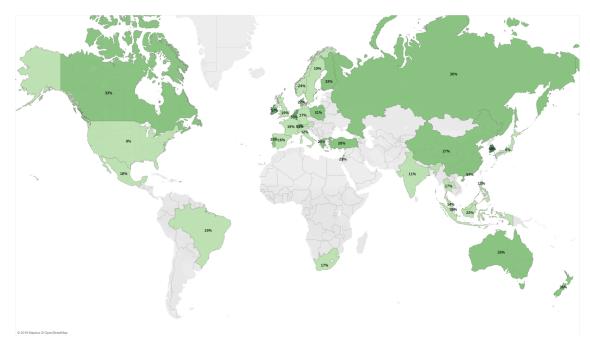
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Figure 1 – Foreign directors around the world

Panel A: Foreign directors by country

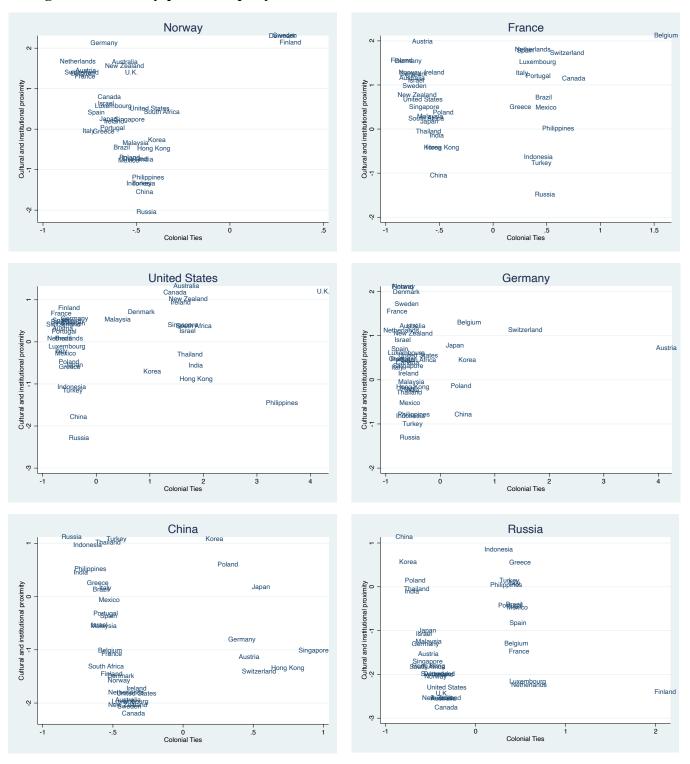


Panel B: World map of foreign directors in 2013



This Figure shows the percentage of foreign directors by country. Panel A reports the distribution for 2000 and 2013. Panel B shows a world map of foreign directors in 2013. Values are expressed as percentages of the total number of directors in a country-year.

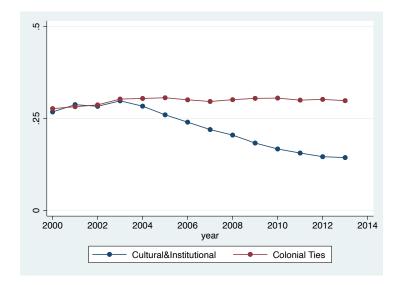
Figure 2 – Country-pair homophily for selected countries



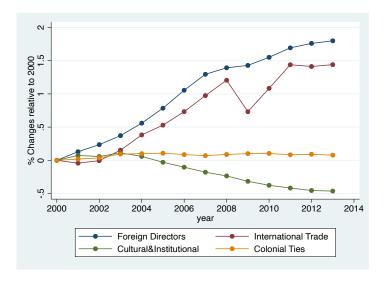
This Figure illustrates examples of our two measures of country-pair homophily (*Cultural and Institutional Proximity* and *Colonial* Ties) for a selection of countries: United States, Germany, Norway, France, China, and Russia. On the x-axis we plot scores for *Colonial Ties*, while on the y-axis we plot scores of *Cultural and institutional proximity*. Each marker on the graph shows a country-pair relation. For example, relative to the United States, United Kingdom is positioned to the top right of both axes, i.e., high country-pair homophily, (*Cultural and institutional proximity* is 1.06 and *Colonial Ties* is 4.24); while Russia is positioned to the bottom left of both axes, i.e., low country-pair homophily (*Cultural and institutional proximity* is -2.42 and *Colonial Ties* is -0.32).

Figure 3 – Country-pair homophily over time

Panel A: Plot of country-pair homophily factors by year



Panel B: Comparing changes in country-pair homophily factors with changes in foreign directors and international trade



This Figure examines trends of country-pair homophily during our sample period. In Panel A, we plot *Cultural and Institutional proximity* and *Colonial ties* by year (levels). In Panel B, we compare changes (relative to year 2000) in *Cultural and institutional proximity* and *Colonial ties* with changes in *Foreign Directors* and changes in *International trade*. Both *Foreign Directors* and *International trade* are aggregated at the year level.

Table 1: Foreign director characteristics

Year	% of foreign directors	Total number of directors	% of foreign directors from countries with same legal origin (3)	% of foreign directors from countries that share a border (4)	% of foreign directors from countries within Q1 of geographic distance (5)	% of foreign directors from countries within Q4 of geographic distance (6)
2000	10.61%	81,307	64%	26%	39%	13%
		, in the second				
2001	11.04%	88,309	64%	26%	39%	14%
2002	11.44%	93,248	64%	27%	39%	14%
2003	11.93%	99,199	65%	26%	38%	15%
2004	12.56%	107,121	65%	26%	38%	16%
2005	13.45%	114,472	65%	26%	37%	17%
2006	14.65%	121,084	64%	26%	37%	17%
2007	15.74%	125,818	63%	26%	37%	17%
2008	16.55%	124,775	63%	27%	38%	17%
2009	17.18%	121,968	62%	27%	38%	18%
2010	17.93%	122,795	61%	28%	38%	19%
2011	18.71%	124,251	60%	28%	38%	20%
2012	19.22%	123,987	60%	28%	38%	19%
2013	19.47%	124,133	60%	27%	38%	19%

This Table reports summary descriptive statistics of corporate directors in our sample. Column (1) shows the percentage of foreign directors. Column (2) shows the total number of corporate directors. Column (3) shows the percentage of foreign directors from countries with the same legal origin. Column (4) shows the percentage of foreign directors that come from countries that share a common border. Column (5) shows the percentage of foreign directors that come from countries that follow within the first quartile of the geographic distance. Column (6) shows the percentage of foreign directors that come from countries that follow within the last quartile of geographic distance.

Table 2 – Country characteristics

Country	Country Code	Foreign Directors	Legal origin	GDP (\$US billions)	Trade (\$US billions)	Listed firms
Australia	AUS	982	Common	869	253	1,647
Austria	AUT	113	German	325	207	93
Belgium	BEL	210	French	399	639	177
Brazil	BRA	112	French	1,332	185	400
Canada	CAN	2,389	Common	1,287	658	3,265
China	CHN	520	German	4,018	1,535	1,548
Denmark	DNK	87	Scandinavian	267	140	200
Finland	FIN	110	Scandinavian	207	111	135
France	FRA	548	French	2,220	823	860
Germany	DEU	502	German	2,917	1,669	705
Greece	GRC	104	French	240	58	308
Hong Kong	HKG	1,466	Common	205	632	1,090
India	IND	394	Common	1,126	232	5,231
Indonesia	IDN	68	French	460	177	361
Ireland	IRL	411	Common	193	163	59
Israel	ISR	208	Common	180	82	609
Italy	ITA	160	French	1,803	631	285
Japan	JPN	153	German	4,803	961	3,205
Korea	KOR	52	German	922	507	1,610
Luxembourg	LUX	226	French	42	29	39
Malaysia	MYS	100	Common	186	253	923
Mexico	MEX	93	French	941	474	147
Netherlands	NLD	431	French	666	669	177
New Zealand	NZL	77	Common	117	44	137
Norway	NOR	141	Scandinavian	344	166	189
Philippines	PHL	32	French	148	82	241
Poland	POL	108	German	361	199	360
Portugal	PRT	69	French	195	91	63
Russia	RUS	122	French	1,101	316	271
Singapore	SGP	564	Common	173	419	478
South Africa	ZAF	257	Common	257	89	437
Spain	ESP	150	French	1,156	406	2,822
Sweden	SWE	244	Scandinavian	401	234	298
Switzerland	CHE	501	German	448	275	256
Thailand	THA	48	Common	232	224	470
Turkey	TUR	50	French	537	162	318
United Kingdom	GBR	1,887	Common	2,214	853	2,302
United States	USA	3,607	Common	13,557	2,394	5,407

This Table reports legal origin, and mean values of number of foreign directors, GDP, total trade, and number of listed firms for the period 2000-2013.

Table 3 – Foreign directors by country of origin (column) and their firm's domicile country (row)

NOR AUS AUT BEL CHE CHN DEU DNK ESP 27 FIN FRA GBR GRC HKG IDN IND 150 IRL ISR ITA JPN KOR LUX MEX MYS NOR NZL PHL POL 23 PRT RUS SGP 31 TUR 75 42 USA 101 ZAF

This Table shows below (above) the diagonal the average number of directors moving from country of origin in *i* column (row) to country of destination in *j* row (column).

Table 4 – Univariate statistics

Panel A: Summary statistics (19,684 observations)

Variable	Mean	Median	P25	P75	SD
Foreign Directors	12.30	1.00	0.00	4.00	79.68
GDP	26.97	26.75	26.10	27.84	1.24
Geographic distance	8.50	8.96	7.75	9.20	1.01
Contiguous	0.05	0.00	0.00	0.00	0.21
Cultural proximity	-1.66	-1.63	-2.26	-1.01	0.83
Reporting proximity	-0.75	-0.65	-1.14	-0.27	0.55
Colony	0.03	0.00	0.00	0.00	0.17
Common legal origin	0.28	0.00	0.00	1.00	0.45
Common religion	0.24	0.00	0.00	0.00	0.43
Common language	0.17	0.00	0.00	0.00	0.38
Governance proximity	-3.13	-3.05	-3.86	-2.27	1.19

Panel B: Correlations (observations 19,684)

	Variables	1	2	3	4	5	6	7	8	9	10	11
1	Foreign Directors	1										
2	GDP destination	0.13*	1									
3	GDP origin	0.20*	0.05*	1								
4	Geographic distance	-0.07*	0.04*	0.04*	1							
5	Contiguous	0.16*	0.06*	0.06*	-0.42*	1						
6	Cultural proximity	0.09*	-0.08*	-0.08*	-0.29*	0.17*	1					
7	Reporting proximity	0.06*	-0.04*	-0.04*	-0.08*	0.06*	0.34*	1				
8	Colony	0.23*	0.05*	0.05*	-0.06*	0.16*	0.05*	0.09*	1			
9	Common legal origin	0.12*	-0.01	-0.01	-0.05*	0.13*	0.14*	0.14*	0.25*	1		
10	Common religion	0.05*	0.02*	0.02*	-0.21*	0.11*	0.18*	0.14*	0.08*	0.16*	1	
11	Common language	0.19*	-0.03*	-0.03*	0.06*	0.11*	0.04*	0.16*	0.25*	0.33*	0.07*	1
12	Governance proximity	0.06*	0.02*	0.02*	-0.26*	0.17*	0.38*	0.40*	0.06*	0.17*	0.20*	0.03*

Panel C: Rotated factor loadings of country-pair latent factors

	Factor 1 Cultural and institutional	Factor 2 Colonial
Country-pair variables	proximity	ties
Cultural proximity	0.743	
Reporting proximity	0.696	
Common religion	0.434	
Governance proximity	0.791	
Common language		0.760
Colony		0.674
Common legal origin		0.706

Panel D: Variation explained by country-pair latent factors

Factor	Eigenvalue	Variation Explained	Cumulative variation explained
Cultural and institutional proximity	2.099	0.300	0.300
Colonial ties	1.368	0.195	0.495

This Table reports univariate statistics of the variables we use in our main models. Panel A reports summary statistics. Panel B reports Pearson correlations of variables for years 2000-2013. Panel C summarizes the factor analysis used to identify the country-pair latent factors. Panel D reports estimated factor loadings (for parsimony and readability, we only print factor loadings higher than 0.2). The symbol * indicates statistical significance at the 5% level. Variable definitions are provided in Appendix 1.

Table 5: Gravity model for foreign director appointments

Dependent Variable		Foreign Directors	Ln(Foreign Directors)		
Sample	ALL CO	DUNTRIES	NO U.S.&U.K.	ALL	NO U.S.&U.K.
Estimator	PPML	PPML	PPML	OLS	OLS
	(1)	(2)	(3)	(4)	(5)
Cultural and institutional proximity		0.20***	0.18***	0.13***	0.11***
		[2.92]	[3.05]	[6.50]	[5.50]
Colonial ties		0.30***	0.29***	0.23***	0.21***
		[9.74]	[6.93]	[10.33]	[7.33]
GDP origin	0.94***	0.92***	0.64***	0.24***	0.20***
	[11.93]	[11.62]	[4.67]	[5.32]	[4.47]
GDP destination	0.39***	0.35***	0.55***	-0.01	0.08*
	[3.89]	[3.47]	[9.50]	[-0.36]	[1.80]
Geographic distance	-0.34***	-0.53***	-0.98***	-0.43***	-0.44***
	[-4.19]	[-8.37]	[-18.18]	[-15.04]	[-14.83]
Contiguous	1.28***	0.49**	0.73***	0.51***	0.56***
	[5.33]	[2.11]	[5.50]	[3.97]	[3.88]
Observations	19,684	19,684	17,640	19,684	17,640
R-squared	0.847	0.901	0.931	0.757	0.62
Country Destination FE	YES	YES	YES	YES	YES
Country Origin FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

This Table examines the economic, geographic, social, legal, reporting and cultural determinants of appointing foreign directors for the period 2000-2013. The level of analysis is the country pair-year. For each country j (38 countries) we include all the possible countries i (37 countries) over the sample period (14 year), resulting in 19,684 observations. Column (1) shows a gravity model controlling for GDP, geographic distance and whether two countries share a common border. In column (2), we include our country-pair homophily vector that captures cultural, reporting, social legal, and institutional similarities between country i and country j (cultural proximity, reporting proximity, the existence of a colonial link between two countries, common legal origin, religion, and language). In column (3), we exclude the U.S. and the U.K. as both country of destination and country of origin. In columns (1) through (3) results are estimated from regressions using Poisson pseudo maximum likelihood (PPML), Santos Silva and Tenreyro (2006). The z-statistics are reported in parentheses. Standard errors are adjusted for group correlation at the country-pair level. In columns (4) and (5) we use an OLS estimator to reproduce results of columns (2) and (3), where the dependent variable is the natural logarithm of *Foreign Directors*. The t-statistics are reported in parentheses. In all models, standard errors are adjusted for group correlation at the country-pair level. The symbols *, **, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two tailed tests. Variable definitions are provided in Appendix 1.

Table 6: Foreign director appointments and country-level governance quality

Panel A: Distribution of foreign director appointments by governance regimes

		DESTINATION			
		LOW	HIGH		
ORIGIN	LOW	1.66%	14.97%		
ORIGIN	HIGH	14.31%	69.06%		

Panel B: Gravity model

Governance Quality Destination	LOW	LOW	HIGH	HIGH
Governance Quality Origin	LOW	HIGH	LOW	HIGH
	(1)	(2)	(3)	(4)
Cultural and institutional proximity	-0.250	0.110	0.56***	0.49***
	[-1.63]	[0.72]	[3.61]	[3.21]
Colonial ties	0.36***	0.27***	0.30***	0.27***
	[4.73]	[3.92]	[4.65]	[8.44]
GDP destination	0.360	0.77***	0.95***	0.86***
	[1.28]	[7.28]	[4.60]	[8.71]
GDP origin	0.39*	-0.110	0.68***	0.110
	[1.78]	[-0.51]	[8.86]	[0.83]
Geographic distance	-1.42***	-0.91***	-0.93***	-0.39***
	[-11.78]	[-7.69]	[-8.05]	[-5.50]
Contiguous	-0.360	0.86***	1.34***	0.30*
	[-1.17]	[2.88]	[5.34]	[1.83]
Observations	4,788	5,054	5,054	4,788
R-squared	0.64	0.87	0.97	0.97
Country Destination FE	YES	YES	YES	YES
Country Origin FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES

This Table examines differences in the determinants of appointing foreign directors between countries with low (below the median) and high (above the median) institutional quality. The level of analysis is the country pair-year. All results are estimated from regressions using Poisson pseudo maximum likelihood (PPML), Santos Silva and Tenreyro (2006). We use measures from Karolyi (2015) to identify countries of low (high) governance quality as those in the first (last) quartile of the distribution. Panel A shows the distribution of foreign director appointments. Low governance quality countries are: Brazil, China, Indonesia, India, Mexico, Philippines, Poland, Russia, Thailand, and Turkey. High governance quality countries are: Australia, Canada, United Kingdom, Hong Kong, Ireland, Luxembourg, Singapore, Sweden, and United States. Panel B shows results of a gravity model. Column (1) shows results when the governance quality of the country of destination is low and the governance quality of the country of origin is low. Column (2) shows results when the country of destination's governance quality is low and the governance quality of the country of origin is high. Column (3) shows results when the country of origin's governance quality is high and the governance quality of the country of origin is low. Column (4) shows results when the country of origin's governance quality is high and the governance quality of the country of origin is high. The z-statistics are reported in parentheses. Standard errors are adjusted for group correlation at the country-pair level. The symbols *, **, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two tailed tests. Variable definitions are provided in Appendix 1.

Table 7: Gravity model with pair fixed effects

Dependent variable:	Ln (Foreign Directors)	Pair Fixed Effects
	All Years	2013
	(1)	(2)
Cultural and institutional proximity		0.12***
		[3.85]
Colonial ties		0.45***
		[11.52]
GDP origin	0.24***	
	[5.13]	
GDP destination	-0.01	
	[-0.34]	
Geographic distance		-0.30***
		[-8.84]
Contiguous		0.66***
		[3.12]
Observations	19,684	1,406
R-squared	0.935	0.268
Pair FE	YES	NO
Year FE	YES	NO

This Table shows results of applying a gravity model with country-pair fixed effects. In column (1), we use a baseline gravity model to estimate country-pair fixed effects. In column (2), we use as dependent variable the estimated country-pair fixed effect coefficients from Column (1), and we regress them on country-pair time invariant characteristics. The *t*-statistics are reported in parentheses. Standard errors are adjusted for group correlation at the country-pair level. The symbols *, **, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two tailed tests. Variable definitions are provided in Appendix 1.

Table 8: IFRS adoption and foreign directors

Dependent variable:	ALL	NO USA	NO M&A
Ln(Foreign)	(1)	(2)	(3)
Cultural and institutional proximity	0.15***	0.12***	0.13***
	[5.88]	[5.16]	[6.08]
Colonial ties	0.35***	0.31***	0.30***
	[12.52]	[11.19]	[11.17]
Both_IFRS	0.15***	0.18***	0.11***
	[3.26]	[4.10]	[2.68]
Both_IFRS x Cultural and institutional proximity	0.08**	0.12***	0.07**
	[2.38]	[3.88]	[2.20]
Both_IFRS x Colonial ties	0.03	0.05	0.04
	[0.64]	[1.42]	[1.01]
GDP origin	0.24***	0.23***	0.13***
	[4.36]	[4.12]	[2.81]
GDP destination	0.43***	0.30***	0.36***
	[18.58]	[15.16]	[16.82]
Geographic distance	-0.33***	-0.36***	-0.25***
	[-11.03]	[-12.15]	[-9.31]
Contiguous	0.45***	0.45***	0.45***
	[2.83]	[2.76]	[3.05]
Observations	12,654	11,988	12,654
R-squared	0.608	0.563	0.576
Country Destination FE	YES	YES	YES
Year FE	YES	YES	YES

This Table examines a shock to the supply of foreign directors around the staggered adoption of IFRS worldwide. We restrict the analysis to the period 2001-2009 to obtain a group of adopters and non-adopters similar to Christensen, Hail and Leuz (2013). Both_IFRS is a dichotomous variable equal to one if both country of destination and country of origin adopt IFRS at time t. In Column (1), we use the full sample. In Column (2), we exclude the U.S. as both country of destination and country of origin. In Column (3), to control for the potential effect of cross-country M&A transactions we first exclude all firm-year observations where the change in board size with respect to year t-1 is larger than zero, and then we re-calculate our measure of foreign directors at the country-pair level. The t-statistics are reported in parentheses. Standard errors are adjusted for group correlation at the country-pair level. The symbols *, ***, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two tailed tests. Variable definitions are provided in Appendix 1.

Table 9: Gender quota and female foreign directors

Dependent variable:	ln(Female Foreign)	ln(Male Foreign)	ln(Female Foreign)	ln(Male Foreign)	ln(Female Foreign)	ln(Male Foreign)
	(1)	(2)	(3)	(4)	(5)	(6)
Cultural and institutional proximity	-0.02	0.22***	0.00	0.28***	0.03	0.13
	[-0.55]	[2.81]	[-0.02]	[4.08]	[0.40]	[1.13]
Colonial Ties	0.51***	1.35***	0.40**	1.61***	0.06	0.21**
	[2.73]	[3.16]	[2.42]	[3.15]	[0.69]	[2.13]
Quota	0.63***	0.05	0.88***	0.05	0.02	0.03
	[2.76]	[0.55]	[7.67]	[0.44]	[0.28]	[0.29]
Cultural and institutional proximity x						
Quota	0.21***	0.08*	0.24***	0.08*	0.02	0.01
	[4.22]	[1.90]	[5.56]	[1.96]	[0.45]	[0.38]
Colonial Ties x Quota	1.00**	0.20	1.42***	0.17	0.06	0.06
	[2.55]	[1.45]	[6.58]	[0.91]	[1.14]	[0.92]
GDP origin	0.15**	0.32**	0.14**	0.31**	0.12**	0.43**
	[2.36]	[2.57]	[2.24]	[2.53]	[2.01]	[4.17]
Geographic distance	-0.10**	-0.20**	-0.08*	-0.17*	-0.06	-0.37**
	[-2.39]	[-2.34]	[-1.96]	[-1.88]	[-0.80]	[-2.31]
Contiguous	-0.4	-0.44	-0.09	0.1	0.31	0.64
	[-1.48]	[-0.87]	[-0.78]	[0.26]	[1.37]	[1.34]
Observations	370	370	340	340	360	360
R-squared	0.529	0.563	0.622	0.654	0.353	0.605
Country Origin FE	YES	YES	YES	YES	YES	YES
Year FE	NO	NO	NO	NO	NO	NO

This Table examines a shock to the supply of female directors in the aftermath of adopting a gender quota rule in Norway. We adapt the research design of Ahern and Dittmar (2012) to our setting. We restrict the sample to the 2001-2009 period and include only Norway as country of destination. Norwegian parliament passed the rule in December 2003, and the law became compulsory in January 2006, with a two-year transition period. *QUOTA* is a dichotomous variable equal to one after 2003, and zero otherwise. In Column (1), we use the natural logarithm of number of female foreign directors as dependent variable, while in Column (2) we use the natural logarithm of number of male foreign directors. In Columns (3) and (4), we exclude Finland, Spain, and Switzerland as country of origin. In Columns (5) and (6), we show results of a placebo test where we exclude Norway and for each of the country in our sample we run independent regressions, and tabulate average results for coefficients, *t*-statistics and R-squared. The *t*-statistics are reported in parentheses. Standard errors are adjusted for group correlation at the country-pair level. The symbols *, **, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two tailed tests. Variable definitions are provided in Appendix 1.

Table 10: Foreign director appointments and firm value

Panel A: Univariate tests

Panel A.1 - Domestic vs. foreign director appointments (7,284 firm announcements)

Mean						Med	ian				
Directors:	Domestic		Foreign		Difference		Domestic	Foreign		Difference	
Independent	0.044	**	-0.098	***	0.142	***	-0.023	-0.088	**	0.065	*
All	0.030	**	-0.066	**	0.096	***	-0.032	-0.066	**	0.035	*

Panel A.2 - Foreign director appointments: Cultural and institutional proximity (1,342 firm announcements)

	Mea	n		Diff.		Med	ian		Diff.	
Directors:	High	Low		H/L		High	Low		H/L	
Independent	-0.027	-0.163	***	0.136	**	-0.003	-0.110	***	0.106	*
All	0.016	-0.140	***	0.156	***	-0.007	-0.124	***	0.117	**

Panel A.3 - Foreign director appointments: Colonial ties (1,342 firm announcements)

	Mea	n		Diff.		Medi	an		Diff.	
Directors:	High	Low		H/L		High	Low		H/L	
Independent	-0.047	-0.144	***	0.097	*	-0.016	-0.098	**	0.081	
All	0.000	-0.123	***	0.123	**	-0.028	-0.107	***	0.079	*

Panel B: Multivariate tests

	A11	Independent
Dependent variable: CAR	directors	directors
Dependent variable. CAR		
Tr. 1 G 1: 1 0 1 ch ch ch	(1)	(2)
High Cultural & institutional proximity	0.10	0.15
	[0.42]	[0.59]
High Colonial ties	0.31	-0.05
	[1.48]	[-0.25]
Size	-0.02	-0.01
	[-0.92]	[-0.65]
ROA	0.19	0.22
	[1.61]	[1.55]
Constant	-0.14	-0.02
	[-0.76]	[-0.12]
Observations	1,229	901
R-squared	0.058	0.074
Industry FE	YES	YES
Year FE	YES	YES
Country FE	YES	YES

This table examines the three-day window standardized cumulative abnormal returns (CAR) around the announcement of appointments of directors. In Panel A.1, we replicate the analysis of Masulis et al. (2012) and report mean and median CARs to appointments of domestic and foreign directors. In Panels A.2 and A.3, we report mean and median CAR for announcements of foreign directors from High vs Low country-pair homophily. We partition *High vs Low Cultural and institutional proximity* and *High vs Low Colonial ties* based on the median. Panel B shows regression estimates of CAR on firm Size, ROA and fixed effects. Symbols ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively. All t-statistics (in brackets) and p-values are calculated using robust standard errors. Variable definitions are provided in Appendix 1.

Appendix 1 – Variable definition

Variable	Description	Data source
Foreign Directors	Number of directors domiciled in country i who have board appointments in country j at period t .	BoardEx
GDP	Natural logarithm of GDP in \$billions of country i (or country j).	World Bank Development Indicators
Geographic distance	Natural logarithm of the artic distance in kilometers between the capitals of country i and country j .	Rose (2004) and CIA Worldfact Book
Contiguous	Dummy variable set to one if country <i>i</i> and country <i>j</i> share a border, and zero otherwise.	Rose (2004) and CIA Worldfact Book
Cultural proximity	Index representing sociocultural proximity in societal values and beliefs between country i and country j calculated as: $[-\sqrt{(TSR_j - TSR_i)^2 + (SSE_j - SSE_i)^2}]$ where TSR and SSE are the mean values of Traditional versus Secular-Rational authority (TSR) and Survival versus Self-Expression values (SSE).	Hofstede (2001) Inglehart and Welzel (2005)
Reporting proximity	Index representing financial reporting and auditing proximity calculated as follows: $[-\sqrt{(ReportingIndex_j - ReportingIndex_i)^2}]$, where Reporting Index is the mean value of the index measuring a country's auditing and reporting quality for the period 1995-2012.	Global Competitiveness Report (World Economic Forum)
Colony	Dummy variable set to one if country i country j have ever had a colonial link, and zero otherwise.	Rose (2004)
Common legal origin	Dummy variable set to one if country <i>i</i> and country <i>j</i> adopt the same legal system, and zero otherwise.	La Porta et al. (2006)
Common religion	Dummy variable set to one if country <i>i</i> and country <i>j</i> share a common religion, and zero otherwise	CIA Worldfact Book
Common language	Dummy variable set to one if country <i>I</i> and country <i>j</i> share a common language, and zero otherwise	CIA Worldfact Book
Governance proximity	Index representing governance proximity calculated a follows: $[-\sqrt{(GovernanceIndex_j - GovernanceIndex_i)^2}],$ where Governance Index is the value of the index measuring a country's governance quality.	s Karolyi (2015)
Bilateral trade	Log of one plus the sum of imports and exports between country <i>i</i> and country <i>j</i> .	United Nations Comtrade Database
Cross-listings	Log of the number of firms in country <i>i</i> listed in an exchange of country <i>j</i> .	BoardEx
Low/High governance quality	Indicator variable equal to one if the country is below/above the sample governance quality.	Karolyi (2015)
FD appointment	Indicator variable equal to one if director x from country i is appointed to firm z in country j , and zero otherwise.	BoardEx
Foreign sales	Foreign sales as percentage of total sales for firm <i>z</i> in year <i>t</i> .	Worldscope
Log (assets)	Logarithm of total assets for firm z in year t.	Worldscope
Sales growth	Growth in net sales relative to the previous year for firm <i>z</i> in year <i>t</i> .	Worldscope

Leverage	Long term debt plus short term debt divided by total assets for firm <i>z</i> in year <i>t</i> .	Worldscope
Board size	Number of directors on board for firm z in year t .	BoardEx
Busyness	Number of directors who hold 3 or more other directorships divided by the total number of directors on firm z's board in year t.	BoardEx
GAAP similarity	Index created to capture similarities in GAAP between country of destination and country of origin based on 21 accounting items listed in Table 1 of Bae et al. (2008). A pair of countries is deemed to have similar GAAP for an item if both countries conform to IAS/IFRS for that item, hence a score of one is assigned to each item, and zero otherwise. This procedure is repeated across all 21 items and the ratio formed by the sum of the scores for each country pair, scaled by 21, constitutes an index.	Francis, Huang, and Khurana (2016)
Human capital	Index representing the level of human capital of the country <i>i</i> .	Human capital report (World Economic Forum)
GDP per capita	GDP per capita of country j .	World Bank Development Indicators
Listed firms	Log of the number of firms listed in the stock market of country i (or country j)	World Bank Development Indicators
% FD	Percentage of directors domiciled in country different from j who have board appointments in country j at period t .	BoardEx
Female foreign directors	Number of foreign female directors from country j at period t	BoardEx
Male foreign directors	Number of foreign male directors from country j at period t	BoardEx
Both_IFRS	Indicator variable equal to one if both country <i>i</i> and country <i>j</i> use IFRS at time <i>t</i>	IFRS Foundation
Quota	Indicator variable equal to one after 2003, and zero otherwise	Ahern and Dittmar (2012)
CAR	Standardized cumulative abnormal returns (CAR) around the announcement date of new director appointments and turnovers. CAR is calculated over the three-day window around the announcement date 0 (window: -1, +1). Abnormal returns are estimated using the value-weighted market returns in the period -210 to -11 days prior to the announcement	CRSP

In this table, subscript i indicates country of origin, and subscript j indicates country of destination.

Appendix 2 – Firm characteristics versus country-level characteristics

Prior international corporate governance studies show that country characteristics play a first-order role and are more important than firm-level characteristics in explaining governance (Lel and Miller 2019; Levit and Malenko 2016; Doidge et al. 2007). We reexamine this result for foreign director appointments. We estimate the following logistic regression:

```
FD appointment<sub>z,i,j,t</sub> = \gamma_0 + \gamma_1 Foreign sales<sub>z,t</sub> + \gamma_2 Log(assets)<sub>z,t</sub> + \gamma_3 Sales growth<sub>z,t</sub> + \gamma_4 Leverage<sub>z,t</sub> (A2.1) + \gamma_5 Board size<sub>z,t</sub> + \gamma_6 Busyness<sub>z,t</sub> + \gamma_7 GDP destination<sub>j,t</sub> + \gamma_8 GDP origin<sub>i,t</sub> + \gamma_9 Geographic distance<sub>i,j</sub> + \gamma_{10} Contiguous<sub>i,j</sub> + \gamma_{11}Cultural institutional proximity<sub>i,j</sub> + \gamma_{12}Colonial ties<sub>i,j</sub> + \varepsilon_{z,t}
```

FD appointment is an indicator variable equal to one if director x from country i is appointed to firm z in country j in year t, and zero otherwise. For each firm z with domicile in country j that appoints a new foreign director in year t (11,555 firm-year observations), we include all possible countries i (38 countries). We account for the following idiosyncratic firm factors (Miletkov et al. 2016; Masulis et al. 2012): percentage of foreign sales to total sales, company size (natural logarithm of total assets), growth in sales relative to the previous year, leverage (total debt divided by total assets), number of directors on board, and percentage of busy directors (directors who hold more than 3 board appointments). In each specification, we include year fixed effects and cluster standard errors by firm.³¹

Table A.2 displays our results. Firm characteristics explain less than one percent of foreign director appointment likelihood, even including industry fixed effects (Column 1) and firm fixed effects (Column 2). In contrast country-level covariates alone (Column 3) explain about 27% of the likelihood of foreign director appointment. Adding firm characteristics increases the Pseudo R-squared to 0.321 (Column 5), and further adding fixed effects for country of origin i (Column 6) increases the pseudo R-squared to 0.363. Analysis of the area under the receiver operating characteristic curve (AUC) confirms these results (see bottom of Table A.2).

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³¹ Our inferences do not change if we cluster standard errors by country of destination or by year.

Table A2.1 – Firm-level and country-level determinants of foreign director appointment

Dependent variable: Pr(Foreign director=1)	(1)	(2)	(3)	(4)	(5)
Cultural and institutional proximity			0.24***	0.27***	0.15***
,			[15.49]	[16.06]	[7.80]
Colonial ties			0.48***	0.50***	0.32***
			[68.44]	[65.86]	[28.80]
Foreign sales	0.000	-0.00**		-0.00*	-0.00*
	[0.63]	[-2.05]		[-1.86]	[-1.89]
Log (assets)	0.000	-0.04***		-0.04**	-0.04**
	[1.46]	[-2.87]		[-2.40]	[-2.40]
Sales growth	0.000	0.000		0.000	0.000
	[-0.06]	[0.79]		[0.79]	[0.77]
Leverage	-0.10***	0.000		0.000	0.000
-	[-5.75]	[-0.09]		[-0.06]	[-0.09]
Board size	0.01***	0.03***		0.04***	0.04***
	[8.44]	[10.84]		[10.34]	[10.57]
Busyness	0.05**	0.11**		0.14**	0.14**
	[2.29]	[2.03]		[2.21]	[2.17]
GDP destination			0.01*	-0.17***	-0.17***
			[1.74]	[-2.78]	[-2.75]
GDP origin			1.04***	1.03***	0.57***
			[85.40]	[85.93]	[8.21]
Geographic distance			-0.48***	-0.63***	-0.62***
			[-32.86]	[-33.51]	[-28.75]
Contiguous			0.27***	0.060	0.58***
			[5.61]	[1.16]	[10.76]
Observations	423,872	423,872	423,872	423,872	423,872
Pseudo R-squared	0.001	0.000	0.276	0.321	0.363
Country Origin FE	NO	NO	NO	NO	YES
Country Destination FE	NO	NO	YES	NO	NO
Year FE	YES	YES	YES	YES	YES
Firm FE	NO	YES	NO	YES	YES
Industry FE	YES	NO	NO	NO	NO
AUC	0.521	0.460	0.870	0.855	0.875

This Table shows the results of logistic regressions of the probability of appointing a foreign director during the period 2000 to 2013. The dependent variable *FD* is one if director *x* comes from country *i*, and zero otherwise. In Column (1), we include firm characteristics and industry fixed effects. In Column (2), we add firm fixed effects. In Column (3), we include country-pair characteristics. In Column (4), we include both firm characteristics, firm fixed effects and country-pair characteristics. In Column (5), we add country of origin fixed effects to Column (4) model. The *z*-statistics are reported in parentheses. Standard errors are adjusted for group correlation at the firm-level. The symbols *, **, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Variable definitions are provided in Appendix 1.

Appendix 3 – Alternative specifications

Table A3.1: Using country of domicile to identify director domicile

Panel A: Steps to identify director domicile

Step	Nr. Directors	Percentage
Nationality	74,649	44%
Country of first appointment	94,823	56%
Total	169,472	

Panel B: Gravity model using different proxies for director country of domicile

Dependent variable:	Nationality	First appointment	Nationality & first appointment
Foreign directors	(1)	(2)	(3)
Cultural and institutional proximity	0.20***	0.25***	0.21**
	[2.92]	[3.81]	[2.43]
Colonial ties	0.30***	0.32***	0.27***
	[9.74]	[10.88]	[8.81]
GDP origin	0.92***	1.01***	0.75***
	[11.62]	[13.13]	[8.34]
GDP destination	0.35***	0.56***	0.54***
	[3.47]	[4.22]	[4.52]
Geographic distance	-0.53***	-0.45***	-0.48***
	[-8.37]	[-7.28]	[-7.18]
Contiguous	0.49**	0.34	0.59***
	[2.11]	[1.44]	[3.01]
Observations	19,684	19,166	18,648
R-squared	0.901	0.947	0.902
Country Destination FE	YES	YES	YES
Country Origin FE	YES	YES	YES
Year FE	YES	YES	YES

This Table shows results for alternative definitions of foreign director. Panel A shows the steps followed to identify director domicile. Panel B shows results of gravity models using different proxies for director domicile. In Column (1), director domicile is operationalized by director nationality. In Column (2), we use the country where the director obtained her first appointment. In Column (3), director domicile is based on director nationality if it coincides with the country where the director obtained the first appointment. All results are estimated from regressions using Poisson pseudo maximum likelihood (PPML) following Santos Silva and Tenreyro (2006). The *z*-statistics are reported in parentheses. Standard errors are adjusted for group correlation at the country-pair level. The symbols *, ***, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two tailed tests. Variable definitions are provided in Appendix 1.

Table A3.2: Alternative specifications for the gravity model

Panel A: Gravity model estimated with PPML estimator

Dependent variable:	ALL	ALL	2013	ALL	2013
Foreign directors	(1)	(2)	(3)	(4)	(5)
Cultural and institutional proximity	0.22***	0.20***	0.14**	0.20***	0.05
1 2	[2.89]	[2.83]	[2.19]	[2.96]	[0.69]
Colonial ties	0.24***	0.30***	0.30***	0.30***	0.21***
	[8.40]	[9.08]	[8.91]	[9.75]	[5.00]
GDP destination	0.57***	0.92***	0.69***	[· · · ·]	£
	[6.37]	[11.62]	[10.20]		
GDP origin	0.02	0.35***	1.01***		
8	[0.18]	[3.46]	[10.73]		
Listed firms' destination		. ,	. ,	0.57***	
				[8.32]	
Listed firms' origin				0.25***	
8				[2.85]	
GDP per capita destination					0.33***
1 1					[2.99]
Human capital origin					1.46***
1 2					[4.08]
Geographic distance	-0.05	-0.53***	-0.55***	-0.53***	-0.66***
	[-0.57]	[-8.38]	[-8.45]	[-8.39]	[-8.95]
Contiguous	0.07	0.48*	0.49**	0.49**	0.70***
	[0.37]	[1.96]	[1.98]	[2.13]	[2.91]
Bilateral trade	0.59***				
	[7.51]				
Cross-listings origin	0.15**				
	[1.98]				
GAAP similarity		0.08			
		[0.22]			
Observations	19,684	19,684	1,406	19,684	1,184
R-squared	0.909	0.901	0.883	0.897	0.911
Country Destination FE	YES	YES	YES	YES	YES
Country Origin FE	YES	YES	YES	YES	YES
Year FE	YES	YES	NO	YES	NO

(continued)

Table A3.2 (continued)

Panel B: Gravity model estimated with OLS

Dependent variable:	ALL	ALL	2013	ALL	2013
Ln(Foreign Directors)	(1)		(2)	(3)	(4)
Cultural and institutional proximity	0.10***	0.13***	0.08***	0.13***	0.08***
	[5.49]	[6.46]	[3.29]	[6.50]	[3.23]
Colonial ties	0.21***	0.23***	0.24***	0.23***	0.22***
	[9.55]	[9.41]	[9.29]	[10.33]	[7.06]
GDP destination	0.19***	0.24***	0.48***		
	[3.98]	[5.32]	[7.49]		
GDP origin	-0.06	-0.01	0.61***		
	[-1.26]	[-0.36]	[10.82]		
Listed firms' destination				0.14***	
				[4.68]	
Listed firms' origin				0.02	
				[0.55]	
GDP per capita destination					0.26***
					[4.45]
Human capital origin					0.91***
					[5.46]
Geographic distance	-0.34***	-0.42***	-0.53***	-0.43***	-0.58***
	[-8.84]	[-14.39]	[-16.46]	[-15.04]	[-17.15]
Contiguous	0.44***	0.51***	0.35**	0.51***	0.31*
	[3.79]	[3.97]	[2.46]	[3.97]	[1.77]
Bilateral trade	0.06***				
	[2.65]				
Cross-listings origin	0.52***				
	[8.61]				
GAAP similarity		0.09			
		[0.78]			
Observations	19684	19684	1406	19684	1184
R-squared	0.774	0.757	0.771	0.756	0.75
Country Destination FE	YES	YES	YES	YES	YES
Country Origin FE	YES	YES	YES	YES	YES
Year FE	YES	YES	NO	YES	NO

This Table shows results for different estimation methods. In Panel A, regressions estimates are based on Poisson pseudo maximum likelihood (PPML) as in Santos Silva and Tenreyro (2006). In Panel B the estimates are based on OLS regressions where the dependent variable is the natural logarithm of *Foreign Directors*. In column (1), the model includes GDPs and other economic determinants (bilateral trade and the number of firms from the origin country listed on an exchange in the destination country). In column (2), the model includes GAAP similarity (Francis et al. 2016) as a predictor of cross-border M&A transactions. Column (3) provides results for year 2013 only. The model in column (4) replaces GDP for another country size measure (number of listed firms). In column (5), GDP of the origin country is replaced by level of human capital and GDP of the receiver country is replaced by GDP per capita, for the restricted sample of year 2013. The *z*-statistics are reported in parentheses. Standard errors are adjusted for group correlation at the country-pair level. The symbols *, **, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two tailed tests. Variable definitions are provided in Appendix 1.

Table A3.3: Gravity model for appointments of foreign independent directors

Dependent variable:		Foreign Directo	rs	Ln(For	eign Directors)
Sample:	ALL COU	NTRIES	NO U.S.&U.K.	ALL	NO U.S.&U.K.
Estimator:	PPML	PPML	PPML	OLS	OLS
	(1)	(2)	(3)	(4)	(5)
Cultural and institutional proximity		0.18***	0.19***	0.13***	0.11***
		[2.76]	[3.22]	[6.82]	[5.66]
Colonial ties		0.30***	0.31***	0.23***	0.20***
		[9.97]	[6.85]	[10.46]	[7.50]
GDP origin	0.91***	0.90***	0.60***	0.21***	0.18***
	[11.61]	[11.37]	[4.44]	[4.79]	[4.11]
GDP destination	0.34***	0.32***	0.53***	-0.06	0.05
	[3.55]	[3.23]	[8.56]	[-1.40]	[1.15]
Geographic distance	-0.35***	-0.54***	-0.96***	-0.38***	-0.38***
	[-4.53]	[-8.91]	[-17.44]	[-14.12]	[-13.94]
Contiguous	1.22***	0.45**	0.66***	0.53***	0.57***
	[5.49]	[2.09]	[4.82]	[4.17]	[4.05]
Observations	19,684	19,684	17,640	19,684	17,640
R-squared	0.862	0.91	0.897	0.741	0.604
Country Destination FE	YES	YES	YES	YES	YES
Country Origin FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

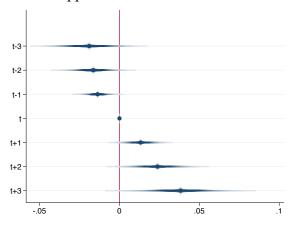
In this Table we exclude executive directors from our definition of *Foreign Directors* and replicate Table 4 with independent directors only. Column (1) shows a gravity model controlling for *GDP*, geographic distance and common border. Column (2), includes the measures of country-pair homophily. Column (3), excludes the U.S. and the U.K. as both country of destination and country of origin. In columns (2) through (3) results are estimated from regressions using Poisson pseudo maximum likelihood (PPML) following Santos Silva and Tenreyro (2006). The *z*-statistics are reported in parentheses. In columns (5) and (6) the estimations are based on OLS regressions where the dependent variable is the logarithm of Independent Foreign Directors. The *t*-statistics are reported in parentheses. In all models, standard errors are adjusted for group correlation at the country-pair level. The symbols *, **, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two tailed tests. Variable definitions are provided in Appendix 1.

Table A3.4: IFRS adoption and foreign directors

Panel A – Difference-in-differences analysis

Variables	% FD	% FD
	ALL	NO U.S.&U.K.
	(1)	(3)
IFRS	0.01**	0.01**
	[2.04]	[2.01]
Observations	342	324
R-squared	0.994	0.995
Country FE	YES	YES
Year FE	YES	YES
Country-Year FE	YES	YES

Panel B: Trends in foreign directors appoitments



This Table examines changes in foreign directors' appointments around the staggered adoption of IFRS for the period 2001 to 2009. We adapt the research design of Christensen et al. (2013) to our setting. The variable IFRS takes the value of '1' beginning in the calendar year following the first fiscal-year end after IFRS became mandatory in a given country. Panel A presents results from OLS regressions that test for differences in percentage of foreign directors (Column 1) between adopters and non-adopters. Column (2) excludes the U.S. and the U.K. Panel B, shows time trends in the percentage of foreign directors. To do that, we create year dummies for IFRS adopters for three years before (t-3, t-2, t-1) and after (t+1, t+2, t+3) the first fiscal-year end after IFRS became mandatory (t); and we plot the coefficients of the year dummies. The t-statistics are reported in parentheses. Standard errors are adjusted for group correlation at the country level. The symbols *, ***, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two tailed tests. Variable definitions are provided in Appendix 1.

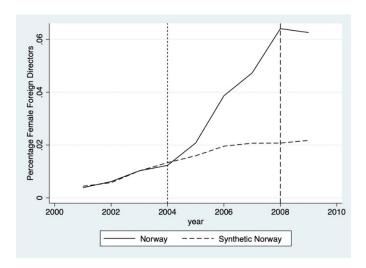
Table A3.5: Excluding M&A transactions

Dependent variable	Foreign Dir	Foreign Directors		Ln(Foreign Directors)	
Sample	ALL COUNTRIES	NO U.S.&U.K.	ALL	NO U.S.&U.K.	
Estimator	PPML	PPML	OLS	OLS	
	(1)	(2)	(3)	(4)	
Cultural and institutional proximity	0.23***	0.21***	0.13***	0.10***	
	[3.12]	[3.27]	[7.19]	[5.78]	
Colonial ties	0.30***	0.30***	0.21***	0.17***	
	[9.82]	[6.93]	[9.85]	[7.03]	
GDP origin	0.87***	0.58***	0.13***	0.12***	
	[11.43]	[4.82]	[3.29]	[3.09]	
GDP destination	0.32***	0.53***	-0.07**	0.03	
	[3.20]	[8.95]	[-1.96]	[0.95]	
Geographic distance	-0.54***	-0.99***	-0.33***	-0.33***	
	[-8.40]	[-18.00]	[-12.75]	[-12.71]	
Contiguous	0.44*	0.71***	0.52***	0.56***	
	[1.92]	[5.41]	[4.17]	[4.08]	
Observations	19,684	17,640	19,684	17,640	
R-squared	0.904	0.933	0.72	0.559	
Country Destination FE	YES	YES	YES	YES	
Country Origin FE	YES	YES	YES	YES	
Year FE	YES	YES	YES	YES	

This Table replicates the analyses displayed in Table 5. To control for the potential effect of cross-country M&A transactions we exclude all firm-year observations where the change in board size with respect to year *t-1* is larger than zero and re-calculate foreign directors at the country-pair level. Column (1) shows results for a Poisson pseudo maximum likelihood (PPML) gravity model following Santos Silva and Tenreyro (2006). Column (2), excludes the U.S. and the U.K. as both country of destination and country of origin. The *z*-statistics are reported in parentheses. In columns (3) and (4) the estimations are based on OLS regressions where the dependent variable is the natural logarithm of *Foreign Directors*. The *t*-statistics are reported in parentheses. In all models, standard errors are adjusted for group correlation at the country-pair level. The symbols *, ***, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two tailed tests. Variable definitions are provided in Appendix 1.

Table A3.6: Gender quota rule in Norway

Panel A – Female foreign directors' trends: Norway versus synthetic Norway



Panel C – Difference-in-differences analysis

V:-1.1	% FEMALE	% FEMALE
Variables	FD	FD
	(1)	(3)
NORWAY_2004	-0.00**	-0.00**
	[-2.61]	[-2.50]
NORWAY_2005	0.00	0.00
	[0.90]	[1.04]
NORWAY_2006	0.01***	0.02***
	[9.10]	[8.95]
NORWAY_2007	0.02***	0.02***
	[10.48]	[10.16]
NORWAY_2008	0.03***	0.03***
	[16.98]	[15.73]
NORWAY_2009	0.03***	0.03***
	[12.25]	[11.58]
Observations	342	315
R-squared	0.848	0.866
Country FE	YES	YES
Year FE	YES	YES

This Table examines changes in female directors' appointments around the adoption of a gender quota rule in Norway, between 2001 to 2009. We adapt the research design of Ahern and Dittmar (2012) to our setting. Panel A, compares Norway with a synthetic control group (Hong Kong, Italy, and Sweden). Panel B presents results from OLS regressions that test the differences in female foreign directors (Column 1) between Norway and the rest of the countries in our sample. Column (2), excludes countries that passed similar quota rules during the period 2001 to 2009 (Finland, Spain, and Switzerland). The *t*-statistics are reported in parentheses. Standard errors are adjusted for group correlation at the country-pair level. The symbols *, **, and *** next to the coefficients indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two tailed tests. Variable definitions are provided in Appendix 1.