

**The Role of Cross-Border Alliances in Corporate Social
Responsibility: International Evidence**

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The Role of Cross-Border Alliances in Corporate Social Responsibility: International Evidence

Abstract

We examine how forming cross-border alliances with US firms influences the corporate social responsibility (CSR) performance of their foreign partner firms. Analyzing a sample across 39 countries between 2002 and 2018, we find that these foreign firms experience higher future CSR performance, with a notable 6.46% increase compared with those without such alliances. Moreover, this effect is stronger in foreign firms from countries with weaker governance institutions, lower social norms, and worse economic conditions. Also, foreign firms with lower governance quality, higher market competition, and weaker innovation capacity show a pronounced improvement in CSR performance after alliances. The improved CSR performance also leads to higher firm value and better earnings quality in these foreign firms. Overall, we highlight the role of cross-border alliances in facilitating the attainment of broader economic and sustainable governance objectives.

JEL classification: F23; G30; G34; M14

Keywords: Cross-border alliances; corporate social responsibility; governance institutions; social reputation and legitimacy; capital market benefits

1. Introduction

This paper mainly examines the impact of forming cross-border alliances with US firms on the corporate social responsibility (CSR) performance of foreign participant firms. For decades, CSR has been widely acknowledged in the existing literature as a company's commitment to mitigating the potential adverse effects of its activities on its internal and external stakeholders and maximizing its long-term positive influence on the public and society (McWilliams & Siegel 2001; Boubakri *et al.* 2016); this ultimately boosts economic performance. Also, socially sustainable engagement can bring collective benefits to corporations and enhance firms' legitimacy in consideration of various stakeholders (i.e., auditors, debtholders, suppliers and customers, and communities) in international capital markets (Liang & Renneboog 2017). As of 2018, approximately half of Fortune 500 firms had enacted environmentally sustainable policies, 22% of which have committed to powering renewable energy to their operations.¹ Besides, a KPMG Survey of Sustainability Reporting reveals that 80% of firms worldwide have now reported on the social welfare of wider communities, with North America having the highest regional sustainability reporting rate.² CSR has also attracted considerable attention among academics who investigate the capital market benefits of firms' decision to engage in CSR, which is referred to as 'doing well by doing good' (Deng *et al.* 2013).

Considering the economic and social implications of practicing CSR, interfirm collaborations through industrial networks or supply chains are increasingly focused on improving CSR in a broader context. Particularly, collective CSR engagements through corporate alliances are widely employed in the corporate world. For instance, Royal Dutch Shell helps strategic alliance partners, such as Microsoft and Kreisel Electric, to work towards their goals of using 100% renewable energy. This effort contributes to decarbonization and is positively valued by their stakeholders. Also, the multinational

¹ See *Stop Talking About How CSR Helps Your Bottom Line* in Harvard Business Review (<https://hbr.org/2018/01/stop-talking-about-how-csr-helps-your-bottom-line>).

² Refer to <https://home.kpmg/xx/en/home/insights/2020/11/the-time-has-come-survey-of-sustainability-reporting.html>.

mining enterprise Rio Tinto collaborates with an American industrial corporation Alcoa through a joint venture ELYSIS to explore the breakthrough technology that eliminates greenhouse gas emissions.³ However, in the extant literature, there is relatively little empirical evidence speaking to the role of cross-border corporate alliances in influencing participant firms' CSR strategies and how such interplay further impacts participant firms' economic outcomes and earnings quality.

With the increasing prevalence of economic globalization, cross-border alliances, characterized by more flexible and effective collaborations in the business world, are becoming increasingly recognized as a critical channel for firms to access global financial markets.⁴ In response to escalating global competition, firms often consider forming alliances with international partners. This strategy allows them to effectively share complementary resources with lower capital investment costs (Tse *et al.* 1997), reduce expropriation risk (Bodnaruk *et al.* 2016), and comply with host government policies on ownership restrictions (Glaister & Buckley 1996; Desai *et al.* 2004). Considering the growing trend of adopting CSR and the sustainable economic benefits driven by cross-border alliances, this study, which assesses to what extent cross-border alliance activities may influence the global spread of CSR practices among international participant firms, is timely and important.

This study conjectures that cross-border alliances with US firms may influence the attitudes of foreign participant firms toward CSR fulfilment. We propose two potential mechanisms. The first mechanism focuses on the perspective of compliance with extended stakeholders' CSR needs. The second mechanism is based on the proactive learning purpose to acquire CSR practices from partner firms, which aims to improve CSR reputation and facilitate future development.

First, forming cross-border alliances exposes firms to a wider range of stakeholders. Grounded in the stakeholder theory of CSR, the broadened stakeholder

³ See the 2020 sustainability report of Royal Dutch Shell plc and Rio Tinto.

⁴ For instance, during the period 1990–2009, US firms were involved in over 52,000 cross-country investment transactions; among these deals, nearly 34,667 were cross-border alliances, and in 17 out of 20 years, the number of alliances outnumbered those of mergers and acquisitions (M&As) (Bodnaruk *et al.* 2016).

group encourages firms to actively engage in more environmentally friendly and socially sustainable activities, as such CSR engagements can reduce the concerns of CSR-conscious stakeholders and increase their support for corporate strategies and policies (Deng *et al.* 2013; Ferrell *et al.* 2016). For example, major customers, as an important group of stakeholders in the supply partnership, can enforce high CSR standards by disciplining suppliers for CSR misconduct (Chen *et al.* 2022a).⁵ Also, navigating the complexities of international markets after forming cross-border alliances often requires firms to adhere to CSR regulations and social norms in other countries (Attig *et al.* 2016). Therefore, we assume that to address stakeholder concerns and maintain good relationships and support from stakeholders in the post-alliance period, alliance participants may be strongly motivated to improve CSR practices which demonstrates a strong social commitment to stakeholders.

Second, drawing upon the learning perspective and knowledge spillover in cross-border activities, firms are motivated to actively learn CSR-related knowledge from international partners for a range of benefits associated with a better CSR reputation, such as lower costs of capital and attract more investment opportunities and business partners (Goergen & Renneboog 2008). Prior literature indicates that firms can learn advanced CSR practices and technologies from international partners through international investments, such as greenfield Foreign Direct Investments (FDI) and cross-border M&As (Castellani *et al.* 2022; Chen *et al.* 2022b). Besides, international trade can facilitate the spread of CSR practices. For instance, suppliers from emerging markets can learn CSR-related governance and guidance from international customers in countries with high social norms (Locke & Romis 2007), leading to more socially responsible behavior. Additionally, M Joshi and Lahiri (2015) argue that integrating

⁵ For example, Apple's international suppliers are required to follow the "Apple Supplier Code of Conduct", including providing safe working conditions, treating workers with dignity and respect, acting fairly and ethically, and using environmentally responsible practices wherever they make products or perform services for Apple. This code goes beyond compliance with applicable laws by drawing upon internally recognized standards to advance social and environmental responsibility. When differences arise between standards and legal requirements, stricter standards shall apply. Any violation of the code may jeopardize a supplier's business relationship with Apple, up to and including termination. See <https://www.apple.com/supplier-responsibility/pdf/Apple-Supplier-Code-of-Conduct-and-Supplier-Responsibility-Standards.pdf>.

participant firms' different governance approaches and social awareness toward common goals in partnership agreements can encourage the sharing of knowledge about stakeholder-oriented strategies. Therefore, we assume that by leveraging partnerships formed through cross-border alliances, firms proactively learn CSR-related knowledge from their partners to enhance their own CSR reputation, thereby fostering their own better development in the domestic and international markets.

To address our research question, we focus on the cross-border alliances between US firms and foreign firms worldwide. The diversity of foreign firms, originating from countries with varied constitutional policies, economic development, legal origins, and institutional cultures, provides deep insights into the role of cross-border alliances in disseminating CSR practices among partners worldwide. Given that the US has relatively stronger governance institutions, US firms tend to be subject to more stringent social awareness and regulations (Boubakri *et al.* 2016). By analyzing the US firms-involved cross-border alliances, we could effectively investigate the dissemination of CSR practices among alliance partners through comparing foreign firms' CSR performance prior to and after allying with US firms.⁶

Analyzing a sample consisting of 14,688 firm-year observations across 39 countries with 1,662 international alliance deals involved over the 2002–2018 period, we find that the CSR performance of foreign firms significantly increases after allying with US firms. Economically speaking, the CSR rating is approximately 6.46% higher for firms involved in cross-border alliances than for those without. Further, both environmental and social dimensions have exhibited significant increases of 5.61% and 7.33%, respectively, in the post-alliance period. We next conduct a battery of robustness tests to validate our main results. We employ both the propensity score matching (PSM) and entropy balancing techniques to rule out the impact of fundamental differences between firms allying with US partners and those without. We also adopt the difference-in-differences (DiD) approach to ensure that our estimates are not biased by omitted trends or unobserved differences between the treatment and

⁶ Section 3.1 details why this study focuses on US firm-involved deals.

control groups. Moreover, our key findings remain robust when applying alternative sample criteria and other model specifications. We further investigate the deal-specific impact from the US side and examine whether the disparity in US firms' CSR quality affects foreign partners' CSR engagement. By sorting US firms into high and low CSR groups, we find that when the US firm has a higher CSR score than that of the foreign firm (classified as a high CSR group), the foreign firm experiences a significant improvement in CSR.

Furthermore, to validate the '*Compliance*' channel, we investigate whether the institutional and economic environments of the countries where foreign participant firms are domiciled would influence the positive link between cross-border alliances and CSR. Our findings suggest that the impacts of forming alliances with US firms on the foreign participants' CSR are more prominent in countries with weaker institutional governance, lower social norms, and poorer economic status. To validate the '*Proactive learning*' channel, we examine whether foreign firms with initially weaker governance quality, higher market competition, and lower innovation capacity are more inclined to actively learn and benefit from the knowledge spillover from alliance partners. These tests provide further support for the two influential channels behind our main argument: firstly, alliance partners from weaker institutional jurisdictions tend to improve CSR performance by complying with the higher US standards; and secondly, participant firms are motivated to actively learn advanced CSR-related knowledge from US partners.

Notably, given our anticipation of CSR facilitation through international alliance activities, a follow-up economic question is whether these activities will enhance the value of CSR for cross-border alliance participant firms. Prior research has established that effective CSR practices and business success are practically inseparable. Practicing CSR conveys positive signals about stakeholder-oriented engagement, propelling stakeholders to continuously support the corporate business, thereby driving up shareholder value and firm performance (Ferrell *et al.* 2016; Lins *et al.* 2017). Moreover, drawing upon the ethical view of CSR, Kim *et al.* (2012) find that firms with high CSR performance are often associated with more ethical financial reporting

behaviors, such as reducing the level of earnings management, which is inevitably beneficial for various stakeholders and corporate economic development. Based on these commonly recognized ‘doing well by doing good’ and ‘good governance’ notions, our empirical evidence suggests that the enhancement in CSR, driven by alliances with US firms, leads to higher market valuations and better earnings quality.

Our study makes three major contributions. First, we add new empirical contributions by making the first attempt to investigate the link between cross-border alliances and participant firms’ CSR fulfilment in an international context. Prior literature has studied various benefits of cross-border alliances, such as accessing natural and technological resources (Zahra *et al.* 2000; Grøgaard *et al.* 2019; Huang *et al.* 2023), facilitating R&D collaboration (Hagedoorn & Narula 1996), and addressing opportunistic behavior of the host country governments (Bodnaruk *et al.* 2016), all of which contribute to increased firm performance (Merchant & Schendel 2000; Lee *et al.* 2013). This study sheds light on the benefits of cross-border alliances in disseminating CSR initiatives among participants, ultimately contributing to the achievement of socially sustainable objectives.

Second, our findings complement the literature on the determinants of CSR and provide support to the positive view of CSR in an international context (Deng *et al.* 2013; Boubakri *et al.* 2016). Prior research has identified factors affecting CSR performance, such as board gender diversity (McGuinness *et al.* 2017), analyst coverage (Adhikari 2016), institutional investors (Dyck *et al.* 2019; Li *et al.* 2021), law systems and social norms (Demirbag *et al.* 2017; Liang & Renneboog 2017). We extend beyond these factors and identify that inter-firm partnerships via cross-border alliances represent another crucial channel through which participant firms actively propel CSR. This partnership channel complements prior studies that emphasize cross-border acquisitions or cross-listing as channels for CSR improvement (Boubakri *et al.* 2016; Chen *et al.* 2022b; Li & Wang 2023),⁷ but provides a broader approach for firms to

⁷ The firm’s motivation for improving CSR performance might be different in cross-border alliances, cross-border acquisitions, and cross-listing. For example, the firms involved in the latter two are subject to the regulations and laws within the jurisdiction of the countries of acquiring firms and the countries of cross-listing, which might bring higher legal risk associated with CSR misconduct.

strengthen CSR engagement. More specifically, for the understanding of cross-border alliances facilitating partners' CSR improvement, our paper sheds light on the perspective of compliance with partners' high CSR standards and the view of firms' proactive learning through knowledge spillover in alliance networks.

Third, our study extends the understanding of the value-increasing effects of enhanced CSR attributable to cross-border activities, as documented in the extant literature (Boubakri *et al.* 2016; Chen *et al.* 2022b). Our empirical evidence indicates that the increase in CSR ratings driven by cross-border alliances can further translate into higher firm value and better earnings quality. Overall, our firm-level evidence demonstrates that international alliance activities can serve as a crucial channel for participant firms to further embrace CSR and build social legitimacy by performing better in socially and environmentally sustainable activities. Our study offers valuable insights for corporate shareholders and policymakers by providing direct evidence that improvements in CSR help promote economic development and ethical reporting objectives in the post-cross-border alliance period.

The remainder of this study is organized as follows. Section 2 reviews the related literature and develops our hypothesis. Section 3 describes the sample, data, and variable construction. Section 4 discusses key findings and presents robustness checks. Section 5 provides additional analysis, and Section 6 concludes.

2. Literature review and hypothesis development

CSR, as a self-regulating business model, has become an integral part of mainstream business strategies, because investors and issuing firms increasingly utilize CSR, which is positively valued by the public, to support corporate investment and financing decision-making. The stakeholder theory, introduced by Freeman (1984), has served as the primary theoretical framework for understanding a firm's commitment to socially responsible activities. The stakeholder theory asserts that focusing exclusively on shareholders' perceived needs is insufficient for managers; instead, companies should also address the demands of other important stakeholders, including customers, suppliers, employees, and community organizations. A strand of studies expands the

stakeholder theory to the implementation of CSR initiatives (Cochran & Wood 1984; Jones 1995), explaining how CSR investment affects firms' performance (McWilliams & Siegel 2001; Barnett 2007; Hull & Rothenberg 2008). Specifically, extant studies have drawn on *transaction cost economics* and *resource-based views* to illustrate why firms pursue the satisfaction of stakeholders' demands. For example, *transaction cost economics* implies that addressing stakeholders' needs, including those of customers, the government, and the community, can help minimize potential costs, as these groups hold indirect claims on firms in addition to shareholders and debt holders (Jones 1995). From the *resource-based view*, addressing stakeholders' needs is seen as a strategic investment, helping organizations build valuable, rare, and non-substitutable assets like leadership and a positive social reputation in the competitive market. Such intangible assets developed from CSR activities would ultimately contribute to improved financial performance (Russo & Fouts 1997).

Besides, as noted by the legitimacy view in the stakeholder theory, practicing CSR can help firms obtain legitimacy in their business operations across the world. It also plays a key role in generating a positive corporate image and reputation (Williams & Barrett 2000; Othman *et al.* 2011) and in reducing costs of capital in challenging international operating environments (El Ghouli *et al.* 2018). This view is in line with the firm value maximization perspective of CSR as advocated by Deng *et al.* (2013), who explore the impact of CSR on firm value in restructuring through mergers.

Based on the aforementioned perspectives, our study aims to explore the extent to which the formation of cross-border alliances can motivate participant firms to actively engage in CSR activities. We propose the following two underlying reasons.

(1) Compliance with high CSR standards from broad stakeholder groups

First, grounded in the stakeholder theory of CSR, cross-border alliances create a social network involving a broad stakeholder group, exposing the participant firms to various stakeholder concerns (Lin & Darnall 2015; He *et al.* 2020), such as social legitimacy and litigation risks in the international market. Thus, exposure to broad stakeholders from multiple countries may prompt firms to comply with CSR

regulations and social norms of the nations represented by those stakeholders (Attig *et al.* 2016). Prior studies have established that stakeholder pressures are one of the drivers of CSR initiatives (Deng *et al.* 2013). For example, in international supply partnerships, concentrated customers, as a crucial group of influential stakeholders, can discipline suppliers' CSR misconduct and require them to adhere to high-standard CSR practices already implemented by concentrated customers (Chen *et al.* 2022a). Therefore, to meet the expectations of extended international stakeholders and address legitimacy risk, alliance participants may be highly motivated to improve their social legitimacy by demonstrating a social commitment to their stakeholders through enhanced CSR engagement (Lavie & Miller 2008; Campbell *et al.* 2011).

Besides, when firms operate in international markets, they face challenging issues associated with expanded stakeholder groups (Zaheer 1995), such as unfamiliarity of foreign business environment and liabilities of foreignness driven by cultural, social preference, and economic differences between home and foreign countries. Compliance with stakeholders' CSR standards would signal firms' commitment to meeting the diverse needs of stakeholders, which might potentially help them alleviate the liabilities of foreignness when entering a new market. However, if these issues are not effectively addressed, firms participating in international activities may struggle to financially and strategically perform well during the integration stage. Therefore, in order to reduce the stakeholders' concerns, address legitimacy risk, and maintain a mutually trusted relationship with stakeholders in the post-alliance period, we posit that participants may be strongly motivated to engage in more CSR activities, ensuring compliance with stakeholders' high CSR standards. These, together, help achieve both the social objectives and financial returns from CSR.

Moreover, it is plausible that firms from emerging countries exhibit more significant CSR improvement when collaborating with partners from developed countries, as firms from developed countries are highly likely to adopt advanced CSR practices in the long run (Ali *et al.* 2017). Specifically, to impose discipline on corporate social and sustainable conduct, CSR regulations and policies have been widely implemented in developed markets for decades (Marano & Kostova 2016), such as

environmental protection (ISO 14001), employment protection (i.e., arrangement for relocation costs, employees' religious diversity, equal opportunities for women and minorities), and ethical business conduct.⁸ As a result, foreign partner firms may have motives to conform to the stricter CSR practices initiated by the countries where partner firms are domiciled, thereby pushing towards better future CSR engagement.

(2) Proactive learning to build CSR reputation and facilitate corporate development

Second, to enhance CSR reputation and boost relevant innovation and competitiveness in the global market, firms also tend to actively learn CSR-related knowledge through networks formed during international investments. For instance, Castellani *et al.* (2022) argue that greenfield Foreign Direct Investments (FDI) facilitate the regional diffusion of environmental technologies. Chen *et al.* (2022b) highlight the importance of learning CSR-related knowledge via cross-border M&As, and indicate that the acquisition of this type of knowledge is considered as one of the most effective ways for firms to learn cutting-edge green-product technologies and managerial skills, which help develop global competitiveness. Consistent with this argument, Aktas *et al.* (2011) find that acquiring firms tend to improve CSR activities by proactively learning from their target firms' CSR experiences in the post-acquisition period. As cross-border alliances are a key tool for expanding international investment, we propose that alliance participants are likely to actively learn CSR-related knowledge by utilizing the networks formed through such partnerships. For example, suppliers from emerging markets can actively acquire CSR-related governance and guidance through interactions with international customers in countries with high social norms (Locke & Romis 2007), ultimately leading them to act more socially responsibly.

⁸ As anecdotal evidence, Nike formulated a code of conduct for the global suppliers and requires them to comply with the basic labor, environmental, health and safety standards. Since the mounting social criticism of the low wages, workplace safety and human rights problems in local factories, such as in China and Vietnam, suppliers have begun to initiate efforts to propel CSR. These social concerns include underpaid work in Indonesia, the use of child labor in Cambodia and Pakistan, and poor working conditions in Vietnam. See Locke and Romis (2007) for details. Besides, Boeing helps its suppliers to meet the environmental targets by guiding them to implement the Environmental Management System (EMS). Please refer to Boeing's Global Environment Report 2020 for details.

Moreover, the business networks created through cross-border alliances provide participant firms with access to both technological and marketing knowledge (Mowery *et al.* 1996; Simonin 1999), as well as valuable managerial resources (Das & Teng 1998). Since CSR strategies are perceived as critical ‘corporate resources and culture’ (Flammer 2013; Li *et al.* 2021), cross-border alliances provide a channel for knowledge spillover, which can facilitate partner firms’ learning about CSR practices within inter-firm networks. For example, Lin (2012) contends that access to the development of tacit knowledge through alliance partnership can help firms develop socially imitable capacities to pursue more proactive environmental strategies. Also, as noted by Cao *et al.* (2019), when a firm implements CSR, its peer firms can observe the firm’s CSR-related returns and competitive advantages through product market connection; thus, these peer effects could motivate firms to adopt similar social behaviors. Additionally, differences in governance and social awareness between two firms in a cross-border partnership may trigger management actions that support the movement towards desired objectives (M Joshi & Lahiri 2015). Such inter-firm networks can therefore facilitate the dissemination of the governance and guidance on CSR among alliance partners through peer communication and learning.

Overall, our arguments pertaining to the proactive learning channel through cross-border alliances underscore the knowledge spillover effects in cross-border activities, which are well established in Bris *et al.* (2008), Goergen and Renneboog (2008), and Martynova and Renneboog (2008). An additional point is about the intrinsic motivation of proactive learning. In the previous section, we explained that the underlying reason for our first argument, i.e., *Compliance with high CSR standards from broad stakeholder groups*, is to reduce the new stakeholders’ concerns and social legitimacy risk after forming international alliances. However, one may ask about the purpose for second channel, that is, what drives alliance participant firms to actively learn advanced CSR knowledge, especially when it goes beyond stakeholders’ requirements? We conjecture that the driving force may be a strong desire to enhance the firm’s CSR reputation in the international market, because doing so can generate various capital market benefits associated with a stronger reputation and further

facilitate the firm's development in the domestic and international markets. For example, a good CSR reputation can reduce a firm's market-based costs (El Ghouli *et al.* 2018) and direct flotation costs in equity financing (Li & Wang 2022), mitigate litigation risk (Freund *et al.* 2021), improve firm performance (Dimson *et al.* 2015), attract more business partners and motivated employees (Renneboog *et al.* 2008), and enhance investment efficiency (Cook *et al.* 2019).

Against the backdrop of the two reasons we have elaborated upon, i.e., *compliance with high CSR standards demanded by broad stakeholder groups*, and *proactive learning to build CSR reputation and facilitate corporate development*, we propose that firms taking part in cross-border alliances may have stronger motives to engage in CSR activities, leading to higher CSR performance. More formally:

Hypothesis: *Ceteris paribus, firms involved in cross-border alliances exhibit higher future CSR performance than those that do not form any cross-border alliances.*

3. Sample and data

3.1 Sample construction

Our sample of cross-border alliances (including both strategic alliances and joint ventures) is collected from the Securities Data Company (SDC) Platinum database.⁹ To begin with, we retain the completed deals with two partners announced between 2002 and 2018.¹⁰ Consistent with Boubakri *et al.* (2016), we require that one of the partners in a cross-border activity relationship is a US firm, resulting in 12,853 cross-border deals.¹¹ Next, we extract 673,075 foreign firm-year-level observations from the Worldscope database during the sample period and then incorporate 12,853

⁹ SDC database is commonly used in prior studies for the collection of alliance deals, i.e., Bodnaruk *et al.* (2016) and Huang *et al.* (2021).

¹⁰ Our sample starts from 2002 since the CSR data are available from 2002 in the Thomson Reuters ASSET4 database, which collects and collates information from financial and CSR reports as well as non-governmental organization sources for large and listed companies. Retaining cross-border deals with only two partners involved could simplify the analysis regarding the impact of the US firms. Bilateral alliances are commonly applied in the alliance literature (Lerner *et al.* 2003; Fich *et al.* 2014).

¹¹ These deals involve a total of 12,853 US participants and 12,853 foreign participants. Some of these participants are not unique firms, as they may be involved in multiple deals thought the sample period. We use "foreign firms" and "foreign partners" interchangeably to indicate the international participant firms that ally with US firms.

alliance deals into this panel data.¹² After excluding firms from utilities (SIC 4900-4999) and financial (SIC 6000-6999) industries and removing observations with missing CSR ratings and other control variables, our final sample consists of 14,688 foreign firm-year observations covering 39 foreign countries, involving 1,662 cross-border alliances deals.¹³ Appendix Table A1 summarizes the sample selection criteria and the corresponding number of remaining observations.

In terms of CSR ratings, we follow Liang and Renneboog (2017), Arouri *et al.* (2019), and Dyck *et al.* (2019) to extract data on firms' CSR ratings from the Thomson Reuters (Refinitiv) ASSET4 platform, which evaluates firms' environmental, social, and governance commitments. We incorporate CSR ratings into the foreign firm-year panel data.

There are mainly two reasons for our focus on the US firms involved in cross-border alliances in our empirical analysis. First, cross-border alliance deals made by US firms constitute the largest proportion (approximately 51%) of the total number of cross-border alliance deals globally during our sample period. Second, the US has relatively stronger governance institutions across the world, potentially exposing domestic firms to stricter social awareness and regulations (Boubakri *et al.* 2016). In this paper, we mainly focus on whether cross-border investment activities through international alliances can facilitate the spread of good CSR practices among partners, highlighting the channels that the participant firms might comply with higher CSR standards and learn advanced CSR knowledge from alliance partners. Therefore, in the empirical analysis, we use a sample of cross-border alliances that involve US firms, as the US firms on average have relatively stronger social norms, which could better help us to investigate the research question.¹⁴

¹² Among the 12,853 foreign participants of the sample deals, there are only 6,100 foreign participants (2,978 unique foreign firms) with available ISIN codes. We only incorporate the deals which have valid foreign firms' ISIN codes into the 673,075 foreign firm-year observations.

¹³ We also exclude firms from the countries with fewer than 10 firm-year observations in our sample to maintain a sufficient number of observations for each country, as such country is also de facto "closed" to forming alliances with the US firms.

¹⁴ Besides, different from M&A where there is an explicit distinction between acquirer and target, participants in alliance agreement are in a relatively equal state in which all the parties collectively reach an agreement. To simplify our empirical setting, we require that one of the participants is from US, and investigate the spread of CSR from US firms to their foreign partners. This approach enables us to avoid

Table 1 displays the sample distribution by country and year. Panel A presents the regional variation of the observations. Notably, Japanese firms are the most likely to form alliances with US firms, as evidenced by the greatest number of firm-year observations involving cross-border alliances ($n = 4,037$). This is followed by UK, Australian, and Chinese firms, with 1,608, 859, and 812 observations engaging in such international alliance activities, respectively. However, Colombia has the fewest observations ($n = 10$). Belgium, Spain, Germany, France, and Israel exhibit a higher percentage of firms participating in cross-border alliances. Turning to CSR, we observe large variations of CSR performance across countries, which range between 33.401 (Saudi Arabia) and 72.052 (Luxembourg). It is worth noting that firms from developed countries tend to exhibit higher CSR performance, and a similar distribution is observed for the CSR categories. Panel B shows the annual distributions of firms involved in cross-border alliances and those that are not, along with the overall CSR and its component scores. In general, the number of observations involving cross-border alliances shows an upward trend (from 24 in 2002 to 142 in 2018) during the sample period, except for a small fluctuation between 2014 and 2016. The CSR score is unevenly distributed across years, with the highest score in 2016 (58.613) and the lowest score in 2007 (51.568), which points to a considerable disparity. Panel C demonstrates the regional distribution of alliance deals covered in the sample with 1,662 deals as the final number.

[Table 1 about here]

3.2 Variable definition

The primary variable of interest is CSR performance, which evaluates a firm's environmental, social, and governance commitments. To disentangle the effects of CSR and the governance dimension, our key CSR performance measure (*CSR*) is constructed based on two equally weighted pillars – corporate environmental and social performance – and is measured on a scale from 0 to 100, following prior studies (Boubakri *et al.* 2016; Ferrell *et al.* 2016). Among the CSR categories, the

an intricate sample that includes all country-paired cross-border alliances but without a clear baseline for comparison.

environmental dimension, *ENV_SCORE*, measures a firm's impact on living and non-living natural systems, including the land, air and water quality, emissions, and complete ecosystems. The social aspect, *SOCIAL_SCORE*, assesses a corporation's capacity to generate trust and loyalty within its workforce and society through its use of management strategies.

ALLIANCE_DUMMY is a categorical variable set to one in the year of forming at least one cross-border alliance with a US firm and afterwards,¹⁵ and set to zero in all years preceding the year of establishing the alliance relationship or if a firm has never formed an alliance. We employ a battery of firm-level characteristics and macroeconomic conditions, generally known to influence corporate sustainability, as control variables. Specifically, we include the natural logarithm of total assets *LN(ASSETS)*, the market-to-book ratio (*MTB*), firm age (*AGE*), sales growth (*SALES_GROWTH*), return on assets (*ROA*), leverage (*LEVERAGE*), R&D expenses scaled by sales (*R&D/SALES*), and the standard deviation of ROA (*SD_ROA*), as control variables (Boubakri *et al.* 2016; Del Bosco & Misani 2016; Dyck *et al.* 2019; Li *et al.* 2021). We further add the natural logarithm of GDP per capita of the firm's country of domicile to our model, *LN(GDP_PERCAPITA)*, to control for the influence of economic conditions on CSR (Liang & Renneboog 2017).¹⁶

3.3 Summary statistics

Table 2 presents summary statistics of the main variables in the empirical analysis, largely consistent with those in prior studies (Boubakri *et al.* 2016; Del Bosco & Misani 2016; Arouri *et al.* 2019). We observe that CSR performance has a mean (median) value of 55.007 (56.415), indicating that more than half of the sample firms have CSR performance higher than the average level. The mean (median) values of CSR categories *ENV_SCORE* and *SOCIAL_SCORE* are 56.536 (57.735) and 53.480

¹⁵ Cross-border alliances are expected to have a long-lasting effect on the participant firm's CSR and management culture, even if the alliance partnership might end in several years. The average life span of an alliance partnership is approximately between five and seven years. See *Your Alliances Are Too Stable* in Harvard Business Review (<https://hbr.org/2005/06/your-alliances-are-too-stable>). Hence, our measurement of *ALLIANCE_DUMMY* could effectively capture the long-term alliance effects.

¹⁶ All continuous variables are winsorized at the 1st and 99th percentiles. Appendix Table A2 provides definitions of regression variables.

(55.140), respectively. On average, approximately 26.6% of observations have formed alliances with US firms (*ALLIANCE_DUMMY*).

[Table 2 about here]

4. Empirical results

4.1 Impact of cross-border alliances on CSR performance

We investigate whether foreign participant firms exhibit higher *CSR* ratings after they have formed alliances with US firms. To begin with, we conduct a univariate test to examine whether the mean and median of observations allying with US firms (*ALLIANCE_DUMMY*=1) and those of observations without (*ALLIANCE_DUMMY*=0) are significantly different. Notably, Table 3 reveals that both the mean and median *CSR* performance of the observations allying with US firms are significantly higher than those without at the 1% significance level. Besides, firm-specific characteristics between these two groups are systematically different in terms of the mean and median values, where the observations allying with US firms have larger firm size, age, and R&D expenses, but lower market-to-book ratio, sales growth, and return on assets.

[Table 3 about here]

We use the following ordinary least squares (OLS) model with a series of fixed effects to test our central hypothesis that firms involved in cross-border alliances exhibit higher future *CSR* ratings:

$$CSR_{i,t} = \beta_0 + \beta_1 ALLIANCE_DUMMY_{i,t} + \beta_i X_{i,t-1} + \beta_j Y_{i,t-1} + FEs + \varepsilon_{i,t} \quad (1)$$

where *CSR* denotes the equally weighted environmental and social rating of the firm *i* in year *t*. *ALLIANCE_DUMMY* is an indicator variable representing the presence of cross-country alliances, which equals one in the year of forming at least one alliance with a US firm and afterwards, and is set to zero in all years preceding the year of establishing the alliance or if a firm has never carried out any alliances with a US firm. $X_{i,t-1}$ contains a vector of firm-specific variables and $Y_{i,t-1}$ controls for the economic condition of the firm's country of domicile. *FEs* stands for country, industry, and year fixed effects, which capture the time-invariant country-level and industry-level

variations, as well as the time-varying differences across years.¹⁷ We cluster standard errors at the foreign firm level to account for potential correlations within the firm.

Table 4 displays the regression results of the foreign firm's CSR score on forming cross-border alliances with a US firm. *ALLIANCE_DUMMY* in Model (1) attracts a significantly positive coefficient when controlling for country, industry, and year fixed effects. Model (2) presents the baseline result, and the estimate remains significantly positive ($\beta = 3.551$, $t = 4.45$) when additionally accounting for firm-specific and macroeconomic variables. Economically, the CSR rating is approximately 6.46% higher in participant firms with alliances with US partners than in firms without such alliances.¹⁸ This evidence supports the *Hypothesis*. That is, firms taking part in cross-border alliances tend to behave more socially responsibly and environmentally friendly to satisfy societal expectations and address the legitimacy concerns of various stakeholders. It also highlights the role of cross-border alliances in disseminating advanced socially sustainable practices across the participant firms. In terms of control variables, CSR performance is positively related to the firm size, market-to-book ratio, firm age, return on assets, and R&D expenses, but negatively associated with sales growth (Boubakri *et al.* 2016; Dyck *et al.* 2019; Chen *et al.* 2020).

Next, we examine the influence of allying with US firms on each of the dimensions (*ENV_SCORE* and *SOCIAL_SCORE*) of the overall CSR, as presented in Models (3) and (4) of Table 4. Notably, since the participant firms formed alliances with the US partners, both corporate environmental and social pillars have experienced significant increases of 5.61% ($=3.170/56.536$) and 7.33% ($=3.922/53.480$) compared with its mean value, respectively. We also investigate the impact on the corporate

¹⁷ Including firm fixed effects may not be appropriate in our study. This is an international sample consisting of 39 countries and the firms in every single country may not change their locations to another country over time/frequently. Moreover, our key variable is an indicator variable, which is, to a certain extent, stable across years among firm-year observations. Similar to prior studies (Cen *et al.* 2017; Griffin *et al.* 2021), we do not use firm fixed effects in our regressions due to the limited within-firm variation in *ALLIANCE_DUMMY*. In our sample, *ALLIANCE_DUMMY* appears to vary more across firms than within firms. The within-firm standard deviation of *ALLIANCE_DUMMY* is 0.052, compared with the between-firm standard deviation of 0.382.

¹⁸ Specifically, in Model (2) of Table 4, the coefficient on *ALLIANCE_DUMMY* is 3.551, and the average CSR rating is 55.007, as displayed in Table 2, which suggests that the CSR rating for firms involved in cross-border alliances is expected to increase by an average of 6.46% (i.e., $3.551/55.007=0.0646$).

governance dimension (*CG_SCORE*), although we do not incorporate this pillar when constructing the overall CSR. This dimension score measures a firm's systems and processes designed to ensure that its board members and executives act in the best interests of its long-term shareholders, with a particular focus on the sustainability strategy. The result shown in Model (5) indicates that allying with US firms facilitates the improvement of governance performance with a 6.90% ($=3.577/51.874$) increase in the mean value. Overall, the results in Table 4 conform to our main hypothesis and highlight the importance of international alliances with US firms on CSR improvement among firms that ally with US firms.

[Table 4 about here]

Besides, strategic alliances and joint ventures are the two main forms of alliances,¹⁹ covering a range of specific agreements such as marketing alliances, manufacturing alliances, supply alliances, licensing alliances, and research and development (R&D) alliances. Therefore, we separately examine the impact of these specific forms on the foreign firm's CSR performance. For each type of deal, we set the dummy variable (*DEAL_DUMMY*) which takes the value of one in the year of forming this specific deal with a US firm and afterwards, and set to zero in all years preceding the year of establishing the relationship or if a firm has never formed this type of deal. We find that the positive impact of *DEAL_DUMMY* on CSR performance remains consistent in the regressions for all the types of deals, except for licensing alliances. Results are tabulated in Appendix Table A3.

4.2 Robustness checks

4.2.1 Endogeneity concerns

To corroborate the results in the main regression, we conduct several robustness tests. One possible concern with our main analysis is the endogeneity issue. For instance, alliance firms might be fundamentally different from non-alliance firms, and the US

¹⁹ Considering the difference between strategic alliances and joint ventures, i.e., the former is based on contractual arrangements, and the latter is the separate business entity invested by the participant firms. We separately examine the impact of strategic alliances and that of joint ventures on the foreign firm's CSR performance.

firms might be more likely to select inherently high CSR firms as the alliance partners. Some omitted variables, such as firm-specific characteristics, might simultaneously influence the likelihood of forming alliances with US partners and CSR practices.

First, we adopt the propensity score matching (PSM) approach to select firms that form alliances with US firms (treatment group) and firms that have never formed alliances with US firms (control group) during the sample period. In doing so, we employ a logistic regression to estimate the probability of being a treated firm based on a battery of factors used as control variables in Eq. (1). We then match each treatment firm to a control firm (without replacement) and require the propensity scores for each matched pair to be within 0.5% of each other. Table 5 reports the PSM results with the matched sample consisting of 4,452 observations in each of the treatment and control groups (8,904 in total). The post-matching diagnostic tests are displayed in Panel A. We find that the means of the matched variables are not significantly different between the treatment and control groups after matching, indicating that our matched sample is reliable. We next re-estimate Eq. (1) based on the PSM sample and present the results in Panel B. We find that *ALLIANCE_DUMMY* in both models still attracts significantly positive estimates, suggesting that our key finding is not driven by observable differences in firm characteristics.²⁰

[Table 5 about here]

Second, considering that the impact of US alliance partners on foreign firms' CSR scores might be driven by the unobserved trends between treatment and control firms, we perform a Difference-in-Differences (DiD) approach following Boubakri *et al.* (2016):

$$CSR_{i,t} = \beta_0 + \beta_1 ALLIANCE_DUMMY_{i,t} + \beta_2 ALLIANCE_FIRM_i + \beta_i X_{i,t-1} + \beta_j Y_{i,t-1} + FES + \varepsilon_{i,t} \quad (2)$$

where *ALLIANCE_FIRM* is used to differentiate the treatment firms and control firms.

²⁰ Besides, we also employ the entropy balancing matching method, and the results in Panel C of Table 5 remain intact. The entropy balancing matching ensures that the first three moments of the control variables (mean, variance, and skewness) are balanced between the treatment and control groups. The advantages of entropy balancing include retention of the baseline sample, improvement in test efficiency by incorporating covariate balance into the weight function, and reduction in model dependence (Hainmueller 2012).

It is a dummy variable, which equals one if foreign firms formed alliances with US firms during our sample period at any point in time (treatment group), and is set to zero if foreign firms have never formed alliances with US firms (control group). *ALLIANCE_DUMMY* performs as the interaction term between *ALLIANCE_FIRM* and *POST*, where *POST* is a dummy variable equal to one after the firm forms an alliance with a US firm, and zero otherwise.²¹ Therefore, *ALLIANCE_DUMMY* captures the change in CSR for the treatment group (post-alliance CSR rating minus pre-alliance CSR rating) relative to the change in CSR for the control group during the same period. The results of the DiD analysis are displayed in Panel A of Table 6. In both models, our DiD term (*ALLIANCE_DUMMY*) attracts a significantly positive coefficient, reaffirming our main finding that foreign firms exhibit higher CSR ratings after forming alliances with US firms, compared with non-alliance foreign firms.

[Table 6 about here]

Further, to identify whether our DiD setting satisfies a parallel trend assumption, following Seltzer *et al.* (2020), we examine the dynamics of treatment effects during the pre- and post-10 years of alliances formation by plotting the coefficients estimated from the following regression:

$$CSR_{i,t} = \sum_{k=-10}^{10} \beta_k [(t = k) * ALLIANCE_FIRM_i] + \beta_i X_{i,t-1} + \beta_j Y_{i,t-1} + FES + \varepsilon_{i,t} \quad (3)$$

These plots help to determine whether there is a clear visual change in the trend of CSR performance around the announcement of alliances with US firms. Figure 1 shows the treatment effects for each period. The blue lines and dots indicate the coefficient estimates, and the green lines are bands of the 95% confidence interval around these estimates. The pattern shows that, in the pre-alliance period, the coefficients are small (below 5) and insignificant. However, there is a sizable increase in the foreign firm's CSR rating around the announcement of alliances with US firms. The coefficients jump to around 10 with statistical significance in the post-alliance

²¹ *POST* dummy variable is dropped in this regression model as the impact of *POST* is absorbed by the year fixed effect.

period. The above evidence indicates that our data satisfies the condition of the parallel trends.

[Figure 1 about here]

In addition, we tabulate the results of the dynamic effects of cross-border alliances on CSR. Following the procedure in Boubakri *et al.* (2016), we create several categorical variables capturing the effects of different timeframes, measured as *ALLIANCE (-2)*, *ALLIANCE (-1)*, *ALLIANCE (0)*, *ALLIANCE (+1)*, *ALLIANCE (+2)*, *ALLIANCE (+3)*, *ALLIANCE (+4)*, and *ALLIANCE (5+)*, and re-estimate Eq. (1) by regressing CSR performance on these dummies, along with the same set of control variables.²² Models (1) and (2) of Panel B of Table 6 display these results by using the whole sample (firm-year observations for alliance firms and non-alliance firms) and the subsample (firm-year observations for alliance firms), respectively. In both models, the coefficients on *ALLIANCE (-2)*, *ALLIANCE (-1)*, and *ALLIANCE (+1)* are small and insignificant, implying that our results are not driven by a pre-alliance trend. It is worth noting that post-alliance indicators broadly attract significantly positive coefficients, with increasing magnitudes over time. This indicates that foreign firms incrementally exhibit improvement in CSR only since the formation of alliances with US firms, but not before. Thus, the reverse causality does not explain our main finding. In sum, the results from both the PSM, entropy balancing matching, and DiD approaches consistently indicate that the claimed relationship between cross-border alliances and CSR is robust to endogeneity concerns.

4.2.2 Alternative specifications and samples

In this sub-section, we employ alternative model specifications and samples to test the validity of our *Hypothesis*: (1) we follow Dyck *et al.* (2019) to cluster standard errors at the country-year level to account for potential correlations in unobserved variables that might affect the firms within the same country-year groups; (2) we control for the lagged *CG_SCORE* in Eq. (1) to account for the influence of governance ratings

²²*ALLIANCE(-2)*, *ALLIANCE(-1)*, *ALLIANCE(0)*, *ALLIANCE(+1)*, *ALLIANCE(+2)*, *ALLIANCE(+3)*, *ALLIANCE(+4)*, and *ALLIANCE(5+)*, respectively, equal one if the firm-year observation is in two years before, in one year before, in the year of, in one year after, in two years after, in three years after, in four years after, and in five or more years after the alliance announcement, and zero otherwise.

on sustainable management (Kim *et al.* 2012); (3) we further control for the number of alliances with US firms that foreign firms formed previously, since we suppose that the intensive partnerships with US firms might intensify CSR communication; (4) given that each firm-year observation may not be treated equally,²³ which drives potential concerns regarding the homogeneity of error terms, we follow Callan and Thomas (2011) to introduce the Weighted Least Squares (WLS) regression to maximize the parameter estimation efficiency; (5) we restrict the sample within the symmetric window (-3,+3), (-5,+5), (-10,+10) years relative to the year of alliance announcement. We only retain the firms that form alliances with US firms during the sample period. (-3, +3) years, (-5, +5) years, and (-10, +10) years indicate that the sample includes the firm-year observations between pre-3 and post-3 years, pre-5 and post-5 years, and pre 10 and post 10 years of the alliance announcement date, respectively. This method of sampling could address potential issues arising from the unbalanced distribution of observations around the deal announcement; (6) we exclude sample firms from Japan and the UK since these observations account for approximately 38.4% of the sample, which may drive our key finding; and (7) we finally exclude firms from the countries with a higher average CSR performance than the average CSR performance of the US.²⁴ In sum, panel A of Table 7 shows that *ALLIANCE_DUMMY* in all the above regressions attracts a positive and statistically significant coefficient, again supporting our hypothesis.

[Table 7 about here]

Besides, we also explore how alliances activities influence the subcategory scores of foreign firms' CSR performance. Particularly, *Emission reduction*, *Environmental innovation*, and *Resource use* are the three subcategory scores for the environmental pillar score. *Workforce*, *Human rights*, *Community*, and *Product responsibility* are the four subcategory scores for the social pillar score. Panel B of

²³ As shown in Table 1, our sample is unevenly distributed across countries and years.

²⁴ The average CSR of a given country is calculated as the mean value of CSR of the sample firms in domicile (reported in Table 1). The US's average CSR score (=63.976) is calculated by using the CSR scores of the US firms which formed cross-border alliances with the sample foreign firms during the sample period. We find that Colombia, France, Italy, Luxembourg, and Sweden perform better in CSR than the US, and thus we remove these countries from our robustness test.

Table 7 reports the results. Our findings suggest that forming alliances with US firms leads to significant improvement in all subcategories of foreign firm's CSR performance. Notably, *Resource use* within the environmental pillar and *Workforce* within the social pillar exhibit the most substantial point increases.

4.2.3 Impact of the individual US firm on the foreign participant's CSR

The results in the previous sections speak to the positive influence of alliance deals with US firms on foreign partners' CSR performance, supporting that cross-country alliances facilitate the dissemination of the governance and guidance on CSR among participant firms. We expect such an impact on partner firms would be more pronounced in an alliance relationship where US participants have higher initial CSR performance than that of foreign partners.²⁵ To further capture such spillover effects in an alliance network, we conduct a deal-level regression, which includes all sample cross-border alliances with US firms. For each deal, we create a dummy variable *HIGH_US_CSR* to indicate the US partner's CSR status, which equals one if the US firm has a higher CSR score than the foreign firm one year prior to the alliance announcement, and zero otherwise.²⁶ To investigate the long-term dynamic effects of the foreign firm's CSR, we use *CSR_CHANGES* to measure the change of CSR ratings of the foreign firm in the post 3 years (or 5 years) after the deal announcement, which is calculated by the post-alliances average CSR scores minus the CSR scores one year prior to the alliance announcement.²⁷ Table 8 reports the regression results. It is worth noting that the coefficients on *HIGH_US_CSR* in Models (1) and (2) are both significantly positive at the 1% level. Specifically, collaborating with the US firms that have higher CSR leads to an 11.793-point increase in foreign firms' CSR ratings in the

²⁵ Focusing on the comparison of an individual US firm's and a foreign participant firm's CSR performance prior to the formation of cross-border alliances would also provide robust evidence that the spread of CSR is from highly CSR-performed firms to the firms with weak CSR performance. This supports the conclusion drawn from the baseline regression, as one may argue that some US firms might have lower CSR performance than that of the foreign partners, and hence, the direction of CSR dissemination would be from the foreign partners to US firms.

²⁶ If the US partner's CSR score is missing but the foreign firm's CSR score is not missing in a deal, we set *HIGH_US_CSR* equal to zero. If the foreign firm's CSR score is missing but the US partner's CSR score is not, we assign a value of one to *HIGH_US_CSR*. We exclude observations with both missing CSR scores in the year prior to the alliance announcement.

²⁷ We require non-missing CSR scores for the post 3 years (or post 5 years) when calculating the change of CSR scores (*CSR_CHANGES*).

post 3 years and a 13.804-point increase in the post 5 years. The results confirm that alliance networks serve as an intermediary for the effective spread of social awareness from high-CSR firms to low-CSR firms.²⁸

[Table 8 about here]

5. Additional analysis

5.1 Moderating effects of home country institutions

In this section, we explore the influential mechanisms of foreign firms' increased CSR performance after forming alliance deals, including the perspective of compliance with extended stakeholders' CSR needs and the view of proactive learning purpose to acquire CSR practices from partner firms. To verify the "compliance channel", we investigate whether variations in foreign partners' country-level characteristics may moderate the influence of the partnership with US firms on foreign firms' CSR. Specifically, we focus on the country-level institutional quality, social norms, and economic development, as prior studies suggest such factors can significantly affect firms' CSR performance (Boubakri *et al.* 2016; Del Bosco & Misani 2016; Liang & Renneboog 2017).

Since firms from countries with weak institutional environment and lower social awareness tend to have lower CSR performance, such firms are likely targeted by international stakeholders to comply with high CSR standards (Dyck *et al.* 2019; Li *et al.* 2021; Li & Wang 2023). We thus assume that firms from such countries tend to experience more significant CSR improvement after forming cross-border alliances. Moreover, economically developed countries have cared more about social welfare issues and published some regulations to ensure that corporate conduct is socially sustainable (Ioannou & Serafeim 2012). Firms from countries with weak economic conditions may lack CSR engagement, we therefore conjecture that such firms may face greater international pressure to improve CSR engagement when they are exposed

²⁸ Moreover, we also examine the case if the foreign firm has higher CSR performance than the US partner before the alliance formation. Our un-tabulated results suggest that the US partner would also experience an increase in CSR performance in the post 3 years (or 5 years) after the deal announcement, which provides further supports on our argument that the cross-border alliances would facilitate the spread of CSR from high-performed partner to low-performed partner.

to international stakeholders. Also, firms domiciled in relatively weak economic countries have greater incentives to improve their CSR reporting to overcome liabilities of foreignness and reduce barriers to legitimation when they enter international markets (Marano *et al.* 2017), indicating that the disparity in economic development between countries plays an important part in influencing the CSR dissemination between countries.

First, to examine the role of institutional backgrounds in the interplay between cross-border alliances and CSR, we use three proxies commonly used in prior studies to measure a country's institutional quality. Boubakri *et al.* (2016) provide evidence that the legal system built based on common law can improve corporate governance, thus driving CSR ratings. We then follow Porta *et al.* (1998) to create a dummy variable *COMMON_LAW* to indicate whether the foreign firm's country is a common law country. From the perspective of investor protections, we employ the anti-self-dealing index score (*ANTI_SELF_DEALING_INDEX*) from Djankov *et al.* (2008) as another proxy for the country institution, since Boubakri *et al.* (2016) find that there is a positive link between the anti-self-dealing index and CSR. Next, we consider the constraints on executive power (*CONSTRAINED_ON_EXECUTIVE_POWER*) as a supplementary proxy for the governance quality of the home country, with higher scores indicating more constraints on executive power and fewer limitations in authority.²⁹ Panel A of Table 9 displays the regression results with *ALLIANCE_DUMMY* being interacted with *COMMON_LAW* in Model (1), *ANTI-SELF-DEALING_INDEX* in Model (2), and *CONSTRAINED_ON_EXECUTIVE_POWER* in Model (3), respectively. We find that the coefficients on *ALLIANCE_DUMMY* are significantly positive in all models, consistent with our main finding.³⁰ More importantly, interaction terms all attract negative and significant coefficients, implying that foreign firms from countries with

²⁹ We thank Acemoglu and Johnson (2005) for sharing their updated data for *Constraints on Executive Power*.

³⁰ When the country-level factors are in the time-invariant value in a given country, the impact of such factors will be absorbed by the country-fixed effect in the model. We, therefore, remove the country-fixed effect in the regression for such a consideration.

weaker institutions are more likely to be affected by their US partner firms and exhibit CSR improvement.

[Table 9 about here]

Second, to test the moderating impact of social norms in the foreign firms' country, we employ two variables to measure the social norms. One is the world value E&S index (*WORLD_VALUE_E&S_INDEX*) extracted from Dyck *et al.* (2019), which measures a society's values regarding lifestyle liberty, gender equality, environmental activism, personal autonomy, and the voice of the people. Higher values of this index indicate higher social norms (awareness) of a society. The other proxy is an indicator for the social performance of the country where the foreign firm is domiciled (*COUNTRY_SOCIAL_PERFORMANCE*). Specifically, it is assigned a value of one if the average social performance (*SOCIAL_SCORE*) of the foreign firm's country is higher than the median value of the average social performance among all countries in a given year, and zero otherwise. Panel B of Table 9 presents the regression results with *ALLIANCE_DUMMY* being interacted with *WORLD_VALUE_E&S_INDEX* in Model (1) and interacted with *COUNTRY_SOCIAL_PERFORMANCE* in Model (2), respectively. Notably, the coefficients on the interaction terms are both significantly negative, suggesting that the influence of allying with US firms on foreign firms' CSR performance is more salient for foreign firms from low social norm countries.

Finally, we consider whether the economic conditions of foreign firms' countries of domicile play a part in the link between alliance activities and foreign firms' CSR. We use three variables to measure a country's economic development, including stock market capitalization (*MARKET_CAPITALIZATION*), financial structure (*FINANCIAL_STRUCTURE*), and restrictions on foreign ownership (*FOREIGN_OWNERSHIP_RESTIRCTION*).³¹ Similarly, we interact these proxies

³¹ Specifically, the data on *MARKET_CAPITALIZATION* are extracted from the World Bank and are calculated as the ratio of stock market capitalization to GDP for a given country in a given fiscal year. *FINANCIAL_STRUCTURE* is measured by the ratio of stock market capitalization to bank credit to the private sector (Boubakri *et al.* 2016). To measure the level of restrictions on foreign ownership in a country, we follow Owen and Yawson (2013) and use the ownership restriction score from the Economic Freedom of the World annual reports published by The Fraser Institute. The score is calculated based on the evaluation of whether the foreign ownership of companies in the country is rare, and whether the rules governing foreign investments are damaging or are discouraging FDI with lower values indicating

with *ALLIANCE_DUMMY* to re-estimate Eq. (1) and report the results in Panel C of Table 9. The coefficients on interaction terms suggest that foreign firms from underdeveloped economies or from countries with more foreign ownership restrictions are more likely to experience a significant increase in CSR ratings after allying with US firms. This supports the economic transmission channel in the link between cross-border alliances and CSR: the CSR practice in participant firms from countries with relatively weak economic development tends to improve after forming alliances with firms from a well-developed market (Ali *et al.* 2017). In sum, the above evidence indicates that foreign firms from countries with weak institutional quality, low social awareness, and poor economic conditions are more likely to improve their CSR practices in cross-border partnerships with US firms, further supporting our argument that foreign firms tend to comply with stricter CSR standards initiated by their US partners.

5.2 Moderating effects of foreign partner firms' governance quality, market competition, and innovation capacity

Next, we seek to corroborate the second channel (i.e., the proactive learning perspective) through which foreign partner firms strive to improve CSR in the post-alliance period. We first examine this channel by highlighting the role of corporate governance in foreign firms. Prior research finds that firms with good corporate governance are positively associated with high CSR performance, and vice versa (Jo & Harjoto 2011; Jain & Jamali 2016; McGuinness *et al.* 2017). However, another strand of corporate behavioral research finds that weak corporate governance will further encourage proactive stakeholder relationship management for instrumental and strategic purposes (Arora & Dharwadkar 2011; Jain & Jamali 2016). Against the backdrop of these findings, firms with weak corporate governance have inferior CSR knowledge and practices, and thus may have stronger incentives to learn more about CSR engagements from other firms through the networks in the international investments. For example, Li and Wang (2023) argue that in a cross-border M&A

more restrictions. We transfer the sign of the scores, with higher values corresponding to more restrictions on foreign ownership.

activity, if a participant firm already has an initial inferior governance quality, then this firm may have a greater incentive to initiate more efforts to enhance their socially responsible activities by learning CSR-related knowledge from target firms. Therefore, if the proactive learning perspective channel works, we assume that foreign firms with weak corporate governance are expected to experience a greater scope of the improvement in their CSR performance after forming cross-border alliances with US firms, as they have more incentives to learn CSR engagements from their US partners through alliance networks.

To test the abovementioned conjecture, we introduce the interaction terms between *ALLIANCE_DUMMY* and a series of proxies for corporate governance quality (*GOVERNANCE*) to our baseline model, and re-estimate the model specification. Specifically, we use both the internal governance and external monitoring to capture the firm's governance quality. Internal governance quality can be proxied by the independent director ratio (*INDEPENDENT_DIRECTOR*), the percentage of female directors (*FEMALE_DIRECTOR*), and CEO/chairperson duality (*DUALITY*) following prior studies (Bhagat & Bolton 2008; Srinidhi *et al.* 2011). The high value of *INDEPENDENT_DIRECTOR* and *FEMALE_DIRECTOR* indicates good internal governance quality, while a high value of *DUALITY* indicates weak governance. The degree of external monitoring can be measured as the natural logarithm of the number of analysts following a firm (*ANALYST_COVERAGE*) and the percentage of outstanding shares by foreign investors (*FOREIGN_OWNERSHIP*) (McGuinness *et al.* 2017; Hussain *et al.* 2023), where the high value of these two proxies indicates strong external monitoring.

The empirical results are displayed in Panel A of Table 10. Consistent with our conjecture, in columns 1-2, the coefficients of the interaction terms between *ALLIANCE_DUMMY* and *INDEPENDENT_DIRECTOR* (*FEMALE_DIRECTOR*) are significantly negative, and the coefficient of the interaction term between *ALLIANCE_DUMMY* and *DUALITY* in column 3 is significantly positive. This suggests that foreign participant firms with weak internal governance tend to experience a greater scope of CSR improvement after forming alliances with US firms. Similarly,

columns 4-5 in Panel A show that the interaction terms between *ALLIANCE_DUMMY* and *ANALYST_COVERAGE (FOREIGN_OWNERSHIP)* attract significantly negative coefficients, indicating that the incremental impact of the alliance is more pronounced for the foreign firms that are less subjected to external monitoring. Furthermore, the coefficients of the proxies for internal governance and external monitoring are also significant, supporting prior research findings on the positive relationship between corporate governance and CSR performance (Jo & Harjoto 2012).

Overall, the results in Panel A indicate that when foreign participant firms have weak internal governance quality, they are highly likely to actively bootstrap themselves to better CSR strategies after establishing alliances with their US partners, thereby showing a high scope of CSR improvement in the post-alliance period.

[Table 10 about here]

Besides, prior studies suggest that competitive pressure could facilitate the firm's learning and exploration process, as the firm needs to engage in proactive activities that require learning and exploration to survive under the conditions of intense market competition (Khanna *et al.* 1998; Auh & Menguc 2005). Also, Chen *et al.* (2022b) provide evidence that firms with competitive disadvantages are more ambitious in actively acquiring CSR-related knowledge (i.e., green innovation techniques) through cross-border M&As to achieve global competitiveness. Therefore, we assume that firms in the competitive market tend to have higher learning incentives, and actively learn CSR-related knowledge through cross-border partnerships, resulting in the increase of CSR performance.

To validate this conjecture, we use two proxies to capture the degree of market competition. The Herfindahl-Hirschman index (*HHI*) is used to measure the industry-level competition, which is defined as the sum of the squared market shares of the firms in each 3-digit SIC industry in a given country in a given year. Besides, following prior studies (Haw *et al.* 2015; Bradford & Chilton 2018), we also use the country-level measures, i.e., the competition law index (*COMPLAW*), to assess the country-wide competition environments. The competition law index measures the effectiveness of a country's competition law in curbing unfair practices and promoting fair competition.

A higher score on this index indicates that the country's competition laws are more effective in facilitating fair competitive practices. Panel B of Table 10 reports the regression results. The negative coefficient between *ALLIANCE_DUMMY* and *HHI* in column 1 and the positive coefficient between *ALLIANCE_DUMMY* and *COMPLAW* in column 2 indicate that foreign firms in highly competitive markets experience higher CSR improvement via actively learning from alliance partners.

Furthermore, we also consider the heterogeneity of the foreign firm's environmental innovation and R&D activities. As alliance partners could share knowledge and technical resources through R&D projects (Lerner *et al.* 2003), firms with weaker R&D capacity might benefit more from knowledge spillover through alliance partners. Besides, Padgett and Galan (2010) find that firms with lower R&D intensity tend to have inferior CSR performance. Therefore, we expect that such firms tend to experience significant improvement in CSR performance via the learning channel. In doing so, we use the foreign firm's environmental innovation score collected from ASSET4 and the R&D intensity (i.e., R&D expenses scaled by assets) to capture the degree of innovation engagement. The significant coefficients on the interaction terms between these proxies and *ALLIANCE_DUMMY* shown in Panel C of Table 10 further support our argument on the knowledge spillover through the proactive learning channel.

5.3 Incremental effects of CSR on firm value and earnings quality

Here, we extend this study by exploring the incremental effect of CSR associated with cross-border alliances on investors' valuation. Extant studies have documented that CSR initiatives may have positive implications for firm value (Boubakri *et al.* 2016). Stakeholder theory suggests that the success of an organization relies heavily on its ability to develop a mutually respectful and trustful relationship with different stakeholder groups (Deng *et al.* 2013). In regions with high social norms, socially sustainable behaviors can improve reputation, which further translates into stronger customer purchase intention, and thus leads to the increment of firm performance (Albuquerque *et al.* 2018). Moreover, in the Hypothesis Section, we

suggest that one of the motives of foreign firms to improve CSR performance is to establish a good CSR reputation and foster the firms' growth, considering the benefits associated with the improved CSR performance. Therefore, we examine whether the benefits of enhanced CSR attributable to cross-border alliances can materialize in the post-alliance period. We perform the following regression models:

$$MTB_{i,t} = \alpha + \beta_1 ALLIANCE_DUMMY_{i,t} \times CSR_{i,t-1} + \beta_2 ALLIANCE_DUMMY_{i,t} + \beta_3 CSR_{i,t-1} + \beta_i X_{i,t-1} + \beta_j Y_{i,t-1} + FES + \varepsilon_{i,t} \quad (4a)$$

$$REM_{i,t} = \alpha + \beta_1 ALLIANCE_DUMMY_{i,t} \times CSR_{i,t-1} + \beta_2 ALLIANCE_DUMMY_{i,t} + \beta_3 CSR_{i,t-1} + \beta_i X_{i,t-1} + \beta_j Y_{i,t-1} + FES + \varepsilon_{i,t} \quad (4b)$$

where the market-to-book ratio (*MTB*) captures investor reactions to a firm (Boubakri *et al.* 2016), and the real earnings management (*REM*) is defined as management actions that deviate from normal business practices undertaken for meeting or beating certain earnings thresholds (Kim *et al.* 2012).³² The interaction term between *ALLIANCE_DUMMY* and *CSR* captures the moderating effect of alliance activities on the link between CSR and firm value. This effect is expected to be positive because the increased CSR rating in the post-period of deal completion should result in positive market perceptions. A vector of controls is included, including *LN(ASSETS)*, *AGE*, *SALES_GROWTH*, *ROA*, *LEVERAGE*, *R&D/SALES*, *SD_ROA*, *ANALYST_COVERAGE*, and *LN(GDP_PERCAPITA)*.³³

We report the result of the incremental effect of CSR performance related to alliance activities on firm value in Model (1) of Table 11. The interaction term between *ALLIANCE_DUMMY* and *CSR* attracts a significantly positive coefficient, implying that the improved CSR driven by allying with US firms is highly valued by the market.

³² We follow Kim *et al.* (2012) to estimate the following: (1) abnormal levels of operating cash flows (*REM_CFO*), (2) abnormal production costs (*REM_PROD*), and (3) abnormal discretionary expenses (*REM_DISX*). Considering the expected directions of these three proxies, we then calculate *REM* as *REM_CFO - REM_PROD + REM_DISX*.

³³ In these two regression models, we add the analyst coverage as an additional control variable compared with the baseline Eq. (1), as this variable might affect the firm's market-to-book ratio and earnings management. We exclude the market-to-book ratio as the control variable when the market-to-book ratio is the dependent variable in the regressions following prior studies (Masulis & Mobbs 2011; Boubakri *et al.* 2016).

[Table 11 about here]

Furthermore, we also explore whether firms with enhanced CSR attributable to alliance activities exhibit better earnings quality. Accounting scandals at large organizations such as Enron and World-Com have resulted in tremendous damage not only to firms' stakeholders but also to societies (Kalelkar & Nwaeze 2011). Regulatory authorities and academic researchers continue to explore the determinants of fraudulent financial reporting as well as mechanisms to prevent the recurrence of reporting improprieties. Grounded in the ethical theory, Kim *et al.* (2012) document that socially sustainable firms are less likely to engage in earnings management. Thus, we posit that the increase in CSR driven by alliance activities may drive better earnings quality.

Consistent with Kim *et al.* (2012), our combined real activities manipulation proxy decreases as firms engage in more aggressive earnings management through real activities; therefore, higher values of *REM* indicate better earnings quality. The regression result for Eq. (4b) is displayed in Model (2) of Table 11. The estimate on the interaction term is significantly positive, indicating that firms involved in cross-country alliances perform better at propelling CSR, and such socially friendly and ethical reporting behaviors consequently translate into better earnings quality.

In addition, given the incremental effect of CSR on foreign firms' valuation after forming alliances with US firms, as evidenced by the increased market-to-book ratio and better earnings quality in the long run, we extend our investigation to the stock market's reaction to these partnerships around the deal announcement date. Specifically, we examine whether the difference in CSR performance between US and foreign participants may affect participants' announcement returns, as investors may value the dissemination of CSR practices associated with cross-border alliances. We examine the participants' 7-day cumulative abnormal returns in the window of (-3, +3) days around the announcement date, and conduct a deal-level regression which includes all sample cross-border alliances with US firms. The foreign firm's cumulative abnormal return is estimated by using the market-adjusted model and Daily WRDS World Indices as the market index returns. The US firm's cumulative abnormal return is measured by using the market-adjusted model and CRSP value-weighted market return. The variable of

interest is a dummy variable *HIGH_US_CSR* indicating the US partner's CSR status, which equals one if the US firm has a higher CSR score than the foreign firm one year prior to the alliance announcement, and zero otherwise. We control for the foreign firm's characteristics (US firm's characteristics) when analyzing the foreign firm's (US firm's) performance.³⁴

Panel A and Panel B of Table 12 report the regression results for foreign firms' performance and US firms' performance, respectively.³⁵ The significantly positive coefficient of *HIGH_US_CSR* in Panel A suggests that foreign firms experience higher announcement returns when they ally with the US firms that have higher CSR performance than foreign participant firms. However, we do not observe such an increase in the cumulative abnormal returns among the US firms. Overall, the results in Table 12 highlight the incremental effect of CSR on a participant firm's valuation because the cross-border alliance would facilitate the dissemination of advanced CSR practices from the US firms to the foreign partners.

[Table 12 about here]

6. Conclusions

Conducting the study in an international context, we examine the influence of allying with US partners on foreign participant firms' sustainability strategies and engagement. Using panel data on 14,688 firm-year observations and 2,045 publicly traded firms across 39 countries between 2002 and 2018, we find that firms involved in alliances with US partners exhibit higher CSR ratings. Specifically, we reveal that firms allying with US partners perform better at promoting the environmental and social dimensions of CSR. Our key finding continues to hold by employing the PSM, entropy balancing matching, and DiD methods for addressing endogeneity concerns, and is robust to several additional tests, including alternative model specifications and various

³⁴ The controlled firm's characteristics are consistent with those used in the baseline regression model (1) and also the same as those in Table 8 which examines the impact of *HIGH_US_CSR* on the change of foreign firm's CSR performance.

³⁵ We find that foreign firms and US firms, on average, experience around 0.85% and 1.16% cumulative abnormal returns (CARs) in the (-3, +3) days event windows around the deal announcement date, respectively.

sample criteria. Moreover, the positive link between cross-border alliance activities and CSR is more salient in foreign firms with lower initial CSR scores compared to their US partner firms. Turning to the moderating effects of a battery of external characteristics, we find that foreign firms from countries with inferior institutional quality, low social awareness, and poor economic development initiate more efforts in CSR practices in the cross-border partnership with US firms. The finding supports the first proposed influential channel that foreign firms tend to comply with stricter CSR standards initiated by their alliance partners, driving up these foreign firms' CSR performance. Our second influential mechanism, i.e., proactive learning via knowledge spillover in alliance networks, also gets empirical support. We find that foreign firms which have more learning incentives and obtain more benefits from knowledge spillover show a pronounced improvement in CSR performance after alliances, such as the firms with lower governance quality, higher market competition, and weaker innovation capacity. Finally, we find that the increased CSR performance attributable to alliances with US partners results in higher shareholder value and a lower degree of real earnings management.

Our study opens avenues for future research. We mainly focus on the role of cross-border alliances in CSR strategies and the moderating effects of participant firms' home countries' social norms, institutional quality, and economic status, as well as participant firms' governance quality, market competition, and innovation capacity on the above relationship. Future studies could examine the influence of cross-border alliance activities on governance-related issues such as the level of analyst forecasting accuracy and information asymmetry, and investigate the incremental effects associated with international alliances on capital allocation efficiency.

Our findings offer valuable implications for various stakeholders, indicating that internationalization strategies via cross-country alliances that are oriented to high CSR preference countries can open a critical avenue for firms from countries with relatively weak institutions to engage more in activities such as environmental management, social welfare, and socially sustainable practices. These activities would improve the overall social reputation and counteract potential competitive weaknesses

in international markets. This study sheds light on the influence of cross-country alliances on shaping foreign participant firms' sustainable management and stakeholder-oriented practices, and highlights the roles of these cross-country alliances in facilitating the attainment of broader environmental, social, governance, and economic objectives.

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Table 1 Sample distribution

This table displays the sample composition. The full sample includes 14,688 firm-year observations from 39 foreign countries (or regions) during the period from 2002 to 2018. Panel A and Panel B show the full sample distribution by country and by year, respectively. Panel C shows the distribution of cross-border alliance deals covered in the sample. *No deals* indicates the number of firm-year observations without alliances; that is, there is no alliance occurring in that firm-year. *With deals* indicates the number of firm-year observations with alliances; that is, there is at least one alliance occurring in that firm-year. % indicates the ratio of the observations with alliances deals to the total observations in a given country. The regional and annual distributions of the overall CSR score (*CSR*), environmental performance (*ENV_SCORE*), and social performance (*SOCIAL_SCORE*) are displayed in Panel A and Panel B, respectively.

Full sample	All	No deals	With deals	%	CSR	ENV_SCORE	SOCIAL_SCORE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	14,688	13,686	1,002	6.82%			
Panel A: By country/regions							
Austria	130	126	4	3.08%	57.943	58.105	57.777
Australia	859	845	14	1.63%	44.119	41.469	46.797
Bermuda	28	27	1	3.57%	55.041	53.877	56.205
Belgium	144	118	26	18.06%	56.101	55.875	56.328
Brazil	96	93	3	3.13%	55.499	54.435	56.556
Canada	764	728	36	4.71%	46.189	45.295	47.109
China	812	777	35	4.31%	38.356	41.263	35.358
Colombia	10	10	0	0.00%	66.076	63.198	68.876
Denmark	224	209	15	6.70%	55.709	57.314	54.101
Finland	301	298	3	1.00%	62.254	65.787	58.733
France	627	551	76	12.12%	69.822	72.187	67.437
Germany	804	705	99	12.31%	63.738	63.303	64.196
Greece	51	51	0	0.00%	45.666	48.913	42.428
Hong Kong	201	195	6	2.99%	39.829	41.334	38.277
Indonesia	60	60	0	0.00%	51.469	47.690	55.248
India	401	370	31	7.73%	59.596	59.173	60.062
Republic of Ireland	269	254	15	5.58%	52.694	50.056	55.372
Israel	104	93	11	10.58%	41.906	41.280	42.535
Italy	135	126	9	6.67%	64.407	63.279	65.563
Japan	4,037	3,750	287	7.11%	54.324	59.600	49.037
Luxembourg	39	39	0	0.00%	72.052	75.043	69.069

Malaysia	100	99	1	1.00%	47.651	44.378	50.932
Mexico	22	22	0	0.00%	43.765	46.268	41.513
Norway	139	132	7	5.04%	63.475	65.966	60.940
Netherlands	309	280	29	9.39%	63.209	62.359	64.162
New Zealand	73	69	4	5.48%	44.893	45.270	44.517
Philippines	31	28	3	9.68%	54.288	56.285	52.431
Poland	29	29	0	0.00%	60.265	60.696	59.834
Russian	50	49	1	2.00%	41.246	39.510	42.982
South Africa	198	197	1	0.51%	59.969	55.187	64.763
Saudi Arabia	26	26	0	0.00%	33.401	33.838	31.996
Singapore	80	75	5	6.25%	42.848	42.708	42.987
South Korea	657	614	43	6.54%	55.035	59.003	51.101
Spain	132	115	17	12.88%	62.252	62.075	62.416
Sweden	435	408	27	6.21%	65.019	65.461	64.618
Switzerland	567	511	56	9.88%	58.984	58.098	59.888
Thailand	16	16	0	0.00%	56.408	51.739	61.078
Turkey	120	120	0	0.00%	55.326	56.816	53.992
United Kingdom	1,608	1,471	137	8.52%	59.017	58.309	59.725
	All	No deals	With deals	%	CSR	ENV SCORE	SOCIAL SCORE
Panel B: By year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2002	208	184	24	11.54%	57.387	57.992	56.779
2003	213	182	31	14.55%	56.642	57.442	55.809
2004	463	426	37	7.99%	53.663	55.200	52.107
2005	630	568	62	9.84%	52.422	53.607	51.226
2006	657	571	86	13.09%	52.637	53.966	51.285
2007	698	622	76	10.89%	51.568	53.866	49.242
2008	795	704	91	11.45%	53.130	55.291	50.957
2009	896	873	23	2.57%	53.957	56.000	51.915
2010	1,037	1,011	26	2.51%	54.147	56.028	52.251
2011	1,072	1,029	43	4.01%	54.274	55.786	52.746
2012	1,102	1,049	53	4.81%	54.070	55.530	52.608
2013	1,111	1,044	67	6.03%	53.830	55.081	52.580
2014	1,063	1,016	47	4.42%	54.345	55.427	53.253
2015	1,042	1,033	9	0.86%	57.127	58.773	55.498
2016	1,085	1,019	66	6.08%	58.613	60.225	57.056

2017	1,272	1,153	119	9.36%	57.668	59.370	55.998
2018	1,344	1,202	142	10.57%	57.251	58.242	56.281

Panel C: Deal samples by country

Deal sample	All
	1,662
Austria	4
Australia	16
Bermuda	1
Belgium	33
Brazil	3
Canada	50
China	64
Colombia	0
Denmark	15
Finland	3
France	111
Greece	0
Germany	195
Hong Kong	7
Indonesia	0
India	55
Republic of Ireland	25
Israel	14
Italy	11
Japan	480
Luxembourg	0
Malaysia	2
Mexico	0
Norway	9
Netherlands	49
New Zealand	5
Philippines	3
Poland	0
Russian	1

South Africa	1
Saudi Arabia	0
Singapore	7
South Korea	84
Spain	25
Sweden	34
Switzerland	115
Thailand	0
Turkey	0
United Kingdom	240

Table 2 Summary statistics

This table reports the summary statistics of the main dependent and explanatory variables during the sample period from 2002 to 2018. *CSR* is the overall CSR performance of the firm, which is measured as the average of environmental performance and social performance. *ENV_SCORE* is the environmental performance, *SOCIAL_SCORE* is the social performance, and *CG_SCORE* is the governance performance. *ALLIANCE_DUMMY* is an indicator variable that is set to one in the year of forming at least one alliance with a US firm and afterwards, and set to zero in all years preceding the year of establishing the alliance or if a firm has never carried out any alliances with a US firm. *LN(ASSETS)* is the natural logarithm of the book value of total assets. *MTB* is the market value of assets divided by the book value of total assets. *AGE* is the firm's age. *SALES_GROWTH* is the annual growth of revenues. *ROA* is the net income before the extraordinary items scaled by total assets. *LEVERAGE* is the total debt divided by total assets. *R&D/SALES* is the expenses on research and development scaled by total sales. *SD_ROA* is the standard deviation of ROA in the previous four years. *LN(GDP_PERCAPITA)* is the natural logarithm of GDP per capita. Appendix Table A2 provides definitions for the list of variables. All the continuous control variables are winsorized at the 1% and 99% levels.

VARIABLES	Obs.	Mean	SD	Min	P25	P50	P75	Max
CSR	14,688	55.007	20.300	12.525	38.833	56.415	71.478	92.170
ENV_SCORE	14,688	56.536	21.753	11.810	39.430	57.735	74.220	95.110
SOCIAL_SCORE	14,688	53.480	22.436	8.440	36.125	55.140	71.330	94.660
CG_SCORE	14,688	51.874	20.932	9.440	35.305	52.460	68.730	92.500
ALLIANCE_DUMMY	14,688	0.266	0.442	0.000	0.000	0.000	1.000	1.000
LN(ASSETS)	14,688	22.258	1.537	18.079	21.303	22.248	23.264	25.838
MTB	14,688	1.866	1.370	0.687	1.087	1.404	2.054	8.993
AGE	14,688	16.684	6.614	3.000	12.000	17.000	22.000	28.000
SALES_GROWTH	14,688	10.261	24.550	-40.034	-0.899	6.069	15.295	146.416
ROA	14,688	0.048	0.081	-0.319	0.018	0.045	0.082	0.292
LEVERAGE	14,688	0.219	0.156	0.000	0.090	0.209	0.322	0.639
R&D/SALES	14,688	0.042	0.084	0.000	0.003	0.016	0.043	0.634
SD_ROA	14,688	0.039	0.058	0.002	0.011	0.021	0.042	0.401
LN(GDP_PERCAPITA)	14,688	10.423	0.802	7.292	10.564	10.703	10.776	11.382

Table 3 Univariate tests

This table reports the results of univariate tests on the differences between US-alliances and non-US-alliances observations at the firm-year level. The sample is split by *ALLIANCE_DUMMY*, which is an indicator variable that is set to one in the year of forming at least one alliance with a US firm and afterwards, and set to zero in all years preceding the year of establishing the alliance or if a firm has never carried out any alliances with a US firm. *CSR* is the overall CSR performance of the firm, which is measured as the average of environmental performance and social performance. *ENV_SCORE* is the environmental performance, *SOCIAL_SCORE* is the social performance, and *CG_SCORE* is the governance performance. Z-test is based on the Wilcoxon rank-sum test for median differences. All the continuous control variables are winsorized at the 1% and 99% levels. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	ALLIANCE_DUMMY==1 (N=3,900)		ALLIANCE_DUMMY=0 (N=10,788)		T-statistic of difference in means	Z-statistic of difference in median
	Mean	Median	Mean	Median		
CSR	63.284	65.590	52.015	52.605	30.646***	29.392***
ENV_SCORE	64.655	67.200	53.601	53.710	27.906***	27.144***
SOCIAL_SCORE	61.923	64.220	50.428	51.595	28.150***	26.895***
CG_SCORE	57.975	60.585	49.668	49.380	21.574***	21.253***
LN(ASSETS)	22.892	22.966	22.029	22.055	31.011***	30.021***
MTB	1.801	1.372	1.890	1.416	-3.476***	-1.764*
AGE	18.265	19.000	16.113	16.000	17.597***	16.828***
SALES_GROWTH	8.786	5.388	10.794	6.334	-4.382***	-3.835***
ROA	0.043	0.043	0.050	0.046	-4.651***	-3.715***
LEVERAGE	0.215	0.209	0.220	0.209	-1.505	-0.338
R&D/SALES	0.062	0.032	0.034	0.012	18.021***	28.517***
SD_ROA	0.036	0.019	0.040	0.022	-4.182***	-6.481***
LN(GDP_PERCAPITA)	10.493	10.703	10.398	10.703	6.370***	1.648*

Table 4 Effect of cross-border alliance activities on CSR performance

This table reports the ordinary least square (OLS) regression results of CSR performance on alliance activities. The sample consists of 14,688 firm-year observations from 39 foreign countries (regions) over the period 2002–2018. *ALLIANCE_DUMMY* is the variable of our interest, which is an indicator variable that is set to one in the year of forming at least one alliance with a US firm and afterwards, and set to zero in all years preceding the year of establishing the alliance or if a firm has never carried out any alliances with a US firm. The dependent variable in Models (1) and (2) is the overall CSR performance of a firm in a given fiscal year (*CSR*), which is measured as the average of environmental performance and social performance. The dependent variables in Model (3), (4), and (5) are the environmental performance (*ENV_SCORE*), social performance (*SOCIAL_SCORE*), and governance performance (*CG_SCORE*) of a firm in a given fiscal year, respectively. All regressions control for the country, industry, and year fixed effects. Standard errors are clustered at the foreign firm level, and robust t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10%, respectively.

DEPENDENT VARIABLE	BASELINE		COMPONENTS OF CSR:	COMPONENTS OF CSR:	CG_SCORE
	CSR		ENV_SCORE	SOCIAL_SCORE	
	(1)	(2)	(3)	(4)	(5)
ALLIANCE_DUMMY	10.195*** (10.97)	3.551*** (4.45)	3.170*** (3.61)	3.922*** (4.34)	3.577*** (3.99)
LN(ASSETS)		7.521*** (27.57)	7.142*** (23.13)	7.911*** (26.40)	5.581*** (17.09)
MTB		1.249*** (5.73)	1.088*** (4.54)	1.413*** (5.24)	0.249 (0.96)
AGE		0.189*** (3.10)	0.236*** (3.53)	0.142** (2.07)	0.026 (0.36)
SALES_GROWTH		-0.031*** (-4.76)	-0.031*** (-4.47)	-0.031*** (-4.05)	-0.035*** (-4.45)
ROA		5.761** (1.99)	2.899 (0.89)	8.660** (2.55)	7.581** (2.02)
LEVERAGE		-1.569 (-0.67)	-0.929 (-0.37)	-2.235 (-0.85)	-1.573 (-0.62)
R&D/SALES		9.668*** (2.77)	7.442** (1.97)	11.902*** (2.72)	12.519*** (2.75)
SD_ROA		4.883 (1.18)	3.281 (0.71)	6.421 (1.35)	0.390 (0.08)
LN(GDP_PERCAPITA)		1.274 (0.40)	5.143 (1.53)	-2.429 (-0.65)	-5.965 (-1.41)
CONSTANT	47.435*** (10.25)	-134.728*** (-3.93)	-166.280*** (-4.56)	-105.212*** (-2.64)	-9.682 (-0.21)

COUNTRY FE	YES	YES	YES	YES	YES
INDUSTRY FE	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES
CLUSTER	FIRM	FIRM	FIRM	FIRM	FIRM
OBSERVATIONS	14,688	14,688	14,688	14,688	14,688
ADJUSTED R ²	0.243	0.438	0.388	0.392	0.176

Table 5 Propensity score matching approach and entropy balancing method

This table displays the results of the influence of CSR performance on alliance activities by using the PSM approach and entropy balancing method. To conduct PSM analysis, we first employ a *Logistic* regression to estimate the probability of being a treated firm on the control variables shown in the main model. We then match each treatment firm to a control firm (without replacement) and require the propensity scores for each matched pair to be within 0.5% of each other. Panel A reports the results of post-matching diagnostic tests, and Panel B presents the regression results based on the PSM-matched sample. Panel C reports the results based on the entropy-balanced sample. The entropy balancing matching ensures that the first three moments of the control variables: mean, variance, and skewness are balanced between the treatment and control groups. All regressions control for the country, industry, and year fixed effects. Standard errors are clustered at the foreign firm level, and robust t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Post-matching diagnostic test

	Treated		Control		t-value	p-value
	Mean	Obs.	Mean	Obs.		
LN(ASSETS)	22.541	4,452	22.541	4,452	0.014	0.989
MTB	1.845	4,452	1.859	4,452	-0.400	0.689
AGE	16.950	4,452	16.958	4,452	-0.057	0.954
SALES_GROWTH	11.448	4,452	13.278	4,452	-0.937	0.349
ROA	0.043	4,452	0.044	4,452	-0.418	0.676
LEVERAGE	0.216	4,452	0.213	4,452	1.127	0.260
R&D/SALES	0.095	4,452	0.125	4,452	-0.820	0.412
SD_ROA	0.038	4,452	0.037	4,452	0.279	0.780

Panel B: PSM matched sample

DEPENDENT VARIABLE	CSR	
	(1)	(2)
ALLIANCE_DUMMY	6.133*** (6.09)	3.556*** (4.18)
LN(ASSETS)		7.506*** (23.47)
MTB		1.080*** (3.90)
AGE		0.160** (2.36)
SALES_GROWTH		-0.048*** (-4.90)
ROA		7.675* (1.92)
LEVERAGE		-3.681 (-1.28)
R&D/SALES		0.085** (2.03)
SD_ROA		5.971 (0.99)
LN(GDP_PERCAPITA)		2.538 (0.69)
CONSTANT	44.961*** (8.75)	-149.292*** (-3.79)
COUNTRY FE	YES	YES
INDUSTRY FE	YES	YES
YEAR FE	YES	YES
CLUSTER	FIRM	FIRM
OBSERVATIONS	8,904	8,904
ADJUSTED R ²	0.207	0.408

Panel C: Entropy balancing matching

DEPENDENT VARIABLE	CSR	
	(1)	(2)
ALLIANCE_DUMMY	5.565*** (4.80)	3.228*** (3.76)
LN(ASSETS)		7.527*** (23.83)
MTB		0.986*** (3.72)
AGE		0.117 (1.62)
SALES_GROWTH		-0.051*** (-5.22)
ROA		8.334* (1.91)
LEVERAGE		-4.752 (-1.63)
R&D/SALES		11.019** (2.52)
SD_ROA		5.309 (1.00)
LN(GDP_PERCAPITA)		1.201 (0.33)
CONSTANT	43.889*** (9.35)	-134.954*** (-3.45)
COUNTRY FE	YES	YES
INDUSTRY FE	YES	YES
YEAR FE	YES	YES
CLUSTER	FIRM	FIRM
OBSERVATIONS	14,688	14,688
ADJUSTED R ²	0.220	0.446

Table 6 Difference in differences regression

This table shows the regression results of using the DiD method. Panel A and Panel B report the baseline DiD regression results and the dynamic effects of alliance deals on foreign participant firms' CSR performance, respectively. In Panel A, *ALLIANCE_FIRM* indicates whether the firm has made alliances during the sample period, which equals one if the foreign firms entered alliances with US firms during our sample period at any point in time (treatment group), and equals zero if the foreign firms never form alliances with US firms (control group). In Panel B, independent variables include a set of dummies indicating the year in which cross-border alliances are announced or the year after (or prior to) alliance announcements. The sample used in Model (1) and Model (2) of Panel B is the whole sample (firm-year observations for alliance firms and non-alliance firms) and the subsample (firm-year observations for alliance firms), respectively. The dependent variable is the CSR performance of a firm in a given fiscal year (*CSR*). All regressions control for the country, industry, and year fixed effects. Standard errors are clustered at the foreign firm level, and robust t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Difference in differences regression

DEPENDENT VARIABLE	CSR	
	(1)	(2)
ALLIANCE_DUMMY	7.477*** (5.06)	3.299*** (2.80)
ALLIANCE_FIRM	3.118 (2.07)	0.295 (0.24)
LN(ASSETS)		7.515*** (27.24)
MTB		1.249*** (5.73)
AGE		0.189*** (3.11)
SALES_GROWTH		-0.031*** (-4.76)
ROA		5.761** (1.99)
LEVERAGE		-1.550 (-0.66)
R&D/SALES		9.624*** (2.75)
SD_ROA		4.914 (1.19)
LN(GDP_PERCAPITA)		1.256 (0.39)
CONSTANT	46.466*** (10.19)	-134.500*** (-3.93)
COUNTRY FE	YES	YES
INDUSTRY FE	YES	YES
YEAR FE	YES	YES
CLUSTER	FIRM	FIRM
OBSERVATIONS	14,688	14,688
ADJUSTED R ²	0.244	0.438

Panel B: DiD dynamic effects

DEPENDENT VARIABLE	CSR	
	(1)	(2)
ALLIANCE(-2)	0.312 (0.26)	0.470 (0.41)
ALLIANCE(-1)	0.705 (0.62)	0.711 (0.55)
ALLIANCE(0)	0.696 (0.67)	1.086 (0.82)
ALLIANCE(+1)	2.414** (2.38)	2.754* (1.92)
ALLIANCE(+2)	3.179*** (3.13)	3.648** (2.52)
ALLIANCE(+3)	3.219*** (3.26)	3.630** (2.40)
ALLIANCE(+4)	4.171*** (4.34)	4.624*** (2.92)
ALLIANCE(5+)	4.124*** (4.37)	5.492*** (3.00)
LN(ASSETS)	7.501*** (27.27)	7.903*** (17.49)
MTB	1.254*** (5.75)	1.170*** (3.18)
AGE	0.182*** (2.97)	-0.141 (-1.24)
SALES_GROWTH	-0.031*** (-4.72)	-0.044*** (-3.56)
ROA	5.675** (1.96)	3.707 (0.72)
LEVERAGE	-1.564 (-0.66)	-7.527* (-1.84)
R&D/SALES	9.461*** (2.70)	4.314 (1.34)
SD_ROA	4.832 (1.17)	-3.809 (-0.45)
LN(GDP_PERCAPITA)	1.311 (0.41)	2.776 (0.41)
CONSTANT	-134.324*** (-3.91)	-146.865** (-1.99)
COUNTRY FE	YES	YES
INDUSTRY FE	YES	YES
YEAR FE	YES	YES
CLUSTER	FIRM	FIRM
OBSERVATIONS	14,688	5,072
ADJUSTED R ²	0.438	0.515

Table 7 Alternative model specifications, samples, and subcategory scores of CSR performance

This table shows the regression results using different model specifications, alternative samples, and different subcomponents of CSR performance. Panel A reports the regression results of using alternative model specifications and samples. *Clustered at the country and year level* indicates that we cluster the standard errors at country and year levels. *Controlling for the lagged governance score* indicates that we add the lagged value of *CG_SCORE* in the regression model. *Controlling for previous alliances* indicates that we control for the number of alliances with US firms the foreign firms conducted previously. *Weighted Least Squares* indicates that we use the Weighted Least Squares regression rather than the OLS. *(-3,+3) years*, *(-5,+5) years*, and *(-10,+10) years* indicate that the sample only retains the firms that form alliances with US firms during the sample period, and only retains the firm-year observations between pre-3 and post-3 years of the alliance announcement, between pre 5 and post 5 years of the alliance announcement, and between pre-10 and post-10 years of the alliance announcement, respectively. *Excluding firms from Japan* indicates that we exclude the firms that are from Japan in our sample. *Excluding firms from the UK* indicates that we exclude the UK firms. *Excluding firms from the countries with higher CSR* indicates that we exclude the firms that are from the countries that have higher average CSR scores than the US average CSR score; that is, Colombia, France, Italy, Luxembourg, and Sweden are excluded. Panel B reports the regression results of each environmental and social subcategory score on alliance activities. *Emission reduction*, *Environmental innovation*, and *Resource use* are the three subcategory scores for the environmental pillar score. *Workforce*, *Human rights*, *Community*, and *Product responsibility* are the four subcategory scores for the social pillar score. Control variables and fixed effects are the same as those in the baseline model in Table 4. Robust t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Alternative model specifications and samples

DEPENDENT VARIABLE: CSR				
	ALLIANCE DUMMY	t-stats	Adj. R ²	# of obs.
Baseline specification	3.551***	4.45	0.438	14,688
<i>Alternative specifications</i>				
Clustered at the country and year level	3.551***	12.52	0.438	14,688
Controlling for the lagged governance score	2.729***	3.43	0.466	13,103
Controlling for previous alliances	3.156***	3.85	0.439	14,688
Weighted Least Squares	3.356***	4.21	0.449	14,688
<i>Alternative samples</i>				
(-3,+3) years	1.861**	2.03	0.480	1,621
(-5,+5) years	2.476**	2.51	0.489	2,402
(-10,+10) years	3.603**	2.98	0.514	4,077
Excluding firms from Japan	3.214***	3.72	0.481	10,651
Excluding firms from the UK	3.911***	4.50	0.450	13,080
Excluding firms from the countries with higher CSR	3.634***	4.24	0.420	13,442

Panel B: Subcategory score for the environmental and social pillar

<i>Dependent variable</i>	ALLIANCE_DUMMY	<i>t</i> -stats	Adj. R ²	# of obs.
Environmental pillar: Emission reduction	3.796***	2.66	0.417	14,688
Environmental pillar: Environmental innovation	4.318***	3.04	0.352	14,688
Environmental pillar: Resource use	4.749***	3.29	0.382	14,688
Social pillar: Workforce	5.642***	4.04	0.293	14,688
Social pillar: Human rights	3.791***	2.80	0.388	14,688
Social pillar: Community	4.923***	3.41	0.277	14,688
Social pillar: Product responsibility	4.668***	3.11	0.269	14,688

Table 8 Impact of the US partner's CSR status on the changes of the foreign firm's CSR

This table displays the regression results of the changes in foreign firms' CSR performance. *HIGH_US_CSR* is a dummy variable that equals one if the US partner has a higher CSR score than the foreign firm one year prior to the alliance announcement, and zero otherwise. The dependent variable in Model (1) (Model (2)) is the change of average CSR performance of the foreign firm in the post 3 (post 5) years after the deal announcement, compared with the CSR performance one year prior to the alliance announcement. All regressions control for the country, industry, and year fixed effects. Standard errors are clustered at the foreign firm level, and robust t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

DEPENDENT VARIABLE:	POST THREE YEARS	POST FIVE YEARS
CSR_CHANGES	(1)	(2)
HIGH_US_CSR	11.793*** (4.93)	13.804*** (5.01)
LN(ASSETS)	-1.317** (-2.46)	-1.712*** (-2.68)
MTB	-1.961*** (-2.96)	-2.468*** (-3.11)
AGE	0.311** (2.13)	0.372** (2.04)
SALES_GROWTH	0.007 (0.30)	0.008 (0.25)
ROA	-8.863 (-0.72)	1.357 (0.10)
LEVERAGE	4.568 (1.00)	4.759 (0.93)
R&D/SALES	1.994 (0.26)	7.719 (0.95)
SD_ROA	-12.349 (-0.76)	-2.122 (-0.10)
LN(GDP_PERCAPITA)	-22.845 (-1.24)	4.343 (0.18)
CONSTANT	270.078 (1.41)	10.073 (0.04)
COUNTRY FE	YES	YES
INDUSTRY FE	YES	YES
YEAR FE	YES	YES
CLUSTER	FIRM	FIRM
OBSERVATIONS	1,008	920
ADJUSTED R ²	0.226	0.256

Table 9 Home country characteristics: institutional governance, social norms, economic conditions

This table reports the regression results of the roles of the home country's characteristics in the relationship between alliance activities and CSR performance. Panel A, Panel B, and Panel C present the results of considering the impacts of country-level institutional governance, social norms, and economic conditions, respectively. *COMMON_LAW* is a dummy variable indicating whether the country is a common law country. *ANTI_SELF_DEALING_INDEX* is a survey-based measure of the legal protection of minority shareholders against expropriation by corporate insiders. *CONSTRAINED_ON_EXECUTIVE_POWER* is a score that measures the level of limitations on executive power. *WORLD_VALUE_E&S_INDEX* measures a society's values regarding environmental activism, lifestyle liberty, gender equality, personal autonomy, and the voice of the people, which is extracted from Dyck *et al.* (2019). *COUNTRY_SOCIAL_PERFORMANCE* measures whether the average social performance (*SOCIAL_SCORE*) of the foreign firm's country is higher than the median value of average social performance among all the countries in a given year. *MARKET_CAPITALIZATION* is defined as the ratio of stock market capitalization to GDP in a given year. *FINANCIAL_STRUCTURE* is defined as the stock market capitalization to the private credit by banks. *FOREIGN_OWNERSHIP_RESTRICTION* is the performance score based on the evaluation of whether foreign ownership of firms in the country is rare, and whether rules governing foreign investments are damaging or discouraging FDI with lower values indicating more restrictions. We transfer the sign of the scores, making higher values indicate more restrictions on foreign ownership. The dependent variable is the CSR performance of a firm in a given year (*CSR*). Standard errors are clustered at the foreign firm level, and robust t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Institutional governance

DEPENDENT VARIABLE: CSR	PROXY 1:	PROXY 2:	PROXY 3:
	COMMON_LAW	ANTI_SELF_DEALING_INDEX	CONSTRAINED_ON_EXECUTIVE_POWER
	(1)	(2)	(3)
ALLANCE_DUMMY* COUNTRY_INSTITUTION	-6.327*** (-4.22)	-8.215*** (-2.61)	-1.996** (-2.56)
ALLIANCE_DUMMY	6.388*** (6.20)	9.281*** (4.59)	17.360*** (3.31)
COUNTRY_INSTITUTION	5.297*** (5.56)	-1.204 (-0.61)	4.820*** (11.28)
LN(ASSETS)	7.110*** (24.92)	6.666*** (23.70)	7.233*** (25.78)
MTB	1.498*** (6.03)	1.532*** (6.08)	1.307*** (5.43)
AGE	0.390*** (6.00)	0.371*** (5.73)	0.195*** (2.89)
SALES_GROWTH	-0.047***	-0.044***	-0.040***

ROA	(-6.55) 11.913***	(-6.18) 14.163***	(-5.83) 15.753***
LEVERAGE	(3.58) 2.342	(4.30) 3.502	(4.91) 2.387
R&D/SALES	(0.89) 9.665**	(1.32) 8.989**	(0.88) 12.311***
SD_ROA	(2.40) 7.464	(2.33) 11.420**	(3.19) 9.576**
LN(GDP_PERCAPITA)	(1.63) 3.260***	(2.49) 3.047***	(2.02) 0.151
CONSTANT	(6.44) -155.313***	(5.75) -140.440***	(0.29) -149.126***
	(-17.90)	(-15.42)	(-17.35)
COUNTRY FE	NO	NO	NO
INDUSTRY FE	YES	YES	YES
YEAR FE	YES	YES	YES
CLUSTER	FIRM	FIRM	FIRM
OBSERVATIONS	14,688	14,634	13,655
ADJUSTED R ²	0.353	0.348	0.371

Panel B: Social norms

DEPENDENT VARIABLE: CSR	PROXY 1:	PROXY 2:
	WORLD_VALUE_E&S_INDEX	COUNTRY_SOCIAL_PERFORMANCE
	(1)	(2)
ALLANCE_DUMMY* SOCIAL_NORMS	-1.287** (-2.13)	-2.629** (-2.11)
ALLIANCE_DUMMY	5.119*** (10.09)	4.974*** (4.45)
SOCIAL_NORMS	4.246*** (10.75)	4.078*** (6.40)
LN(ASSETS)	7.000*** (49.29)	7.488*** (27.42)
MTB	1.459*** (9.38)	1.225*** (5.66)

AGE	0.388*** (13.15)	0.189*** (3.11)
SALES_GROWTH	-0.045*** (-7.33)	-0.031*** (-4.71)
ROA	12.092*** (6.73)	5.724** (1.98)
LEVERAGE	2.880*** (2.59)	-1.577 (-0.67)
R&D/SALES	8.455*** (3.90)	9.654*** (2.79)
SD_ROA	9.957*** (3.79)	4.904 (1.20)
LN(GDP_PERCAPITA)	2.388*** (9.43)	2.831 (0.88)
CONSTANT	-142.358*** (-35.75)	-153.636*** (-4.48)
COUNTRY FE	NO	YES
INDUSTRY FE	YES	YES
YEAR FE	YES	YES
CLUSTER	FIRM	FIRM
OBSERVATIONS	14,305	14,688
ADJUSTED R ²	0.353	0.441

Panel C: Economic conditions

DEPENDENT VARIABLE: CSR	PROXY 1:	PROXY 2:	PROXY 3:
	MARKET_CAPITALIZATION	FINANCIAL_STRUCTURE	FOREIGN_OWNERSHIP_RES TRITION
	(1)	(2)	(3)
ALLANCE_DUMMY* ECONOMIC_CONDITIONS	-0.010* (-1.71)	-1.986** (-2.13)	1.906*** (3.01)
ALLIANCE_DUMMY	4.632*** (4.47)	5.712*** (4.66)	16.786*** (3.60)
ECONOMIC_CONDITIONS	-0.007 (-1.25)	0.148 (0.18)	0.571 (1.51)
LN(ASSETS)	7.629***	7.548***	7.592***

	(26.46)	(25.32)	(26.40)
MTB	1.250***	1.243***	1.216***
	(5.35)	(5.16)	(5.12)
AGE	0.181***	0.193***	0.192***
	(2.84)	(2.91)	(2.90)
SALES_GROWTH	-0.030***	-0.027***	-0.031***
	(-4.36)	(-3.80)	(-4.56)
ROA	5.347*	7.421**	7.856***
	(1.77)	(2.31)	(2.66)
LEVERAGE	-1.521	-0.778	-1.701
	(-0.63)	(-0.31)	(-0.69)
R&D/SALES	8.941**	10.120***	10.460***
	(2.47)	(2.64)	(2.77)
SD_ROA	4.261	4.616	5.373
	(0.99)	(0.99)	(1.24)
LN(GDP_PERCAPITA)	1.257	0.735	1.437
	(0.39)	(0.23)	(0.44)
CONSTANT	-136.806***	-130.423***	-133.130***
	(-3.92)	(-3.75)	(-3.75)
COUNTRY FE	YES	YES	YES
INDUSTRY FE	YES	YES	YES
YEAR FE	YES	YES	YES
CLUSTER	FIRM	FIRM	FIRM
OBSERVATIONS	13,801	13,181	13,311
ADJUSTED R ²	0.436	0.436	0.440

Table 10 Foreign firm's corporate governance, market competition, and innovation capacity

This table reports the regression results of CSR performance on alliance activities by considering the impact of foreign firms' corporate governance, market competition, and innovation capacity. Panel A reports the results of the impact of foreign firm's corporate governance, including internal corporate governance and external monitoring. Internal governance quality is proxied by the ratio of independent directors (*INDEPENDENT_DIRECTOR*), the percentage of female directors (*FEMALE_DIRECTOR*), and CEO/chairperson duality (*DUALITY*) in a given foreign firm in a given year. The degree of external monitoring is proxied by the natural logarithm of the number of financial analysts following a firm (*ANALYST_COVERAGE*) and foreign ownership (*FOREIGN_OWNERSHIP*) in a given foreign firm in a given year. Panel B reports the results of the impacts from the market competition of the foreign firms, which is proxied by the industry-level Herfindahl-Hirschman index (*HHI*) and the country-level competition law index (*COMPLAW*). Panel C reports the results of the impact of foreign firms' innovation capacity, which is proxied by the firm's environmental innovation score (*ENVIRONMENTAL_INNOVATION*) and the ratio of R&D expense to assets (*R&D_INTENSITY*) in a given year. The dependent variable is the CSR performance of a firm in a given fiscal year (*CSR*). All regressions control for the country, industry, and year fixed effects. Standard errors are clustered at the foreign firm level, and robust t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Internal governance and external monitoring

DEPENDENT VARIABLE: CSR	PROXY 1: <i>INDEPENDENT_DIRECTOR</i>	PROXY 2: <i>FEMALE_DIRECTOR</i>	PROXY 3: <i>DUALITY</i>	PROXY 4: <i>ANALYST_COVERAGE</i>	PROXY 5: <i>FOREIGN_OWNERSHIP</i>
	(1)	(2)	(3)	(1)	(2)
<i>ALLIANCE_DUMMY*</i> GOVERNANCE	-6.840** (-2.55)	-13.811** (-2.51)	1.685** (2.34)	-3.051*** (-3.71)	-11.648* (-1.94)
<i>ALLIANCE_DUMMY</i> GOVERNANCE	5.810*** (3.61)	4.188*** (3.97)	2.255*** (4.48)	10.499*** (4.68)	3.636*** (4.07)
<i>LN(ASSETS)</i>	7.825*** (3.65)	19.443*** (5.07)	-0.800 (-1.65)	4.698*** (8.54)	5.064** (1.98)
<i>MTB</i>	7.040*** (23.48)	7.015*** (23.52)	7.180*** (43.35)	6.679*** (20.48)	7.790*** (27.07)
<i>AGE</i>	1.543*** (5.84)	1.464*** (5.48)	1.507*** (9.22)	1.150*** (4.65)	1.407*** (5.97)
<i>SALES_GROWTH</i>	0.183*** (2.72)	0.168** (2.52)	0.172*** (5.41)	0.154** (2.38)	0.157** (2.38)
<i>ROA</i>	-0.034*** (-4.09)	-0.034*** (-4.09)	-0.037*** (-4.82)	-0.021*** (-2.82)	-0.030*** (-4.20)
	3.598 (1.10)	3.741 (1.15)	4.075* (1.91)	1.317 (0.44)	5.130* (1.69)

LEVERAGE	-3.183 (-1.21)	-2.953 (-1.12)	-3.108* (-1.89)	0.176 (0.07)	-0.525 (-0.21)
R&D/SALES	5.194 (1.24)	5.479 (1.31)	5.778*** (2.83)	8.346** (2.15)	10.009*** (2.63)
SD_ROA	0.605 (0.14)	0.919 (0.20)	0.738 (0.28)	3.417 (0.73)	1.332 (0.30)
LN(GDP_PERCAPITA)	12.185** (2.24)	13.075** (2.33)	11.564** (2.23)	-1.699 (-0.39)	1.709 (0.50)
CONSTANT	-241.917*** (-4.16)	-246.987*** (-4.14)	-234.474*** (-4.29)	-93.954** (-2.00)	-145.584*** (-3.94)
COUNTRY FE	YES	YES	YES	YES	YES
INDUSTRY FE	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES
CLUSTER	FIRM	FIRM	FIRM	FIRM	FIRM
OBSERVATIONS	9,044	9,044	9,044	13,285	13,534
ADJUSTED R ²	0.482	0.483	0.478	0.458	0.448

Panel B: Market competition

DEPENDENT VARIABLE: CSR	PROXY 1:	PROXY 2:
	HHI	COMPLAW
	(1)	(2)
ALLIANCE_DUMMY*COMPETITION	-2.487** (-2.32)	6.078** (2.43)
ALLIANCE_DUMMY	4.511*** (7.93)	-1.476 (-0.76)
COMPETITION	1.005 (1.50)	-1.446 (-0.36)
LN(ASSETS)	7.521*** (58.12)	7.710*** (43.15)
MTB	1.256*** (9.73)	1.264*** (5.97)
AGE	0.189*** (7.03)	0.190*** (4.14)
SALES_GROWTH	-0.031*** (-5.69)	-0.025*** (-3.10)
ROA	5.564*** (2.91)	11.216*** (3.67)
LEVERAGE	-1.609 (-1.51)	-2.048 (-1.37)
R&D/SALES	9.465*** (4.87)	14.045*** (3.26)
SD_ROA	4.999** (2.08)	9.962*** (2.61)
LN(GDP_PERCAPITA)	1.407 (0.55)	-8.520 (-1.33)
CONSTANT	-137.035*** (-4.95)	-27.987 (-0.42)
COUNTRY FE	YES	YES
INDUSTRY FE	YES	YES
YEAR FE	YES	YES
CLUSTER	FIRM	FIRM
OBSERVATIONS	14,688	6,650
ADJUSTED R ²	0.438	0.420

Panel C: Innovation capacity

DEPENDENT VARIABLE: CSR	PROXY 1:	PROXY 2:
	ENVIRONMENTAL INNOVATION	R&D INTENSITY
	(1)	(2)
ALLIANCE_DUMMY*INNOVATION	-5.554*** (-4.28)	-29.441*** (-2.61)
ALLIANCE_DUMMY	4.972*** (5.64)	4.502*** (4.76)
INNOVATION	41.313*** (41.14)	47.445*** (4.83)
LN(ASSETS)	2.914*** (11.93)	7.520*** (27.56)
MTB	0.990*** (5.44)	1.097*** (4.88)
AGE	-0.019 (-0.44)	0.184*** (3.04)
SALES_GROWTH	-0.014** (-2.46)	-0.028*** (-4.31)
ROA	1.404 (0.59)	5.557* (1.91)

LEVERAGE	-0.363	-1.482
	(-0.22)	(-0.63)
R&D/SALES	3.815	-4.179
	(1.14)	(-1.02)
SD_ROA	3.207	3.986
	(0.95)	(0.97)
LN(GDP_PERCAPITA)	3.735	1.340
	(1.43)	(0.42)
CONSTANT	-73.408***	-135.504***
	(-2.60)	(-3.96)
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COUNTRY FE	YES	YES
INDUSTRY FE	YES	YES
YEAR FE	YES	YES
CLUSTER	FIRM	FIRM
OBSERVATIONS	12,535	14,688
ADJUSTED R ²	0.672	0.441
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Table 11 Incremental effects of CSR on firm value and earnings quality

This table reports the incremental effects of CSR performance associated with alliance deals on firm value and earnings quality. The dependent variable in Model (1) is the market-to-book (*MTB*) ratio. The dependent variable in Model (2) is the level of real earnings management (*REM*). *ALLIANCE_DUMMY* is set to one in the year of forming at least one alliance with a US firm and afterwards, and set to zero in all years preceding the year of establishing the alliance or if a firm has never carried out any alliances with a US firm. All regressions control for the country, industry, and year fixed effects. Standard errors are clustered at the foreign firm level, and robust t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

DEPENDENT VARIABLE:	MTB	REM
	(1)	(2)
ALLIANCE_DUMMY* CSR	0.006** (2.01)	0.001** (2.24)
ALLIANCE_DUMMY	-0.267 (-1.45)	-0.023 (-1.02)
CSR	0.006*** (4.00)	0.001*** (3.96)
LN(ASSETS)	-0.391*** (-8.19)	-0.032*** (-9.42)
AGE	-0.012** (-2.27)	-0.001 (-1.23)
SALES_GROWTH	0.000 (1.11)	-0.000*** (-2.98)
ROA	3.832** (1.99)	1.216*** (19.88)
LEVERAGE	0.060 (0.15)	0.012 (0.57)
R&D/SALES	0.205*** (2.70)	1.340*** (15.42)
SD_ROA	0.859 (0.89)	0.188** (2.05)
ANALYST_COVERAGE	0.229*** (5.76)	0.078*** (13.29)
LN(GDP_PERCAPITA)	-1.203*** (-3.74)	-1.529 (-1.25)
CONSTANT	22.325*** (6.14)	16.760 (1.27)
COUNTRY FE	YES	YES
INDUSTRY FE	YES	YES
YEAR FE	YES	YES
CLUSTER	FIRM	FIRM
OBSERVATIONS	12,237	10,484
ADJUSTED R ²	0.309	0.421

Table 12 Impact of the US partner's CSR status on the alliance participant's short-term stock performance

This table reports the regression analysis of alliance participants' short-term stock performance around the cross-border alliance announcement date. The foreign partner's stock performance is measured as the 7-day cumulative abnormal returns around the announcement date, estimated using the market-adjusted model and Daily WRDS World Indices as the market index returns. The US firm's stock performance is measured as the 7-day cumulative abnormal returns around the announcement date, estimated using the market-adjusted model and CRSP Value-weighted market return. *HIGH_US_CSR* is a dummy variable that equals one if the US partner has a higher CSR score than the foreign firm one year prior to the alliance announcement, and zero otherwise. Panel A and Panel B report the results of foreign firm's performance and US firm's performance, respectively. Control variables used in Panel A and Panel B are firm fundamental characteristics of the foreign firm and US firm, respectively. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Foreign firm's stock performance

DEPENDENT VARIABLE:	CAR(-3, +3) (1)
HIGH_US_CSR	0.011*** (2.72)
LN(ASSETS)	-0.001 (-1.09)
MTB	-0.003 (-0.95)
AGE	0.000 (0.46)
SALES_GROWTH	-0.000 (-0.43)
ROA	-0.008 (-0.21)
LEVERAGE	0.005 (0.35)
R&D/SALES	0.038* (1.95)
SD_ROA	-0.033 (-0.62)
LN(GDP_PERCAPITA)	-0.022 (-0.63)
CONSTANT	0.276 (0.75)
COUNTRY FE	YES
INDUSTRY FE	YES
YEAR FE	YES
CLUSTER	FOREIGN FIRM
OBSERVATIONS	1,273
ADJUSTED R ²	0.0577

Panel B: US firm's stock performance

DEPENDENT VARIABLE:	CAR(-3, +3) (1)
HIGH_US_CSR	0.002 (0.39)
LN(ASSETS)	-0.003** (-2.22)
MTB	0.000 (0.34)
AGE	0.001 (1.16)
SALES_GROWTH	0.006

	(0.74)
ROA	-0.034
	(-1.44)
LEVERAGE	-0.001
	(-0.41)
R&D/SALES	0.001
	(0.89)
SD_ROA	0.013
	(0.26)
CONSTANT	0.068***
	(3.62)
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INDUSTRY FE	YES
YEAR FE	YES
CLUSTER	US FIRM
OBSERVATIONS	1,265
ADJUSTED R ²	0.0404
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Appendix Table A1: Sample construction

This table reports the sample selection criteria and the number of remaining observations.

Panel A: Alliance deals selection criteria

Sample selection criteria	Number of obs.
1. Cross-border alliance deals with only two partners announced between 2002 and 2018	45,832
2. Alliance deals are defined as 'completed' in the SDC	25,114
3. Alliance deals consist of one US firm	12,853
4. Foreign participant firms with available ISIN code	6,100
(Number of unique foreign firms: 2,978)	

Panel B: Foreign firm firm-year observations from Worldscope

Sample selection criteria	Number of obs.
1. Foreign firm-year observations between 2002 and 2018 (excluding US firms)	673,075
2. Incorporate foreign participants which are involved in cross-border alliances	673,075
3. Utility firms (SIC code 4900-4999) and financial firms (SIC codes 6000-6999) are removed	550,454
4. Incorporate CSR score, retain firm-year observations with non-missing CSR score	32,356
5. Exclude the firm-year observations if control variables are missing	14,751
6. Exclude the countries with fewer than 10 firm-year observations	14,688
(Number of countries or regions: 39)	
(Number of unique foreign firms: 2,045)	
(Number of deals: 1,662)	

Appendix Table A2: Variable definition

<i>Variable</i>	<i>Definition</i>	<i>Source</i>
<i>Main variable of interest</i>		
<i>ALLIANCE_DUMMY</i>	An indicator variable that is set to one in the year of forming at least one alliance with a US firm and afterwards, and set to zero in all years preceding the year of establishing the alliance or if a firm has never carried out any alliances with a US firm.	SDC Platinum database
<i>Dependent variables</i>		
<i>CSR</i>	Overall CSR performance of a firm in a given fiscal year – composed of the equally weighted environmental and social performance.	Thomson Reuters' ASSET4
<i>ENV_SCORE</i>	Environmental performance of a firm in a given fiscal year. It measures a firm's impact on living and non-living natural systems, including the air, land, and water, as well as complete ecosystems.	Thomson Reuters' ASSET4
<i>SOCIAL_SCORE</i>	Social performance of a firm in a given fiscal year. It measures a firm's capacity to generate trust and loyalty with its workforce, customers, and society through its use of best management practices.	Thomson Reuters' ASSET4
<i>CG_SCORE</i>	Governance performance of a firm in a given fiscal year. It measures a firm's capacity to ensure minority shareholders' equal rights and privileges and to limit the use of anti-takeover devices, with a particular focus on the management team, shareholders, and sustainability strategy.	Thomson Reuters' ASSET4
<i>Control variables in the main regression</i>		
<i>LN(ASSETS)</i>	The natural logarithm of the book value of total assets in millions of constant 2000 US dollars (WC07230).	Worldscope
<i>MTB</i>	The ratio of the market value of assets (WC07230 – WC07220 + WC07210) to the book value of assets (WC07230).	Worldscope
<i>AGE</i>	Measured as the fiscal year minus the first fiscal year of available accounting data.	Worldscope
<i>SALES_GROWTH</i>	Annual growth of revenues, measured in percentage (WC08361).	Worldscope
<i>ROA</i>	Net income before the extraordinary items (WC01551) scaled by total assets (WC02999).	Worldscope
<i>LEVERAGE</i>	Total debt (WC03255) divided by total assets (WC02999)	Worldscope
<i>R&D/SALES</i>	Expenses on research and development scaled by total sales (WC08341).	Worldscope
<i>SD_ROA</i>	The standard deviation of ROA in the previous four years.	Worldscope
<i>LN(GDP_PERCAPITA)</i>	The natural logarithm of GDP per capita.	World Bank
<i>Variables in additional tests</i>		
<i>EMISSION REDUCTION</i>	The emission reduction score measures a company's commitment and effectiveness towards reducing environmental emissions in its production and operational processes.	Thomson Reuters' ASSET4
<i>ENVIRONMENTAL INNOVATION</i>	The innovation score reflects a company's capacity to reduce the environmental costs and burdens for its customers, thereby creating new market opportunities through	Thomson Reuters' ASSET4

<i>RESOURCE USE</i>	new environmental technologies and processes, or eco-designed products. The resource use score reflects a company's performance and capacity to reduce the use of materials, energy or water, and to find more eco-efficient solutions by improving supply chain management.	Thomson Reuters' ASSET4
<i>WORKFORCE</i>	The workforce score measures a company's effectiveness in terms of providing job satisfaction, a healthy and safe workplace, maintaining diversity and equal opportunities, and development opportunities for its workforce.	Thomson Reuters' ASSET4
<i>HUMAN RIGHTS</i>	The human rights score measures a company's effectiveness in terms of respecting fundamental human rights conventions.	Thomson Reuters' ASSET4
<i>COMMUNITY</i>	The community score measures the company's commitment to being a good citizen, protecting public health and respecting business ethics.	Thomson Reuters' ASSET4
<i>PRODUCT RESPONSIBILITY</i>	The product responsibility score reflects a company's capacity to produce quality goods and services, integrating the customer's health and safety, integrity and data privacy.	Thomson Reuters' ASSET4
<i>COMMON_LAW</i>	A dummy variable indicating whether the country is a common law country.	Porta <i>et al.</i> (1998)
<i>ANTI_SELF_DEALING_INDEX</i>	The anti-self-dealing index.	Djankov <i>et al.</i> (2008)
<i>CONSTRAINED_ON_EXECUTIVE_POWER</i>	A supplementary proxy for the governance quality of the home country, with higher scores indicating more constraints on the executive power and fewer limitations in the authority.	Acemoglu and Johnson (2005)
<i>WORLD_VALUE_E&S_INDEX</i>	This performance score measures a society's values regarding environmental activism, lifestyle liberty, gender equality, personal autonomy, and the voice of the people, with higher scores corresponding to higher social norms (awareness).	Dyck <i>et al.</i> (2019)
<i>COUNTRY_SOCIAL_PERFORMANCE</i>	An indicator variable for the social performance of the country in which the foreign firm is domiciled; specifically, it is assigned a value of one if the average social performance (<i>SOCIAL_SCORE</i>) of the foreign firm's country is higher than the median value of average social performance among all the countries in a given year, and zero otherwise.	Thomson Reuters' ASSET4
<i>MARKET_CAPITALIZATION</i>	The data on the stock market capitalization are extracted from the World Bank and are calculated as the ratio of stock market capitalization to GDP for a given country in a given year.	World Bank
<i>FINANCIAL_STRUCTURE</i>	The ratio of stock market capitalization over bank credit to the private sector.	Čihák <i>et al.</i> (2012)
<i>FOREIGN_OWNERSHIP_RESTRICTION</i>	To measure the level of restrictions on foreign ownerships in a country, we follow Owen and Yawson (2013) and use the ownership restriction score from the Economic Freedom of the World annual reports published by The Fraser Institute. The score is calculated based on the evaluation of whether the foreign ownership of firms in the country is rare,	Economic Freedom of the World

	and whether rules governing foreign investments are damaging or discouraging FDI. We transfer the sign of the scores, with higher values corresponding to more restrictions on foreign ownership.	
<i>INDEPENDENT_DIRECTOR</i>	the ratio of independent director on the board.	Datastream
<i>FEMALE_DIRECTOR</i>	The proportion of female directors on the board.	Datastream
<i>DUALITY</i>	An indicator variable assigned a value of one if the CEO and the chairperson are the same, and zero otherwise.	Datastream
<i>ANALYST_COVERAGE</i>	The natural logarithm of the total number of financial analysts following a firm in a given fiscal year.	Datastream/IBES
<i>FOREIGN_OWNERSHIP</i>	The percentage of outstanding shares by foreign investors.	Datastream
<i>HHI</i>	The Herfindahl-Hirschman Index, measured as the sum of the squared market shares (WC01001) of the firms in each 3-digit SIC industry in a given country in a given year.	Worldscope
<i>COMPLAW</i>	Competition law index, which measures the stringency of a country's competition laws	Bradford and Chilton (2018)
<i>R&D INTENSITY</i>	The ratio of R&D expense (WC01201) to total assets (WC02999)	Worldscope
<i>REM</i>	The level of real earnings management, computed as the sum of real activities manipulation proxies (Kim <i>et al.</i> 2012).	Datastream

Appendix Table A3: Effects of different types of alliance deals

This table reports the regression results of CSR performance on alliance activities by separating different types of alliance deals, including marketing alliances, manufacturing alliances, supply alliances, licensing alliances, and research and development (R&D) alliances. *DEAL_DUMMY* is the variable of interest, which is an indicator variable assigned a value of one in the year of forming the specific type of deal with a US firm and afterwards, and set to zero in all years preceding the year of establishing the relationship or if a firm has never formed this type of deal. All regressions control for the country, industry, and year fixed effects. Standard errors are clustered at the foreign firm level and robust t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

DEPENDENT VARIABLE	CSR						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Strategic Alliance	Joint Venture	R&D alliance	Supply alliance	Market alliance	Manufacturing alliance	Licensing alliance
DEAL_DUMMY	3.297*** (3.95)	2.628** (2.20)	4.170*** (3.81)	2.114* (1.68)	3.863*** (3.62)	5.311*** (5.01)	0.773 (0.61)
LN(ASSETS)	7.550*** (27.68)	7.789*** (29.61)	7.630*** (28.43)	7.823*** (30.01)	7.616*** (27.89)	7.532*** (28.08)	7.842*** (29.82)
MTB	1.248*** (5.73)	1.268*** (5.84)	1.240*** (5.72)	1.268*** (5.86)	1.269*** (5.84)	1.238*** (5.72)	1.272*** (5.86)
AGE	0.194*** (3.20)	0.196*** (3.22)	0.200*** (3.28)	0.203*** (3.33)	0.194*** (3.20)	0.189*** (3.10)	0.202*** (3.32)
SALES_GROWTH	-0.031*** (-4.70)	-0.031*** (-4.74)	-0.031*** (-4.65)	-0.031*** (-4.67)	-0.031*** (-4.71)	-0.031*** (-4.76)	-0.031*** (-4.65)
ROA	5.698** (1.97)	5.641* (1.94)	5.878** (2.02)	5.391* (1.86)	5.615* (1.94)	5.656* (1.96)	5.417* (1.87)
LEVERAGE	-1.610 (-0.68)	-2.010 (-0.85)	-1.776 (-0.76)	-2.109 (-0.90)	-1.847 (-0.78)	-1.969 (-0.84)	-2.040 (-0.87)
R&D/SALES	9.695*** (2.77)	11.591*** (3.29)	9.900*** (2.82)	11.483*** (3.27)	11.044*** (3.15)	10.448*** (2.98)	11.282*** (3.18)
SD_ROA	5.055 (1.22)	5.276 (1.28)	4.948 (1.20)	5.472 (1.32)	4.845 (1.17)	4.433 (1.07)	5.383 (1.30)
LN(GDP_PERCAPITA)	1.369 (0.42)	0.615 (0.19)	0.952 (0.29)	0.780 (0.24)	0.928 (0.29)	0.982 (0.31)	0.642 (0.20)
CONSTANT	-136.553*** (-3.96)	-134.232*** (-3.88)	-134.191*** (-3.85)	-136.825*** (-3.91)	-133.638*** (-3.84)	-131.949*** (-3.84)	-135.819*** (-3.88)

COUNTRY FE	YES	YES	YES	YES	YES	YES	YES
INDUSTRY FE	YES	YES	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES	YES	YES
CLUSTER	FIRM	FIRM	FIRM	FIRM	FIRM	FIRM	FIRM
OBSERVATIONS	14,688	14,688	14,688	14,688	14,688	14,688	14,688
ADJUSTED R2	0.437	0.434	0.436	0.434	0.436	0.439	0.434