CHAIR
Globalization

By
Christoph Schiller
& Jiaying Wei

Corporate Social Responsibility and Global Value Chains facing Increased Risks

On June 20, the Paris School of Economics organized a workshop on 'Firm-level repercussions of Corporate Social Responsibility'. Two guest researchers presented work highlighting the transmission of corporate social and environmental practices along the global value chains. Jiaying Wei, from the Southern University of Finance and Economics (China), and Christoph Schiller, from Arizona State University (USA), answered a few questions to explain their findings and how they shed light on the evolution of consumer and corporate awareness of stricter environmental and social standards.

Christoph Schiller, your paper entitled 'Global supply-chains networks and corporate social responsibility' investigates the importance of global value chains among the different mechanisms explaining why firms adopt environment and social (E&S) practices. Can you tell us how you proceed?

I use data on corporate E&S scores of firms around the world from a variety of sources notably Thomson Reuters' ASSET4 (now called Refinitiv) and Sustainalytics. Environmental scores cover the various policies, initiatives and commitments that firms adopt to reduce emissions. Social performance is assessed on the basis of a large number of criteria relating to their interactions with workers, consumers and society as a whole in terms of employment, health and safety and respect for human rights. In parallel I also gather data on customer-supplier links covering both domestic and international relationships from FactSet Revere. Using both sets of information, I investigate whether E&S policies propagate along the supply chain by looking at whether and how the E&S policies of customer companies lead to the adoption of policies by suppliers. For pairs of companies whose relationships have lasted more than two years, I find that when the client company adopts new policies, resulting in an increase in its measured environmental and social performance, this generates an increase in the E&S performance of its suppliers the following year. The supply-chain E&S propagation is specific to the respective E&S issue: the adoption of a human rights policy by customers has a positive and significant effect on the supplier's human rights rating, but not on its rating in other areas such as health and safety. Importantly the effect is uni-directional: there is no propagation from supplier to customer.

Can you tell us how your results highlight the specificities of international value chains?

My results show that the adoption of corporate E&S policies and practices by customer companies has a strong and positive impact on the subsequent E&S performance of their suppliers, meaning that the spread along value chains is a significant and real phenomenon. The data covers supply-chain relationships in the same country and in different countries as illustrated in *Figure 1:* this allows to compare whether customers drive suppliers' E&S performance differently in a domestic or international value chains. I show that E&S policy propagation is concentrated in supply-chain pairs where customer and supplier firms are located in different countries, and hence are subject to different regulations and standards. In particular, I find that E&S propagation is more pronounced when ESG standards and enforcement are higher in the customer country than in the supplier country which would be consistent with a strategy of customers directly impacting suppliers' E&S policies to mitigate reputation and legal risks. This should help to reduce the still very wide differences in practices shown in *Figure 2.*

Consistent with the notion that customers drive suppliers' E&S practices, I also find propagation to be significantly stronger when customers have higher bargaining power, and when customers adopt supply-chain specific policies, such as supplier E&S training and monitoring.

Figure 1.
Total number of supply-chain pair-year observations in which the supplier and customer are located in different countries

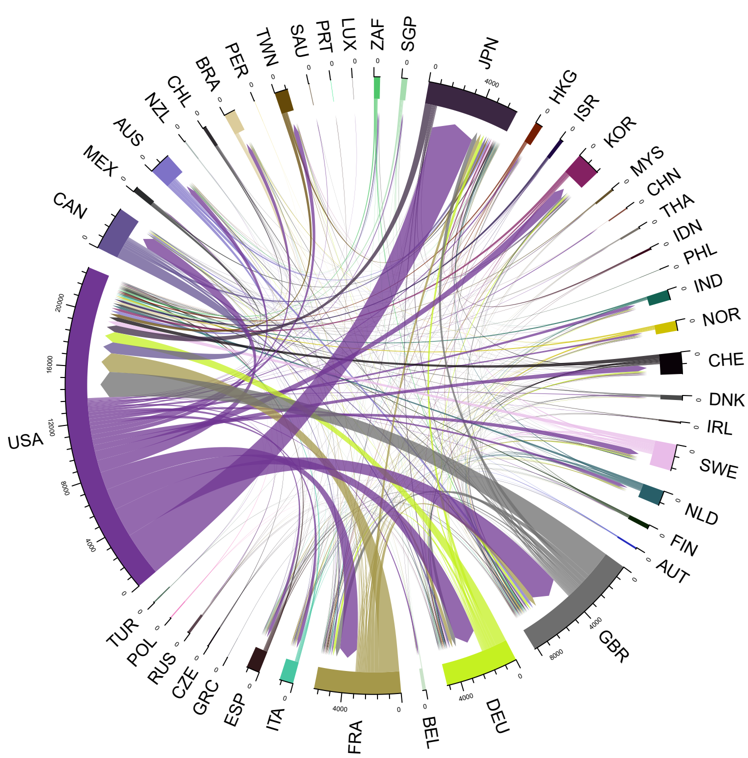
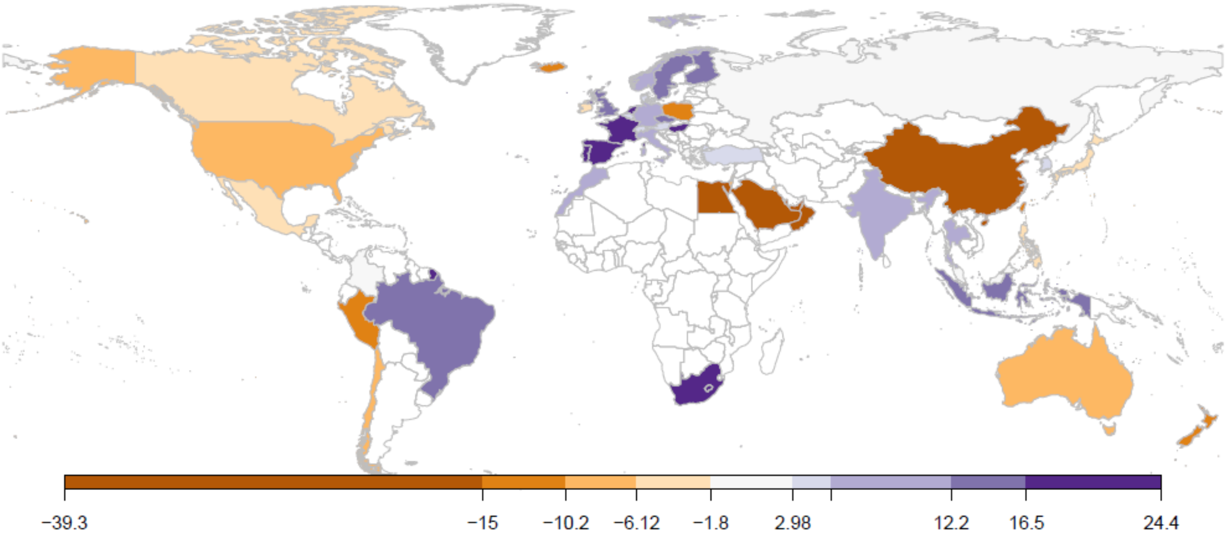


Figure 2.
Average social score by country, corrected for industry and firm size



You also note that the implementation of new national E&S policies in the country where customer companies is headquartered is effective in pushing foreign suppliers to adopt these practices, even if they are not yet the norm in their respective countries. Can you tell us more about this?

A large number of countries have adopted instruments that require or encourage firms to report sustainability-related information or adhere to E&S related regulations. A consortium of researchers has collected all the voluntary initiatives and mandatory instruments adopted from 2003 around the world.[1] I use this information for companies listed on the stock exchange in 31 countries and I find that the introduction of new rules at national level on corporate responsibility leads to an increase in the E&S performance of their suppliers, even when they are located in countries with less stringent standards. For example, the tightening of air pollution criteria in the headquarter country of a company that is a customer of suppliers located in countries where the rules are less strict is followed by an increase in the suppliers' environmental rating. This means that regulatory policies can cross borders through international trade and global value chains.

A significant issue regarding corporate environmental and social (E&S) performance revolves around the concept of greenwashing, wherein companies actively project a socially and environmentally responsible image to the public without actually producing tangible impacts on E&S-related outcomes. Hence if companies' efforts result in tangible consequences that directly influence real outcomes, and consumers possess awareness of these effects, they will respond positively to E&S practices by enhancing their demand.

You are both presenting results attesting to the concrete repercussions of companies' E&S scores.

Jiaying, your research looks at the possibility that higher E&S score improves firm value by increasing consumer demand. In 'Do consumers care about ESG? Evidence from Barcode-level sales data', you show that companies' E&S efforts benefit them through increased sales, suggesting an important role for end consumers in spreading responsible practices.

Yes, I use scanner data recorded in 30,000 grocery shops and superstores from 90 distribution chains in the United States, which provides information on the quantities and sales prices of many everyday consumer products on a weekly basis over the period 2008-2016. I am able to establish a link between these sales and the environmental and social scores of the companies that manufacture these products. I find that better E&S ratings drive higher consumer demand volume for the firm's products. The 'sales premium' is stronger in markets with more Democratic-leaning and high-income population, suggesting that consumers who are attentive to the social and environmental efforts of companies can reward high E&S score producers with increased purchases.

1 https://www.carrotsandsticks.net/

While the E&S ratings provided by rating agencies are often noisy and can be subject to the greening of companies, your results Christoph suggest that they correlate with real environmental and social results, which would justify consumers taking them into account in their purchasing decisions.

Indeed, the literature has shown that investors and consumers are able to distinguish between corporate actions that effectively reduce risk and those that amount to greenwashing. I build on this by studying whether the E&S policies that propagate along the supply chain have real effects. Specifically, I look at toxic emissions into the environment from companies based in the United States and how they are affected by the adoption of regulations in the foreign countries where they sell their products. I focus on US suppliers as the Toxic Release Inventory program of the US Environment protection Agency makes emissions reporting mandatory for all firms above 10 employees. Results show that the introduction of new environmental requirements in foreign countries has a negative effect on the toxic emissions and environmental risk of US suppliers. After new environmental requirements came into effect in foreign customer countries, US suppliers' emissions decreased by 27% compared to those without change in their customer's country.

Jianwei's work and mine therefore suggest that the integration of social and environmental concerns by companies into their business activities results in tangible improvements in environmental and social practices and can pay off for them in terms of sales as consumers respond positively to such efforts.

Last, you both emphasize that the risks inherent to global production networks, and in particular climatic uncertainty, influence consumers and firms. Jiaying, you find that more acute risks make consumers more aware.

Yes, risks related to changing climatic conditions affect the way consumers perceive the environmental and social performance of companies. Consumers that have experienced increased risks such as natural disasters in their region become more aware of E&S issues and firms' policies. This is also true for environmental accidents related to firms' activities, such as the Deepwater Horizon Oil Spill in April 2010. It is difficult to extrapolate, but the predicted increase in the number of extreme climatic events could help to raise consumer awareness of the need for a change in corporate behaviour.

Christoph, you study changes made by companies themselves, in particular the adaptation of their supply chain networks in response to perceived exposure to climate change.

Yes, in another article I document that moderate realizations of adverse weather, which do not necessarily paralyze suppliers but which are projected to gradually increase in frequency and severity, may affect the way they consider the future of their relations with their suppliers. I focus on heat, and construct location-specific measure of suppliers' heat exposure. Abnormal heat negatively affects suppliers' operating performance, but more importantly it can cause them to lose their place in the supply chain. I measure that in case of abnormal heat expectations, customer firms are 7% more likely to end their relationships with their suppliers. This means that firms have ex-ante expectations about climatic events, which may be altered by the evolution of the weather and lead to consequences in the structure of production networks.

This interview was conducted by Pamina Koenig, Affiliate Researcher at the Paris School of Economics and Professor at the University Paris 1 Pantheon-Sorbonne.

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- **Christoph Schiller** is Assistant Professor of Finance at the W.P. Carey School of Business at Arizona State University (ASU).
- **Jiaying Wei** is Associate Professor at he Southwestern University of Finance and Economics (SWUFE).