Transparency as a Supplier Social and Environmental Responsibility Screening Mechanism

Problem Description:

Buying firms face scrutiny (from consumers, NGOs and investors) regarding negative social and environmental impacts that occur in their suppliers’ operations. Buying firms commonly audit supplier’s operations in order to remediate (or have suppliers remediate) problems or drop problematic suppliers. Yet, auditing is costly and imperfect. Some buying firms have made commitments to disclose their audit reports and/or the identities of their suppliers.

In deciding whether or not to make such transparency commitments, a buying firm faces several trade-offs. Forced to publish negative audit results, a buying firm and the supplier may face brand damage and remediation costs. A supplier that knowingly has large social responsibility or environmental problem may decline a contract offered by a buyer that commits to publish audit reports, to avoid remediation costs or reputational damage. Thus, transparency might be a useful “screening” mechanism. A supplier that has favorable audit reports and is listed as supplying a responsible buyer may have reputational benefits and increased demand from other buyers. Hence a supplier (particularly a responsible supplier) may accept a contract with less favorable terms of payment, thereby reducing the buyer’s payment, or causing increased competition for the supplier’s limited capacity.

Our research addresses the following questions:

1. How and under what conditions should a buyer use transparency (about the supplier’s identity and/or supplier’s responsibility performance) as a mechanism to screen suppliers for social and environmental responsibility?

2. Under what conditions should the buyer choose to be transparent about the supplier’s identity and/or the supplier’s social and environmental performance?

3. How should the buyer structure the terms of the contract to handle social and environmental responsibility problems potentially identified at the supplier’s facilities later? How does the buyer’s choice of transparency level and/or commitment affect the contract terms?
**Methods and Assumptions:**

In our base model, we consider the sourcing and transparency decisions of a buyer firm that faces a unit expected penalty associated with its supplier’s impact. The buyer firm determines the sourcing contract to offer to a supplier with an unknown social and environmental impact selected from a pool of potential suppliers. The supplier privately observes the impact level while the buyer firm only knows its distribution. The buyer offers a contract that specifies the total payment to the supplier and contingencies if the supplier is found to have a high impact during auditing and the supplier, observing its type, has the option to accept or reject. If the supplier rejects, the buyer firm has the outside option to source from a high-cost but responsible supplier. If the supplier accepts, the buyer firm audits the supplier, and detects a problem with an exogenously-determined probability. Depending on the findings from the audit and the terms of the sourcing contract, the buyer and the supplier may incur costs to reduce the supplier’s impact. With no transparency commitment, the buyer may choose whether to disclose the supplier’s identity and/or its social and environmental responsibility performance. In the case of no disclosure, the public has rational expectations about the buyer’s supplier’s impact given the buyer’s equilibrium strategy and the distribution of the supplier’s impact, and hence the buyer firm is penalized accordingly.

We consider this base model under alternative sequences of the buyer’s transparency decisions. In particular, the buyer firm may either commit to disclosing the supplier’s identity and/or impact in advance of or after contracting. We also consider an extension of the base model which includes a second buying firm who can observe the disclosures of the first buying firm and make sourcing decision accordingly.

**Preliminary Results:**

Our results show that if the supplier has a sufficiently high budget so that the buyer can hold the supplier fully responsible for remediation costs, a commitment for transparency about the supplier’s social and environmental responsibility performance indeed facilitates supplier screening. That is, such a commitment encourages only the low-impact supplier to accept the buyer’s contract for a wider range of parameters. However, if the supplier is budget constrained and hence the buyer must help the supplier to reduce its impact upon identifying problems in an audit, it is plausible to observe a reversal of results. In this case, a high-impact supplier may be more willing to accept a contract under the buyer’s transparency commitment because the supplier anticipates that the buyer will take on the responsibility to reduce the impact later, which will be beneficial for the supplier. Absent any competitive pressures on sourcing,
transparency about the supplier’s identity increases the value of commitment for transparency about the supplier’s impact and facilitates supplier screening for the buyer.

**Significance:**

**Connections to the literature:** This study is related to the literature on socially responsible and environmentally sustainable supply chains. Most studies in this literature focus on the effect of a buyer’s procurement and sourcing strategies on supplier socially responsible and sustainable performance (Guo et al. 2015, Chen and Lee 2016, Agrawal and Lee 2016, Chen et al. 2016). An important insight from this literature (as pointed out by Chen and Lee 2016) is that sourcing contracts alone are not effective at differentiating suppliers based on their social and environmental performance and that they must be completed with other screening instruments. There has been an increasing interest on transparency initiatives in recent years by both practitioners and academics. However, the prior literature has not yet explored (1) the potential of transparency as a tool for a buyer to screen suppliers (in addition to other contract terms), (2) the buyer’s choice between revealing information about a supplier’s performance and supplier’s identity, or (3) the buyer’s transparency commitment decisions. Our research aims to fill these gaps.

**Practical implications:** Our research will provide guidance to managers on how they can use transparency jointly with contracting to screen suppliers for higher social and environmental responsibility.

**References**


