“Enforcement of Private Food Standards: A Role for Self-Reporting of Non-Compliance?”

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Selected Paper

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Background

- Private standards – important means of food system governance in industrialized countries (Hu et al., 2022)
- Shift in monitoring of compliance with standards to third-party certifiers (Hatanaka et al., 2005)
- Why private standards? Concerns about food safety, demand for product attributes, globalization, and legal liability (Henson and Humphrey, 2010)
- “Private food law”: standards set by private body, adopted and implemented by private firms, compliance evaluated by private auditor, enforced through private certification
- What mechanisms might ensure compliance with private standards?
Literature

- Becker (1968): application of maximal sanction allows for given average sanction with lower probability of violators being caught, but with less enforcement effort

- Malik (1990) argues that, due to possibility of getting maximal sanction, violators expend resources to avoid apprehension

- Kaplow and Shavell (1994) show self-reporting of violations results in enforcement cost savings

- Analysis of self-reporting in environmental economics literature: remediation benefits, reduced avoidance and enforcement costs (Malik, 1993; Innes, 1999a, 2001a, 2001b); incentive effect of reduced sanctions (Innes, 1999b)
Model

- Adapt Kaplow and Shavell (1994) to enforcement of private food standards, focusing on self-reporting

- Incomplete contracts between processor/retailer, post-contractual transactions costs minimized by private standard $f$ with third-party certification

- $f$ describes product requirements $q$ of retailer, whose reputation is indexed by brand equity $B = h(q), B' > 0$

- Risk-neutral processor chooses whether to comply with $f$, failure to comply imposing damage $d$ on retailer through reduction of $B$

- Non-compliance generates processor benefit $b \in [0, \infty]$, $b$ differing among firms with continuous density $g(.)$ and cumulative distribution $G(.)$
No Self-Reporting by Processors

- Certifier audits with probability $p$ at cost $c$

- Non-compliance results in sanction, $s$, i.e., non-certification for specific period, maximal sanction being $\bar{s} \geq d$, where $\bar{s}$ is financial loss of non-certification plus re-certification costs

- Food processor will not comply if $b \geq ps$, with welfare:

  $$W = \int_{ps}^{\infty} (b - d)g(b)db - pc$$

- Optimal sanction is $\bar{s}$, i.e., if $s^* < \bar{s}$ sanction can be increased and probability of audit lowered to keep $ps$ constant, i.e., level of deterrence being preserved at lower cost

- Optimal expected sanction is: $p^*\bar{s} = d - \frac{c}{\bar{s}g(p^*\bar{s})}$
Self-Reporting by Processors

- Sanction \( r \) should be no greater than expected sanction for self-reporting, \( r \leq ps \)

- Processor will not comply if \( b \geq \min(r, ps) \), but will comply and report when \( r \leq ps \), welfare being:

\[
W = \int_{r}^{\infty} (b - d)g(b)db - pcG(r)
\]

- lower limit of integration of \( r \), i.e., processors not complying will self-report with certain penalty

- auditing cost is \( pcG(r) \), i.e., only individuals not committing act, and not reporting, get audited

- If \( r < ps \), probability of audit can be lowered, processors self-reporting still paying \( r \), but auditing costs lower

- Optimal expected sanction is:

\[
p^*s = d - p^*c - \frac{cG(p^*s)}{\bar{s}g(p^*s)}
\]
Threat of Boycott

- Certifiers typically apply gradual system of sanctions, i.e., warning, removal of certification, exclusion from standard (Fuchs and Kalfagianni, 2010)

- Additional sanction of public exposure encouraging campaign by NGO(s) to boycott processor, i.e., equivalent to “imprisonment” in criminal law setting

- Role of NGOs in boycotts analyzed by Baron (2001, 2003, 2011), and Innes (2006) – costly to implement

- With non-compliance $s = s_1 + s_2$, where $s_1$ is sanction for damage inflicted on retailer, and $s_2$ is permanent loss of retail shelf space for processor due to boycott

- Boycott cost is $\gamma s_2$, $\gamma = [\eta + \pi]$, $\eta$ is NGO cost of organizing boycott, and $\pi$ is cost to processor of contesting boycott
Threat of Boycott: Self-Reporting

- With self-reporting, \( r = ps \), where \( r = r_1 + r_2 = ps = p(s_1 + s_2) \)

- If \( r \leq s_1 \), set \( r_1 = r \), \( r_2 = 0 \), i.e., no boycott, generating social cost savings of \( psy_2 \)

- If \( r \geq s_1 \), set \( r_1 = s_1 \), \( r_2 = ps - s_1 \), with social cost savings of \( (1 - p)ys_2 \)

- Monetary costs of non-compliance \( s_1 \) applied with certainty, and threat of boycott reduced by \( (1 - p)s_1 \)

- A given level of deterrence can be achieved at lower cost, with lower probability of audit, because processors who do not self-report face a greater sanction through boycott
Summary

- Little formal analysis of incentives for processors to comply with private standards and role of third-party certifiers

- Adaptation of Kaplow and Shavell (1994) to private standards identifies key issues relating to incentives for compliance, sanctions, deterrence, and auditing costs

- Also highlights reputational risks to both processors and retailers of non-compliance with private standards, i.e., processor boycott and damage to retailer brand equity

- Extension of analysis to focus on enforcement mechanism encouraging self-policing with remediation

- Empirical evaluation of compliance with private food standards would be valuable