

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

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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:

$$W = \int_{ps}^{\infty} (b - d)g(b)db - pc \quad (1)$$

- 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:

$$W = \int_r^{\infty} (b - d)g(b)db - pcG(r) \quad (2)$$

- 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: $p^* \bar{s} = d - p^* c - \frac{cG(p^* \bar{s})}{\bar{s}g(p^* \bar{s})}$

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 γs_2 , $\gamma = [\eta + \pi]$, η is NGO cost of organizing boycott, and π is cost to processor of contesting boycott



Threat of Boycott: Self-Reporting

- With self-reporting, $r = ps$, where $r = r_1 + r_2 = ps = p(\bar{s}_1 + s_2)$
- If $r \leq \bar{s}_1$, set $r_1 = r, r_2 = 0$, i.e., no boycott, generating social cost savings of $p\gamma s_2$
- If $r \geq \bar{s}_1$, set $r_1 = \bar{s}_1, r_2 = p(\bar{s}_1 + s_2) - \bar{s}_1$, with social cost savings of $(1 - p)\gamma s_2$
- Monetary costs of non-compliance \bar{s}_1 applied with certainty, and threat of boycott reduced by $(1 - p)\bar{s}_1$
- 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

