# Exerting Influence Through Information: How Private Actors Win Preferential Policies Internationally

Rebecca Perlman

Stanford University Political Science

*rperlman@stanford.edu*

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# What Are International Health and Safety Standards?


- Divergent national regulations create impediments to trade
- International standards help governments harmonize

# Common Claims About International Standards

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- "contribute to the safety, quality and fairness of [the] international food trade." – *Codex Alimentarius*
- "[are] less susceptible to vested interests." – *OECD publication*
- "avoid protectionism in disguise." – *WTO*



# Research Question

Are international health and safety standards less biased towards powerful private interests than domestic regulations?

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Answer: No

# I Argue That . . .

- Private actors leverage information asymmetries to win biased outcomes *both* domestically *and* internationally

# Why Might International Standards Be Better?

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Domestic regulatory capture operates through politicians

- Through votes (Becker 1983; Grossman and Helpman 1994; Peltzman 1976; Stigler 1971)
- Through employment (Bernstein 1955; Gormley 1979; Cohen 1986)

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- Through employment (Bernstein 1955; Gormley 1979; Cohen 1986)

International level should be less prone to capture

- More removed from politics (Nielson and Tierney 2003, p. 250; also see e.g. Kapstein 1989; Keohane, Macedo, and Moravcsik 2009)
- Helps politicians tie hands (Grossman and Helpman 1995; Maggi and Rodríguez-Clare 2007; Bagwell and Staiger 2011)

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. . . though perhaps not

- International level dominated by powerful states (Krasner 1991; Drezner 2004)
- Interest groups still exert influence (Mattli and Woods 2009; Büthe and Mattli 2003; 2011; Underhill and Zhang 2008)

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Producers can reveal (or withhold) information strategically

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H1: Domestic and international standards will become stricter on less profitable products over time

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H1: Domestic and international standards will become stricter on less profitable products over time

H2: Producers will seek stricter standards on less profitable products

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- Extremely rich and detailed data:
  - Regulated through tolerance levels (amount of pesticide on crop)
- Both national and international standards exist
  - Allows for comparison of outcomes

# Testing H1: Data from Codex Alimentarius

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IV: Pesticide profitability

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Number of years registered in 2015 $\rightarrow$ Proxy for profitability + alternative

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Alternative mechanisms: toxicity, carcinogenicity, environmental impact, effectiveness

# H1: Codex Alimentarius Results

| | *Standard Changes 1996-2015:* | | |
|---|---|---|---|
| | 1=Less Strict, 2=Same, 3=Stricter, 4=Revoked | | |
| | (1) | (2) | (3) |
| Pesticide Age | 0.036*** | 0.033** | 0.033** |
| | (0.013) | (0.014) | (0.014) |
| Toxicity | | 0.074 | 0.148 |
| | | (0.204) | (0.166) |
| Toxicity Increased | | 0.196 | 0.283 |
| | | (0.507) | (0.458) |
| US Carcinogenicity | | −0.007 | −0.064 |
| | | (0.124) | (0.145) |
| Aquatic Acute | | 0.478 | 0.415 |
| | | (0.659) | (0.651) |
| Aquatic Chronic | | −0.108 | −0.076 |
| | | (0.111) | (0.117) |
| EU Carcinogenicity | | | 0.586 |
| | | | (0.611) |
| Fruit/Veggie | | 0.393*** | 0.389*** |
| | | (0.138) | (0.143) |
| Observations | 1,360 | 1,335 | 1,335 |
| *Note:* | *p<0.1; **p<0.05; ***p<0.01 | | |

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- 50% probability that standard for pesticide registered in 1985 $\uparrow$
- Effect size statistically indistinguishable between US and Codex

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- $\sim$900 tolerance change requests from firms and farm groups
- Compared petitions of firms and farmers
- Firms should seek stricter standards on less profitable pesticides
    - Farmers should not

# H2: Evidence Firms Lobby Against Their Own Products

| | *Petition Request: 0=Less Strict, 1=Stricter* | | | |
|---|---|---|---|---|
| | **Company Petitions** | | **Farmer Petitions** | |
| | (Continuous) | (Dichotomous) | (Continuous) | (Dichotomous) |
| Pesticide Age | $0.046^{***}$ | $1.959^{***}$ | $-0.006$ | $-0.052$ |
| | (0.014) | (0.723) | (0.032) | (0.668) |
| Observations | 622 | 622 | 253 | 253 |
| *Note:* | | | | $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01 |

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- Products are re-evaluated every 10-20 years
- Producers must provide data if they want to retain lenient standards
- Producers with alternative products can withhold information
- Generic producers are often unable to compensate

# Conclusion

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1. Private actors can be as influential internationally as domestically
2. Even if protected from political capture, standards may be "captured"
3. Must consider who has information and how information is used

# Are Results Driven By Effectiveness?

| | *Standard Changes 1996-2015* | | |
|---|---|---|---|
| | 1=Less Strict, 2=Same, 3=More Strict | | |
| | (1) | (2) | (3) |
| Pesticide Age | 0.031*** | 0.028*** | 0.027*** |
| | (0.009) | (0.010) | (0.010) |
| Toxicity | | 0.161 | 0.172 |
| | | (0.113) | (0.113) |
| Toxicity Increased | | 0.140 | 0.145 |
| | | (0.240) | (0.237) |
| US Carcinogenicity | | 0.065 | 0.054 |
| | | (0.084) | (0.091) |
| Aquatic Acute | | 0.530* | 0.524* |
| | | (0.302) | (0.328) |
| Aquatic Chronic | | −0.199** | −0.198** |
| | | (0.100) | (0.102) |
| EU Carcinogenicity | | | 0.113 |
| | | | (0.295) |
| Fruit/Veggie | | 0.079 | 0.078 |
| | | (0.219) | (0.219) |
| Observations | 822 | 806 | 806 |
| *Note:* | | | *p<0.1; **p<0.05; ***p<0.01 |

# Are Results Driven By Most Dangerous Products?

| | *Standard Changes 1996-2015* | | |
|---|---|---|---|
| | 1=Less Strict, 2=Same, 3=More Strict, 4=Revoked | | |
| | (1) | (2) | (3) |
| Pesticide Age | 0.037*** | 0.037** | 0.037** |
| | (0.014) | (0.015) | (0.015) |
| Toxicity | | 0.178 | 0.267 |
| | | (0.241) | (0.189) |
| Toxicity Increased | | 0.190 | 0.271 |
| | | (0.531) | (0.486) |
| US Carcinogenicity | | 0.056 | −0.006 |
| | | (0.132) | (0.154) |
| Aquatic Acute | | 0.348 | 0.267 |
| | | (0.705) | (0.718) |
| Aquatic Chronic | | −0.047 | −0.009 |
| | | (0.126) | (0.136) |
| EU Carcinogenicity | | | 0.593 |
| | | | (0.644) |
| Fruit/Veggie | | 0.303** | 0.292* |
| | | (0.151) | (0.157) |
| Observations | 1,155 | 1,130 | 1,130 |
| *Note:* | | | *p<0.1; **p<0.05; ***p<0.01 |

# Comparing Codex and U.S. Results

| | *Standard Changes 1996-2015:* | | |
|---|---|---|---|
| | 1=Less Strict, 2=Same, 3=More Strict, 4=Revoked | | |
| | (1) | (2) | (3) |
| Pesticide Age | 0.038*** | 0.040** | 0.040*** |
| | (0.013) | (0.016) | (0.015) |
| Pesticide Age*US | 0.009 | 0.003 | 0.002 |
| | (0.017) | (0.018) | (0.017) |
| US | −1.063 | −0.703 | −2.383* |
| | (0.751) | (0.835) | (1.289) |
| Toxicity | | 0.527*** | 0.109 |
| | | (0.152) | (0.190) |
| US Carcinogenicity | | 0.011 | −0.002 |
| | | (0.117) | (0.157) |
| Aquatic Acute | | 0.343 | 0.408 |
| | | (0.484) | (0.460) |
| Aquatic Chronic | | 0.080 | 0.066 |
| | | (0.110) | (0.107) |
| EU Carcinogenicity | | 0.415 | 0.355 |
| | | (0.422) | (0.385) |
| Fruit/Veggie | | 0.371*** | 0.352** |
| | | (0.140) | (0.141) |
| Toxicity Increased | | 0.289 | 0.279 |
| | | (0.324) | (0.316) |
| Toxicity*US | | | 0.560** |
| | | | (0.244) |
| US Carcinogenicity*US | | | 0.026 |
| | | | (0.195) |
| Observations | 5,043 | 4,794 | 4,794 |
| *Note:* | | | *p<0.1; **p<0.05; ***p<0.01 |

# U.S. Results

| | *Standard Changes 1996-2015:* | | |
|---|---|---|---|
| | 1=Less Strict, 2=Same, 3=More Strict, 4=Revoked | | |
| | (1) | (2) | (3) |
| Pesticide Age | 0.049*** | 0.050*** | 0.044*** |
| | (0.012) | (0.014) | (0.015) |
| Toxicity | | 0.669*** | 0.685*** |
| | | (0.199) | (0.198) |
| Toxicity Increased | | 0.278 | 0.284 |
| | | (0.378) | (0.381) |
| US Carcinogenicity | | 0.047 | 0.060 |
| | | (0.160) | (0.162) |
| Aquatic Chronic | | 0.116 | 0.120 |
| | | (0.137) | (0.134) |
| Aquatic Acute | | 0.428 | 0.431 |
| | | (0.495) | (0.490) |
| EU Carcinogenicity | | 0.320 | 0.285 |
| | | (0.466) | (0.461) |
| Fruit/Veggie | | | 0.361* |
| | | | (0.191) |
| Primary Acreage | | | −1.341* |
| | | | (0.781) |
| Pesticide Age*Primary Acreage | | | 0.025 |
| | | | (0.016) |
| Observations | 3,683 | 3,459 | 3,459 |
| *Note:* | | | *p<0.1; **p<0.05; ***p<0.01 |