The Economics of Self-Regulation: A Comparative Institutional Perspective

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Presentation Outline

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1. Motivation

- Self-regulation (SR) = formalized promulgation and/or enforcement of legal rules by the regulated
  - common in many professions, exchanges, industries
  - periods when self-regulatory policies enacted on economy-wide basis

- SR comes with pros and cons
  - benefits derive from greater expertise and flexibility
  - drawbacks arise from inherent pro-regulated bias

- Great interest in SR in policy circles
  - regulatory reforms in developing and transition countries, Australia, EU

- Yet SR little investigated both analytically and empirically, especially from comparative perspective

2. Literature

- SR studied within different contexts
  - licensing: Leland (1979), Shaked and Sutton (1981), Hau and Thum (2000)
  - product quality: Gehrig and Jost (1995), Lutz et al. (2000), Kranton (2003)
  - incentives for innovation: Stefanadis (2003)
  - pollution abatement: Lyon and Maxwell (2000), Garvie (2000)
  - exchanges: Pirrong (1995, 2000), Banner (1998), Reiffen and Robe (2007)
  - agency problems: De Marzo et al. (2005), Nunez (2001, 2007)
  - collective action problems: King and Lenox (2000, 2006), Lenox and Nash (2000)
  - (voluntary agreements: Segerson and Miceli (1998), Glachant (2003))

- Explicitly comparative analyses
  - Gehrig and Jost (1995), Maxwell et al. (2000), Stefanadis (2003)

3. Comparative Efficiency of SR: Two Unexplored Aspects

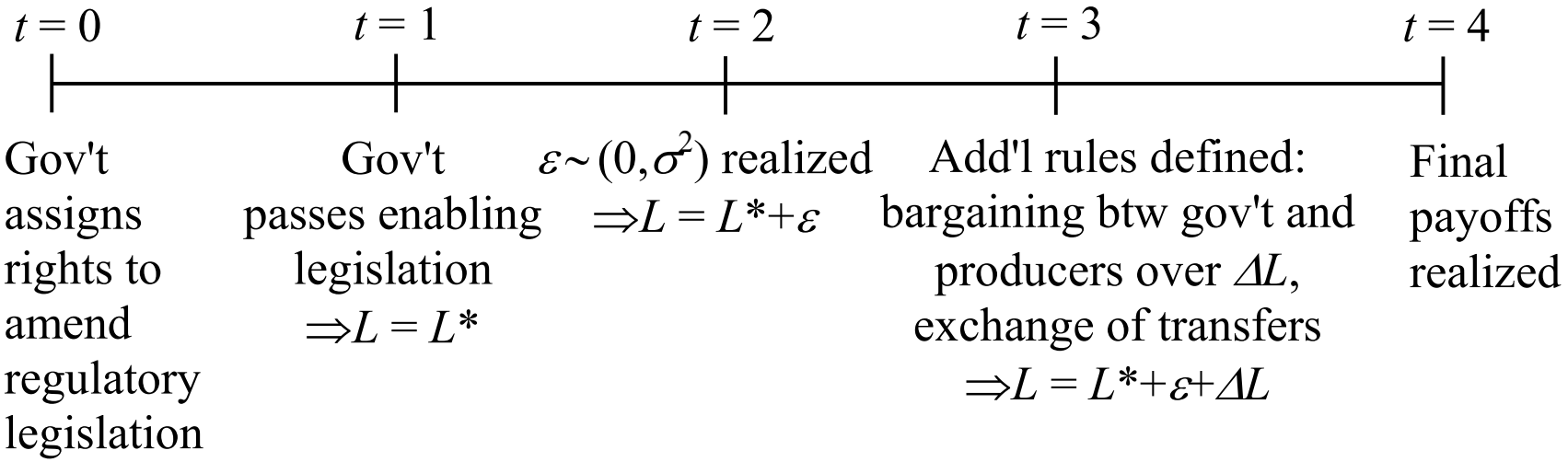
- SR as exercise of delegated lawmaking powers
  - SR result of delegation of state's lawmaking powers, rather than preemption of legislative intervention (see e.g. Maxwell et al. 2000, Stefanadis 2003)
  - When regulatory 'contracts' incomplete (see e.g. Williamson 1976, Estache and Martimort 1999), regulatory right is much like ownership (Grossman and Hart 1986, Hart and Moore 1990)
  - Emphasis on political bargaining between the government and the industry; allocation of lawmaking powers determines "threat points"

- SR as means of social control of torts
  - Social harm from accidents can be controlled not only with tort law and gov't regulation, but also with industry SR
  - SR is inherently biased toward industry, but so are government regulators and courts when public institutions are vulnerable to subversion
  - Where judicial and bureaucratic corruption endemic, endorsing SR as the epitome of regulatory capture may be efficient in second-best sense (see e.g. Berglöf and Claessens 2006, Graham and Woods 2006)

3.1. SR as Exercise of Delegated Lawmaking Powers

(Grajzl and Murrell 2007, *J. of Comp. Econ.*)

- *When do self-interested gov'ts delegate lawmaking authority to the regulated, and when not; what are the efficiency implications?*
- Legal rules evolve through amendments to enabling legislation
  - *R*: right to make amendments with gov't
  - *SR*: right to make amendments with producers
- Involved: government and producers, consumers as general public



3.1.1. Payoffs from legal rules

- Cost of implementing additional legal rules higher under *R* than under *SR* (see e.g. Ogus 1999)
  - ΔL costs economy (producers & consumers) $\gamma_i(\Delta L)^2$, $\gamma_R > \gamma_{SR} > 0$

- Producers and consumers differ only in how much they value law
  - payoff from L to producers: $pL - \frac{1}{2}[L^2 + \gamma_i(\Delta L)^2]$, $p > 0$
  - payoff from L to consumers: $cL - \frac{1}{2}[L^2 + \gamma_i(\Delta L)^2]$, $c > 0$

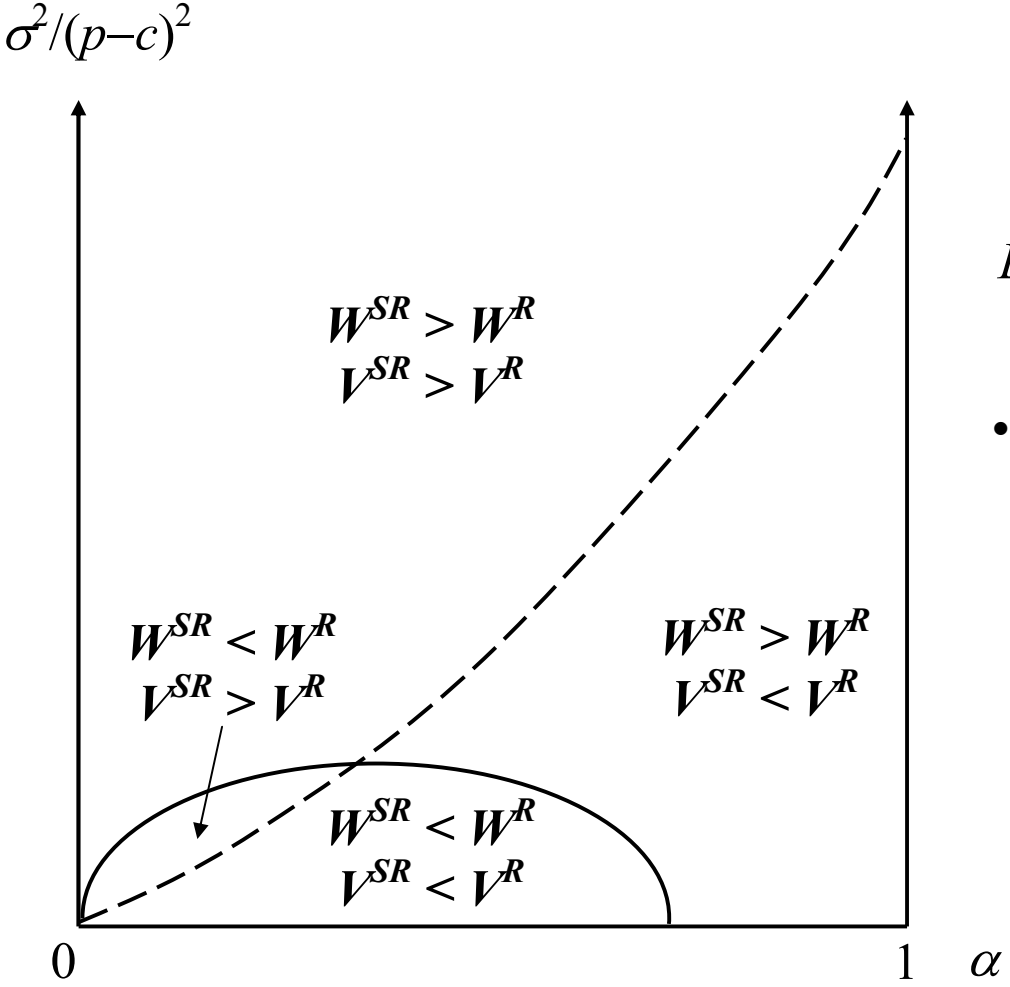
- Govt's payoff from L: $AL - \frac{1}{2}[L^2 + \gamma_i(\Delta L)^2]$, $A \equiv \alpha c + (1-\alpha)p$, $\alpha \in [0,1]$

- (Ex-post) Social welfare under regime $i \in \{SR, R\}$: $(p+c)L^i - L^{i2} - \gamma_i(\Delta L^i)^2$

- (Note: Final payoffs to gov't and producers include transfers)

3.1.2. SR vs. R: efficiency and govt's incentives

W^i = expected social welfare under regime $i \in \{SR,R\}$
V^i = expected govt's payoff under regime $i \in \{SR,R\}$



$$L^i = \frac{\gamma_i(A+\varepsilon) + \frac{A+p}{2}}{1+\gamma_i}, \; i \in \{SR,R\}$$

- *SR* leads to improved quality of lawmaking, but also to increased power of industry within regulatory bargaining

3.1.3. Implications for institutional design

- Inefficient gov't regulation more likely than inefficient SR
  - e.g. many transition economies known for excessive direct gov't regulation
  → compelling, yet inefficient, institutional equilibrium

- Reconciling stark contrast in regulatory practice during Progressive era and the New Deal (see e.g. Eisner 2000)
  - progressive era: proliferation of gov't regulation
  - the New Deal: system of gov't supervised self-regulation
  → equilibrium institutional responses to varying historical circumstances

- Legal origin matters through affecting regulatory regime choice
  - isolate features of legal traditions that help explain cross-country variation in regulatory arrangements (see e.g. Coffee 2001)
  → equilibrium: common law = more SR, less R; civil law = less SR, more R

3.2. SR as Means of Social Control of Torts

(Baniak and Grajzl 2007, working paper)

- *How successful and feasible is social control of firm-caused harm through industry SR relative to liability and administrative regulation, in particular in presence of judicial and bureaucratic corruption?*
- Model in spirit of Shavell (1984) and Glaeser and Shleifer (2003)
- Industry
  - two types of firms, $i \in \{1,2\}$, with $\alpha \in (0,1)$ share of type 1 firms
  - firms take precaution level Q at cost $C_i(Q)$ to prevent an accident, with $C_i(0) = 0$, $C_i'(\cdot) > 0$, $C_i''(\cdot) > 0$, $C_1'(Q) > C_2'(Q)$ for all $Q > 0$
  - probability of accident = $P(Q)$, with $P(0) \in (0,1]$, $P'(\cdot) < 0$, $P''(\cdot) > 0$
  - accident causes social damages = $D > 0$; D captures industry hazardness
- First-best (FB)
  - $\min_{Q_1,Q_2} \{SC = \alpha\left[C_1(Q_1) + DP(Q_1)\right] + (1-\alpha)\left[C_2(Q_2) + DP(Q_2)\right]\}$
    $\Rightarrow \quad C_i'(Q_i^{FB}) + DP'(Q_i^{FB}) = 0; \quad i \in \{1,2\}$

3.2.1. Alternative regimes for social control of harm

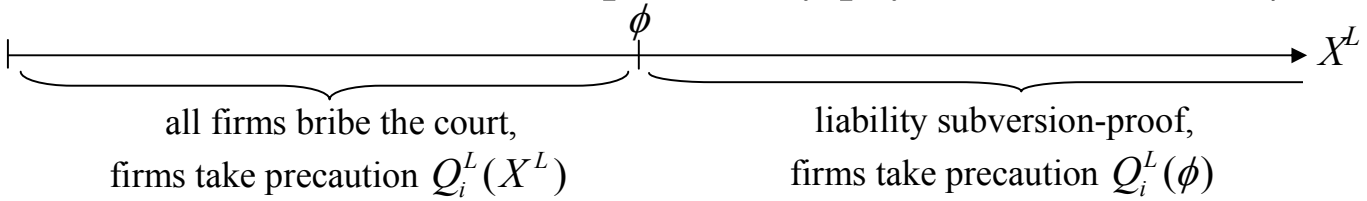
- Courts
  - strict liability
  - acts *ex-post*
  - firm i $\min_{Q_i} \{C_i(Q_i) + \phi P(Q_i)\}$
  $\Rightarrow C_i'(Q_i^L) + \phi P'(Q_i^L) = 0$
  - $\phi < D \Rightarrow$ first-best unattainable

- Gov't Regulation
  - administrative standard-setting
  - acts *ex-ante*
  - gov't regulator $\min_Q SC$
  $\Rightarrow \alpha C_1'(Q^R) + (1-\alpha)C_2'(Q^R) + DP'(Q^R) = 0$
  - $\alpha \in (0,1) \Rightarrow$ first-best unattainable

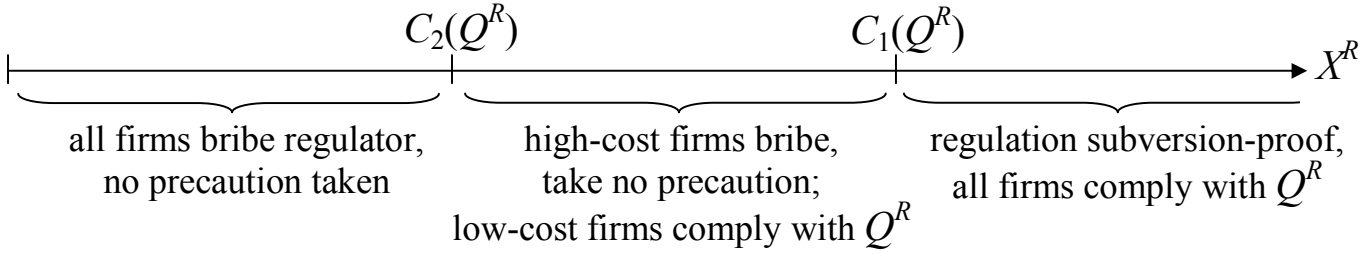
- Industry Self-Regulation
  - acts *ex-ante*, like gov't regulation, but possessing superior information
  - inherently biased toward regulated, yet never entirely unconstrained
  - SRO $\min_{Q_1,Q_2} \{IC = \alpha C_1(Q_1) + (1-\alpha)C_2(Q_2)$ s.t. $\alpha P(Q_1) + (1-\alpha)P(Q_2) \leq P^*\}$
  $\Rightarrow C_i'(Q_i^{SR}) + \lambda P'(Q_i^{SR}) = 0,\ i \in \{1,2\};\ \alpha P(Q_1^{SR}) + (1-\alpha)P(Q_2^{SR}) = P^*$
  - $P^* \in (0,P(0)]$ reflects extra-legal constraints provided by the market (e.g. contestability) and wider institutional environment (e.g. credibility of legislative threats, civil society pressure)
  - $P^* \neq \overline{P}^{FB} \equiv \alpha P(Q_1^{FB}(D)) + (1-\alpha)P(Q_2^{FB}(D)) \Rightarrow$ first-best unattainable

3.2.2. Law enforcement under subversion of justice

- $\left\{\begin{matrix} X^L \\ X^R \end{matrix}\right\}$ = \$ to be paid to the $\left\{\begin{matrix} \text{court} \\ \text{gov't regulator} \end{matrix}\right\}$ to evade $\left\{\begin{matrix} \text{liability payment} \\ \text{regulatory fine} \end{matrix}\right\}$
  - size of X^L, X^R reflects the prevailing degree of 'law and order' in society
- Subversion of Liability
  - firm *i* bribes the court to escape liability payment when $X^L < \phi$

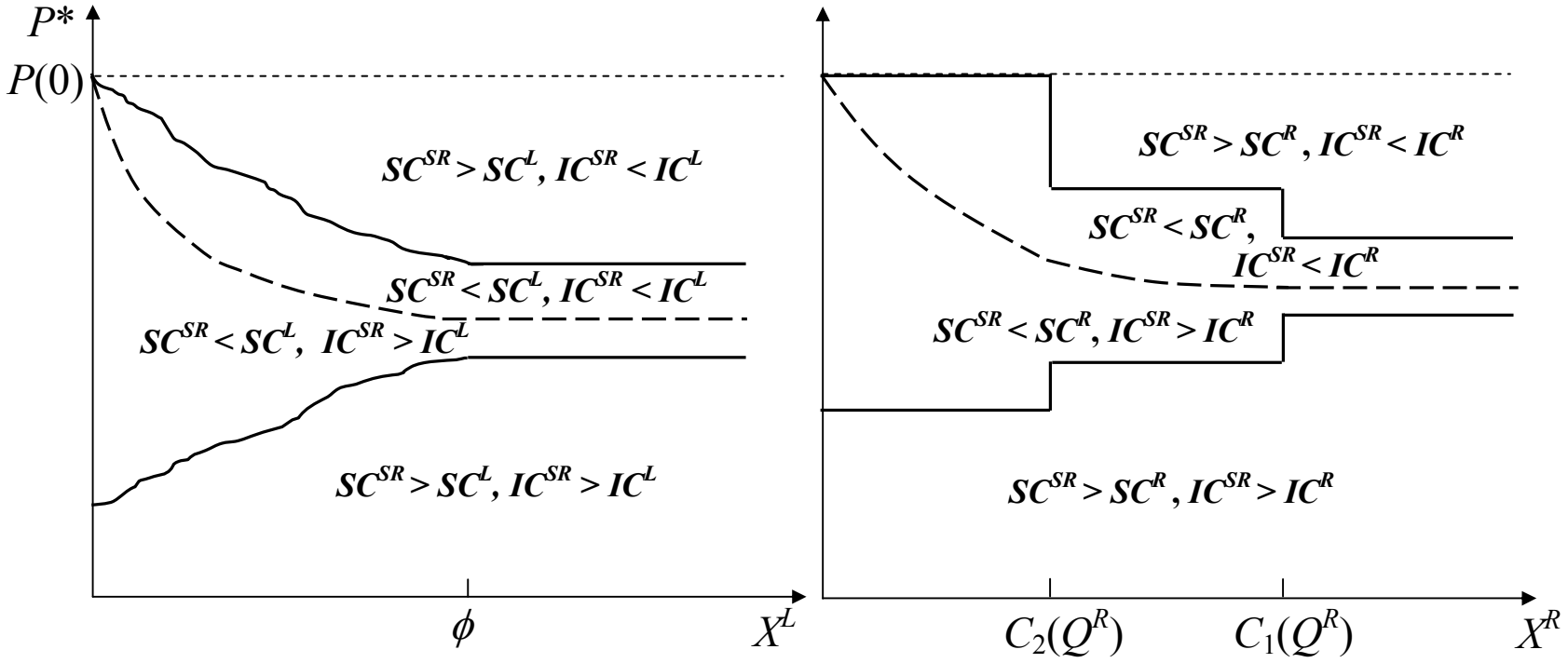


- Subversion of Gov't Regulation
  - firm *i* takes no precaution and bribes the regulator when $X^R < C_i(Q^R)$



- SR *voluntary* in character and, when lasting, *self-enforcing*
  - firms comply with industry-set Q_i^{SR}

3.2.3. Comparative efficiency of SR

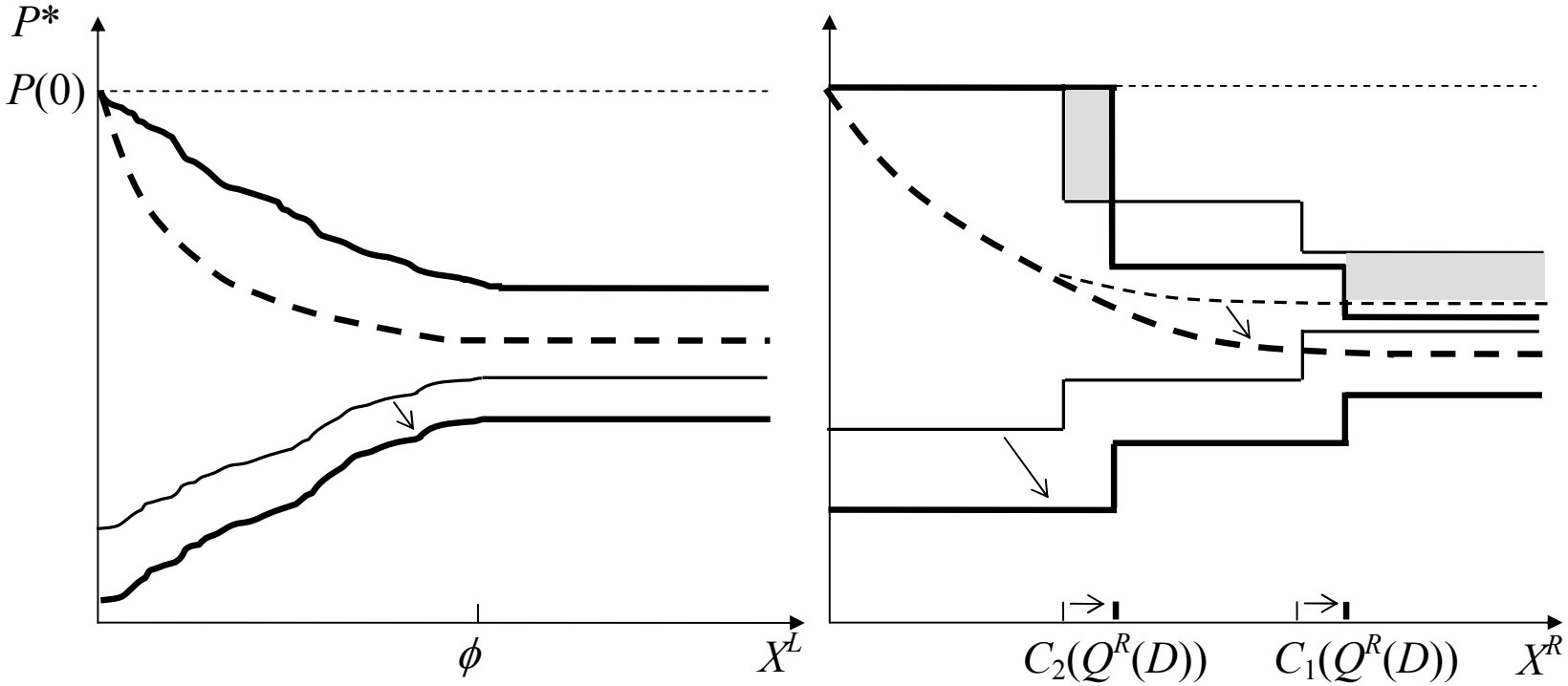


Industry SR vs. Liability *Industry SR vs. Gov't Regulation*

- There always exists scenario when SR socially efficient ($SC^{SR} < SC^{L/R}$) <u>and</u> rational from industry's viewpoint ($IC^{SR} < IC^{L/R}$)

3.2.3. Comparative efficiency of SR (cont'd)

Role of industry hazardness ($\Delta D > 0$)



Industry SR vs. Liability *Industry SR vs. Gov't Regulation*

- Extent of industry hazardness <u>irrelevant</u> when SR considered as feasible alternative to strict liability
- But industry hazardness matters when SR alternative to gov't regulation

3.2.4. Implications for institutional design

→ When justice immune to subversion, SR outperforms public law enforcements instit's only when SR guarantees strict standard-setting

→ Relative to reliance on *subverted* administrative regulation, SR increases social welfare even when (i) SR entails lax standard-setting and (ii) industry considered hazardous

→ Relative to reliance on *subverted* courts, SR increases social welfare only when extra-legal constraints under SR restraining enough; degree of industry hazardness irrelevant

→ Selective delegation of regulatory authority to the industry can increase efficiency, in particular in environments with low levels of 'law and order'

- in contrast with conclusions of Glaeser and Shleifer (2003, p.420) who suggest that in those situations, "the optimal government policy is *to do nothing*" (italics in original)
- in developing and transition countries, SR more likely to succeed if result of 'deregulation' rather than narrowing down scope of courts' jurisdiction
- rather than combating endemic corruption, *in the short run*, efficiency gains can be achieved by selectively endorsing industry self-regulation (example: construction industry)

Thank you.

Questions, comments?