Economic Analysis of Corporate Criminal Enforcement

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US Corporate Criminal Law & Enforcement:

- **Joint Individual and Corporate Liability**
- **Structure Corporate Liability**
  - Traditional approach: Respondeat Superior Liability
    - Firms liable for all crimes in the scope of employment
  - **Modern: Quasi-Duty based**
    - Firms often not convicted if self-report/cooperate
    - Pay quasi-criminal & civil monetary sanctions
    - May be subject to mandated reforms
- **Reputational sanction not eliminate liability**

Corporate Criminal Liability

- Publicly held firms can be criminally liable
- Criminal Respondeat Superior
  - Corporations strictly liable for crimes committed by "servants" in the scope of employment to benefit the master
    - Includes crimes by lower level employees
    - No good faith defense even if
      - firm instructed employees not to violate the law
      - Firm had an effective compliance program

Federal Corporate Criminal Enforcement

Convictions	**FY06**	**2007**	**2008**	**2009**
Total *convicted* Organizations	217	197	199	**177**
Private (CH)	**135**	**127**	**58**	**35**
Public firms	**4**	**7**	**3**	**14**

DPA/NPA	**2006**	**2007**	**2008**	**2009**	**2010**
Total	20	39	19	19	**38**
Publicly held firms	**18**	**27**	**13**	**16**	**33**

Is there an Economic Justification for

1) Imposing Liability on Publicly-held firms even if individuals sanctioned?

2) Move from strict respondeat superior liability to duty-based

3) Should firms face potential liability if there is a reputational sanction?

Becker Model

- **Individual commits a crime**
  - Benefit = b
  - Social cost = H
  - Probability of detection = P
- **Becker**
  - Society wants to deter iff $b < H$
  - Deter by fining: set expected fine $Pf = H$
  - => fine = H/P
- **Absolute deterrence**
  - Fine = B/P

Traditional Model

- **Corporate Crime is an agency cost**
  - Individuals Commit crimes When They Benefit
- **Traditional Model** (firm only substitute sanctioner)
  - Corporation hires agent
    - Benefit of crime to agent is private: given by b (exogenous)
    - Probability of detection is exogenous => P
    - Corporation pays wages W
      - Can reduce wage if crime detected and state not sanction
- **Optimal deterrence (assume b < Harm)**
  - Agent's welfare if commits crime: $W + b - P\,S$
  - Optimal deterrence if $Pf = b$ => $f = b/P$

Simple Model

- **Employer Hires Employee**
  - Employee makes one unit; opportunity cost labor: w
  - Employee may injure third party
    - Employee can take care (x); risk accident p(x); x unobservable
    - Cost of care is c(x)
    - **Optimal care minimizes: c(x) + p(x) H**
- **Employers Problem**
  - Employer maximizes Revenue – wages – expected liability
  - Subject to:
    - Individual rationality: wage-costs $\geq$ reservation wage (0)
      - Min wage = c(x) + expected liability(or sanction)
    - Incentive compatability
- **Individual Liability**
  - Worker pays sanction of H if crime occurs
  - Firm pays wage of c(x) + p(x)H so pays for crime

Corporate Liability

- **Employer Liability**
  - Profits = Revenues – w – expected liability (p(x)H)
  - Wage equals c(x) (expected x)
  - Employer wants to minimize
    - E(c(x)) + p(x)H
    - Minimizes it by inducing x*
  - Employer induces x* by setting wage as follows:
    - Wage if no crime = W = c(x*) + p(x*)H
    - Wage if crime = W – H
    - Employees will set x to maximize: W – c(x) (actual care) – p(x)H
    - Employee takes due care

Implications (Polinsky & Shavell 1993)

- **Optimal deter thru individual or corporate**
- **Firm's incentives to deter equal under individual and corporate**
- **Corporate liability deters by inducing firm to step in as alternative sanctioner**
- **Corporate liability *needed* only if**
  - state cannot feasibly impose optimal sanction
  - Firm not otherwise bears the social cost of crime
    - No need if reputational penalty = H/P
  - Firm can impose greater expected sanction than can the state (or can observe x and sanction breach)

Implications

- **No justification joint individual & corporate**
- **Corporate liability may be justified if agent insolvent**
  – Strict Corporate Liability is Optimal
- **Corporate not needed if firm bears substantial reputational penalty (H/P)**
- **Corporate no purpose if firm cannot impose a higher expected sanction than the state**
  – Individual wealth constraint as binding on firm as the state.

Moving Beyond Traditional Model:

How Do Firms Affect Employees' Incentives to Commit Crime

Central Insight

- Benefit of crime
- Ex Ante Cost of Committing Crime
- Probability of Detection/Sanction

are not exogenous

Firm can affect all three

How Can Corporations Deter Crime

- **Firm Controls Benefit of Crime, b**
  - Agents benefit indirectly thru employment policies
    - Alter promotion, compensation, retention to reduce incentives to commit crime to save job
- **Firm Controls Ex Ante Cost of Crime**
- **Firm Affects Probability Sanction (Policing)**
  - Increase probability that individual sanctioned
    - Ex ante detection (compliance program)
    - Self-reporting
    - Cooperation

Importance of Corporate "Policing"

- **Gov't cannot adequately deter business wrongs without Corporate Monitoring, Reporting and Cooperation because:**
  - Business crimes hard for gov't to detect
    - Need whistleblowers
  - **If Detect, Difficult to Determine Responsible Parties**
    - Dispersed Responsibility
  - Hard to get info need to prove wrong (e.g., mens rea)
    - Need documents or evidence of conversations
    - Very difficult if corporation induces employee silence
- **Corporation better able than state to monitor/detect and can determine if employees cooperate or not.**

Purposes of Corporate Liability

- **Prevention measures**
  - **Invest optimally in measures that deter crime ex ante (lower benefit/Make more difficult to commit)**
- **Corporate Policing:**
  - **Undertake optimal investment in measures to detect crimes and identify/sanction wrongdoers**
  - Ex ante: Monitoring/compliance program
  - Ex Post:
    - Investigate
    - Self-report
    - Cooperate With/Not Impede Gov't Investigation

When is this Relevant

- **When are these purposes relevant?**
  - What if agent cannot pay H/P(0) but can pay H/P*
    - Where P (0) is probability of sanction with no marginal expenditures on detection etc
  - Does this mean corporate liability not needed?
- **Corporation lowest cost provider of detection, reporting, evidence collecting**
  - Once you need to increase P above P(0), then corporate liability is needed=> must hold firm directly liable
  - Otherwise firm incentive to not police since that would reduce agent's liability (and its costs)

How Should Liability Be Structured?

Should Corporations Be Strictly Liable for Crimes by Employees and Managers

Strict Vicarious Liability

- **Old View**
  - Strict Vicarious Liability should induce optimal firm behavior if liability used to induce firms to bear the full cost of crime
    - Invest in deterring crime as long as benefit > cost
- **SL & Prevention**
  - This view is correct in the case of prevention
  - Firm held liable for cost of crime will adopt cost effective measures to reduce the benefit of crime or make it directly more costly to commit

Strict Liability and Prevention

- **Strict Corporate Liability is needed to induce optimal prevention**
- **Firm held liable for cost of crime will adopt cost effective measures to reduce the benefit of crime or make it directly more costly to commit**
  - Strict liability better if state cannot impose specific prevention duties ex ante b/c to costly to identify all optimal prevention measures
    - Firm-specific

Perverse Effect => Corporate Policing

- **Policing: Increases Probability sanction**
- **Strict Vicarious Liability**
  - Not induce optimal expenditures on policing
    - Firm bears full cost of monitoring
    - Firm benefit < Social benefit
      - Social benefit = benefit crimes deterred
      - Effect policing on firm
        - Reduces costs by deterring crimes
        - Increases cost crimes that occur (P higher)

Perverse Effects of Vicarious Liability

- Benefit Policing to firm < Social Benefit
- Social benefit => Deterrent Effect
- **Private benefit under Vicarious Liability**
  - **Deterrence effect**
    - Monitoring deters => Reducing Expected Liability
  - **Liability Enhancement Effect**
    - Crimes may happen nevertheless
    - Policing increases corporate liability for undeterred crimes by increasing P
- **=> Firms under invest in policing**

Illustrative Example

- **Assume the following**
  - **No monitoring/Reporting: P = 1/20**
    - 7 employees commit crimes
  - **Corp. monitors/Reports: P= 1/10**
    - 3 crimes are deterred; 4 crimes are committed

- **Firm's incentive to Monitor/Report under RS**
  - **Expected cost if Not Monitor/Report**

    (7/20) F

    Expected costs if Monitor/Report

  Cost monitoring + (4/10)F = (8/20) F + M* > 7/20 F

Reporting: Time Inconsistency Problem

- **In addition to wanting firms to monitor, we also want them to report detected wrongdoing so as to increase probability A's liable**
  - Corporate liability might seem to induce reporting to extent the threat of reporting deters agents
- **But to provide optimal incentives, must be the case that not only is the desired behavior optimal ex ante but also ex post at the moment of choice**
  - Threat must be credible
- **Under Strict VL reporting is not ex post optimal**
  - At moment report no deterrence b/c wrong done
  - But does enhance liability

Credibility (Time Inconsistency) Problem

- **Firm wants to threaten to report detected crime**
  - **Deters wrongdoers**
- **Threat not credible because under strict corporate liability firm incentive to not report**
- ***Expected* Liability if firm Does not Report**
  - (Probability Caught)(Fine) = PF < F
- **What if the firm Reports & Cooperates?**
  - **Expected sanction = F**
- ***Reporting increases the firm's expected costs***

How to Induce Policing

- **Need to ensure that corporations face lower expected costs when they police optimally than when they do not**

Solution?

Impose duty to adopt optimal policing

Monitoring

Self reporting

Cooperation

Sanction firms for each breach

Policing Duty: Liability vs Regulation

- **Ex Post Enforcement vs Ex Ante Monitoring**
- **Standard vs Rules**
- **Policing Occurs Ex Post**

Existing US System Reconsidered

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Optimal Corporate Liability

- **Traditional view**
  - Strict Corporate Liability is Optimal
- **Institutionally-Grounded Approach**
  - Duty-based corporate liability
    - Policing duties
  - Firms that optimally monitor, self-report, cooperate should face civil corporate liability to induce optimal corporate prevention
    - $F = H/P^*$

Why Sanction Firms that Report/cooperate

- **Need firms to face "residual" sanction for crime in order to ensure that firm expecting leniency will still adopt optimal**
  - **Compliance Programs**
    - Need Duty based liability
  - **Prevention**
    - Compensation policies

Joint Individual and Corporate Liability

- **Traditional view:**
  - Corporate liability not needed if state imposed individual sanction is maximum feasible
    - Even if $f < B/P$
- **Institutionally-Grounded Approach**
  - Corporate liability needed if $f < B/P$
  - Duty-based => corporate policing
  - Residual strict corporate liability
    - Corporate prevention
    - Need sanction $F = H/P$ (minus indiv liability)

Reputational Penalty

- **Traditional view**
  - Corporate Liability not needed if firm faces reputational penalty = H/P
- **This view**
  - Corporate Duty-based Liability needed if detected wrong imposes Reputational Penalty
- **Analysis**
  - Reputational penalty imposes cost on firm that causes crime to be detected => deters policing
  - Duty-based liability for failure to monitor & self-report can ensure firms better off if police

What About Agency Costs?

Corporate Sanction => Managerial Action

- **Corporate duty-based liability only works if managers respond to corporate liability with optimal policing.**
- **Why this might happen**
  – Managers who derive no private benefit from the crime have incentives through shareholdings (options) to deter crime if benefit firm
  – Duty increases Mangers' private incentives to adhere to duty because gov't statement that managers neglect duty will anger shareholders
    • Caremark

Remaining Agency Costs

- **Agency costs may remain**
  - Managers knowing do not adopt or oversee compliance program
  - Or turn the other way because of agency costs
- **Solutions**
  - May need supplement monetary sanction with firm-specific meta-policing duties
    - Impose duties on the firm designed to induce firms to comply
      - Change structure compliance program
      - Compliance program + Corporate monitor

DPA/NPA

- **DPA/NPA**
  - Agreement btw prosecutor and firm where prosecutor agrees not to convict if firm satisfies conditions
- **Deferred Prosecution Agreement**
  - DOJ files criminal charges (typically through criminal complaint), but defers prosecution in return for the firm agreeing to certain conditions. Agreement is filed in court.
    - Complaint: initial document; supports arrest warrant
    - Some use "criminal information" (KPMG)
      - akin to indictment, albeit with no Grand Jury (waived) (agreement may specify not trigger debarment)
- **Non-Prosecution Agreement**
  - Under an NPA, the DOJ agrees not to file a charging document in return for the firm agreeing to certain conditions. The NPA is expressed in the form of a letter, which is not filed in court.

Characteristics D/NPA

- **Prosecutor agrees not to indict/prosecute iff firm agrees to :**
  - – Cooperate with federal authorities (policing)
  - – Waive right to speedy trial
  - – Pay "fines" and also civil/administrative sanctions
  - – Accepts a statement of facts regarding what happened => firm admits crime
    - Firm agrees that if breach D/NPA prosecutor can introduce firm's acceptance of facts in court

Federal Criminal DPAs/NPAs: Penalties

(Dollars in millions)   Source: Arlen & Kahan (2011)

Year	2003	2004	2005	2006	2007	2008	2009	2010
Total	5	9	14	20	39	19	19	38
Publicly-held	**4**	**8**	**10**	**18**	**27**	**13**	**16**	**33**
Mean DOJ Penalty	$5.6	$16	$12	$26	$7.8	$6.8	$1.1	$46
Mean *Total* Monetary Penalty	$60	$116	$155	$137	$51	$14	$149	$126
Compliance Program	3 (60%)	7 (80%)	9 (65%)	9 (45%)	23 (60%)	15 (80%)	11 (60%)	27 (70%)
Monitor Mandated	3 (60%)	6 (65%)	7 (50%)	6 (25%)	13 (35%)	6 (30%)	2 (10%)	11 (30%)

Conclusions

- **Corporate liability serves important roles**
  – Must look beyond simple model to understand purposes of liability
  – Need to understand the purposes to identify the optimal structure of liability
- **Optimal structure is complex: multi-tiered and duty based**
- **Agency Costs may remain**
  – May need to supplement monetary sanctions with specific duties to address this.