

Controlling for Corruption in Public Risk Management



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When a firm undertakes risky activities, the conflict between social and private incentives to implement safety care requires public intervention which can take the form of both monetary incentives but also ex ante or ex post monitoring, i.e., before or after an accident occurs. We delineate the optimal scope of monitoring depending on whether public monitors are benevolent or corruptible. We show that separating the ex ante and the ex post monitors increases the likelihood of ex post investigation, helps prevent capture and improves welfare.

THE NECESSITY OF VARIOUS INSTRUMENTS TO CONTROL RISK

Although much debated and often criticized, the view that our societies are 'at risk' has certainly pushed both scholars and practitioners to reconsider the role of public intervention in the field of risk regulation¹ (see Beck, 1992). For instance, Hood, Rothstein and Baldwin (2001)² recognized that "*The idea of the 'regulatory state' is that a new institutional and policy style has emerged, in which government's role as a regulator advances (...)*". Consumers should be protected against buying defective products, patients against medical malpractice, workers against accidents in the workplace, the environment against major industrial or transportation hazards, etc.

In all these circumstances and although risk tolerance may vary, **public intervention is called for to control private actors involved in activities that put humans or the environment at risk.** As risks spread over the whole spectrum of economic activities, more effort and expertise should be allocated to assess their true impact on society. **The adequate design of incentives for key players involved in the management of these risks should be put at the forefront of the public debate.**

Maintaining risk at levels which are socially acceptable does require systems of control. This issue has attracted much attention in the public management literature with a strong motivation being to explain the great variety of regimes in risk regulation across fields and countries (see Hood, Rothstein and Baldwin, 2001). However, little is known on the design of adequate institutions for risk regulation. Institutions do vary significantly across fields. Casual evidence suggests that, sometimes, administrative agencies are staffed with experts able to assess specific risks and these agencies have strong enforcement powers. A typical example is that of nuclear power plants, which are routinely checked for maintaining safety. In other fields, such as defective products, agencies are more generalist and most of the enforcement power resides with Courts of Law that perform their own investigation in case of prosecution following an accident. Most of the time however, **risk regulation involves an intricate combination of both kinds of intervention taking place either ex ante or ex post.** Transportation, road and navigation safety, or occupational safety are good illustrations.



One might argue that risk regulation fits into the general grid already available to discuss regulatory policies and institutions for market regulation (see Noll, 1989³, and Baron, 1989⁴). However, there is some value in distinguishing agencies and regulations which are used ex ante, i.e. before any accident occurs, from agencies, Courts of Law and other enforcement devices which may intervene ex post, i.e. after an accident. **This time line naturally distinguishes the roles of different public officials involved in risk monitoring.**

1. Beck, U. (1992), *Risk Society, Towards a New Modernity*, London: Sage Publications

2. Hood, C., H. Rothstein and R. Baldwin (2001), *The Government of Risk*, Oxford University Press

3. Noll, R. (1989), "Economic Perspectives on the Politics of Regulation," *Handbook of Industrial Organization*, Volume II, R. Schmalensee and R. Willig eds., North Holland.

4. Baron, D. (1989), "Design of Regulatory Mechanisms and Institutions," *Handbook of Industrial Organization*, Volume II, R. Schmalensee and R. Willig eds., North Holland

In this respect, an important but largely unexplored issue is to delineate the optimal scope of ex ante and ex post control in a world plagued with informational constraints. **This study discusses the costs and benefits of splitting the tasks of ex ante and ex post monitoring of a firm**, the activity of which generates some risk. This is done in a context where moral hazard on safety care calls for explicit monetary incentives but also for setting up auditing mechanisms to force compliance with safety standards. **When capture of monitors by the very interests they are supposed to control is a concern**, separation of monitoring tasks between two independent bodies is preferable.

OUR APPROACH

Consider a risk-neutral firm which can cause an accident of substantial scale affecting third-parties. This firm undertakes a nonverifiable prevention effort. A high level of effort is socially optimal. Compliance with this standard of due care can be induced through monetary incentives and the threat of random inspections. Such monitoring can be preventative (ex ante) or occur ex post, following an accident, and uncovers whether the firm did perform sufficient care. Fines can be imposed if investigation reveals misconduct, but the firm is protected by limited liability. This access to privileged information gives discretion to public officials. **The firm may attempt to capture monitors to prevent them from revealing its misbehavior.** Had monitors been non-corruptible, monitoring would unambiguously improve the firm's incentives.



Things are different when monitors are corruptible.

Consider first the case where ex ante and ex post monitoring is performed by a single entity. **Such an integrated organization opens large opportunities for collusion.** The long-term relationship between an integrated monitor and the firm facilitates collusion by expanding the set of contingencies in which bribes can be exchanged. Under integration, the monitor's close contact with the firm significantly reduces the transaction costs of side-contracting. Postulating convex transaction costs in side-transfers, average transaction costs decrease as bribes are spread over more contingencies⁴. Intervening both ex ante and ex post, an integrated agency reduces such transaction costs and reaches more efficient collusive deals with the regulated firm.

Under separation, different monitors are used ex ante and ex post. Each monitor anticipates that the other receives enough benefits from adopting an uncorrupted behavior. When striking their collusive deal, the firm and the ex ante monitor anticipate that another monitor may intervene ex post to unveil both the firm's misconduct and evidence of corruptible deals. Bribes can only be transferred when they cannot be detected by an ex post investigation. Smoothing bribes with the ex ante monitor becomes harder and transaction costs of collusion increase. Diseconomies of scale in side-contracting appear, making it easier to prevent capture. Because it reduces the social cost of preventing capture, ex post monitoring takes place more often under separation than under integration. As its capture is less likely under separation, the ex ante monitor is called upon more often. **This highlights a complementarity between ex ante and ex post monitoring.** Taking a broader perspective, tougher ex ante regulation and ex post judicial prosecution should come together.

WHAT DO WE LEARN ?

This analysis has stressed the benefits of splitting ex ante and ex post monitoring of environmentally risky ventures in a moral hazard environment. Having an independent ex post monitor intervening only upon an accident makes it more difficult for the firm to collude with the ex ante monitor whose control is more routinized. **Regulatory capture is less of a concern under separation and this institutional choice improves social welfare.** This study sheds some light on a number of recent institutional changes in air transportation in Canada, for instance, or the management of nuclear waste in the U.S..

Although our model generates some value for separation to improve the fight against capture, **it is worth stressing other potential benefits from separation that could be added in a more complete model.** First, separation may help to generate evidence because it allows to cross-check the monitors' announcements. Second, duplication of expertise between ex ante and ex post monitors may facilitate specialization in gathering information on different dimensions of the firm's activities. The ex ante regulators are certainly more prone to gather technical information, whereas ex post judges would instead focus on testimonies by private parties. Investigating both the incentives for specialization and its consequences for institutional design would certainly be a valuable extension to our analysis.

4. Transaction costs are convex when it is increasingly harder to transfer larger bribes or when such illegal side-transfers can be detected and punished at an increasingly higher rate