

## Misapplying moral hazard · Christopher Adolph

**Moral hazard.** *Concept in economics describing a situation in which the potential negative consequences of one actor's choices are shifted to other actors in such a way as to encourage riskier behavior; often used in the context of insurance or other contractual arrangements.*

A valid concept that usefully explains some behavior, moral hazard may nevertheless be the most frequently misapplied and overused idea in economics. Sound examples of moral hazard affecting decisions include the effects of extensive flood insurance on the propensity of middle-class households to build valuable properties in zones that routinely flood: few would do this without a guarantee against losses from their poor choices. Moral hazard also explains why executive compensation tied in a one-sided fashion to corporate profits (but not losses) encourages risky behavior that harms companies in the long-run. On the other hand, economics lessons on moral hazard often emphasize far more dubious applications to personal behavior, including claims that health insurance encourages unhealthy habits or that mandating seatbelts encourages reckless driving. What the sound examples have in common is that they tend to involve comprehensive insurance against losses that are purely financial and thus assure substantial or total compensation for all personal utility at risk, while the more sensational – and strikingly counter-intuitive – health and safety examples typically include risks which cannot be conceivably resolved by compensation.

In theory, one way to mitigate moral hazard problems is to restore some of the consequences of risky behavior. Thus for executive compensation incentives to ever work as claimed, corporate leaders would need to pay penalties out of pocket for corporate losses at the same rate they expect to share in profits from executing stock options. Examples of such a scheme are tellingly scarce. Likewise, if you are convinced that health insurance or seatbelt mandates really do encourage unhealthy behavior, you might support the use of insurance deductibles and copays. Of course, the mere existence of such provisions demonstrates little, as it is hard to find a for-profit insurer that wouldn't like to shift more costs to patients, regardless of the effects on incentives.

Some proponents of these practices use an ugly phrase to describe them, saying they make sure the insured patient (or seatbelted driver) “has some skin in the game.” Notably, people invariably use this expression to refer to the risk of purely financial loss,

which only indirectly affects physical health and safety. But with the example of seatbelt mandates, your *actual skin* is already in jeopardy, and no technology or insurance can remove that risk. It is impossible to fully compensate for severe disability, and in the case of death, the person in question no longer exists to benefit from compensation, rendering utility calculations dubious. The same reasoning undermines the application of moral hazard to health insurance. The idea that insurance would encourage people to take risks with a physical body that cannot be fully repaired or replaced for any sum of money is not just deeply intellectually flawed but grotesque, and likely to discredit anyone who proposes it in the eyes of people who value their own bodies.

Moral hazard remains an important concept for the study of insurance and incentives, especially where the stakes are purely financial, and thus theoretically capable of full and frictionless replacement. (Of course, no one can be certain of successfully making a claim against any insurance, even of purely measurable financial losses, so even in this case moral hazard motivations are easy to overstate.) Moral hazard tends to vanish when essentially uninsurable non-financial penalties enter the equation – bankers that expect a “golden parachute” if they are caught breaking the laws are far less likely to be tempted if they anticipate being sentenced to prison. Indeed, negotiated settlements over financial malfeasance often involve vast financial penalties and zero jail time, suggesting white collar criminals have very strong preferences on this point.

If it's obvious that fraudsters would prefer to pay up than go to jail, it should be no more difficult to presume that drivers understand that neither seatbelts nor health insurance can eliminate risk. This is obvious to anyone who has experienced even a minor injury, so it provides a test of whether we are applying economic theory in a grounded and useful fashion, or just playing intellectual games. Under a non-falsifiable definition of rationality and any remotely reasonable discount rate, we shouldn't expect modest reductions in the risk of death or disability to “rationally” incentivize risky behavior to any measurable extent – especially when the benefits of risk-taking are very small. Evidence to the contrary casts doubt on the application of rational actor assumptions to the context in question: if seatbelts do encourage risky behavior, we should turn to behavioral and psychological theories and methods to study how and when people act as if some external force has magically removed the risk of injury from an intrinsically hazardous behavior.

So why do so many economics lessons repeat these dubious claims? The hypothesis that seatbelts induce moral hazard was initially proposed by Peltzman (1975). While Adams (1981) provided early cross-national evidence in favor of this claim, the method he employed to infer the causal effect of seatbelt mandates is idiosyncratic. Applied

statistical methods have advanced greatly since the early 1980s, and serious flaws in Adams' analysis are now readily apparent. In particular, Adams' approach tends to mix-up the effects of seatbelt laws with other safety regulations that may or may not have been implemented around the same time in different jurisdictions. His techniques also conflate seatbelt mandate effects with unrelated differences across countries in rates of injury due to traffic accidents. More rigorous recent empirical research repairing these defects shows that seat belts *do not* encourage risk taking (Houston and Richardson, 2007). Instead, laws that require the use of seat belts *reduce* risk taking behavior by seat belt users and lower the probability of fatal accidents for all drivers on the road – including motorcyclists, who would be strictly harmed by seat belt mandates if they truly created moral hazard. At this point, lessons on moral hazard should leave the example of seatbelts in the dustbin.

There is a broader lesson here: we should all be skeptical of suspiciously neat applications of economic theory that present profoundly counter-intuitive conclusions based on minimal argumentation and evidence. Powerful counter-intuitive ideas exist – good examples include Ricardo's (1817) comparative advantage theory of trade and Olson's (1965) insight into the power of concentrated interests over larger groups – but they are exceptional discoveries of a sort we shouldn't expect to regularly uncover, however much we might wish to be the next Ricardo or Olson. Social phenomena are more often intuitive than counter-intuitive and are more often complex than simple: they are rarely both simple *and* counter-intuitive. When confronted with such a claim, demand strong evidence and pay careful attention to the knowledge of relevant subject experts: behind most glib, counter-intuitive explanations lie fatal errors of comprehension, measurement, and inference.

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8 APRIL 2019

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