

Instrument Choice for Internality Regulation

Brian Galle, Boston College Law School

Abstract

While there is a well-developed literature on the choice of regulatory instruments for correcting externalities (see Galle 2012 and Helfand et al. 2003 for reviews), there has been no systematic effort at translating that work to the context of “internalities” (Gruber & Koszegi 2001). This paper offers a first take on the extent to which the basic conclusions of the externality-control literature apply to government’s effort to protect individuals from self-inflicted harms. I argue that the translation is likely to be at best inexact, and that many important issues depend on open empirical questions. Therefore, the paper will conclude both with some tentative policy implications as well as a proposed agenda for future research.

Galle (2014) identifies the sub-components of policy instrument choice for the regulation of externalities, breaking the traditional dichotomies of price vs. quantity and carrot vs. stick down into a more complex set of policy options. For example, instruments may reveal or may not reveal private cost information; may or may not transfer wealth; transfers may be to public coffers or private individuals; and the intervention can be imposed before or after the regulated conduct. Depending on human cognition, some instruments may be more (or less) effective than rational-choice models assume. This paper extends this model to internalities and identifies dimensions on which internality-regulation differs from regulation of externalities.

Most of the literature argues that wealth-transferring instruments dominate “command and control regulation” and other transferless policies because the transfer offsets some of the deadweight loss of regulation. (Glaeser 2006, Becker 1968). Galle (2014) identifies some limits on this argument. Among others, the argument assumes that all regulation affects labor supply. However, as Kaplow (2006) suggests, labor-supply effects for agents with non-standard preferences are complex. Galle (2014) argues that some forms of regulation---many of them what Sunstein & Thaler (2009) term “nudges”---are especially likely to have minimal labor-supply effects, making it ambiguous whether transfers are welfare-superior along this dimension.

A central question for this paper will be whether this Galle (2014) argument extends to internality-regulating instruments. O’Donoghue & Rabin (2006) suggest that regulating internalities creates a double dividend, because the intervention improves, rather than distorting, consumer preferences. But O’Donoghue & Rabin (2006) consider only taxes that are too small to have any labor-supply effects. I address that gap here.

Depending on the nature of the individual failure and the empirics of how various agents respond to interventions, transfer instruments may in some cases be more or less preferable relative to regulation or nudges. I model agents as possessing a combination of two parameters, $\hat{\theta}$ and $\hat{\beta}$, which represent, respectively, their awareness of the current costs of complying with

government policy and the future benefits of doing so. (I also offer illustrative real-world examples of each combination.) Assuming that substitution effects generally dominate income effects, agents with low $\hat{\theta}$ will tend to have more modest negative labor response from an intervention. Agents with high $\hat{\beta}$ may actually have positive labor-supply responses.

For example, suppose an individual who impulsively consumes large quantities of fatty foods. Government policies correcting this externality may tend to increase labor supply, to the extent that the individual recognizes that the real long-term returns to labor are greater as a result of the policy (high $\hat{\beta}$). At the same time, if this policy takes the form of a sales tax, the tax is significant in amount, and the individual is aware of that tax, we should expect negative labor supply effects (high $\hat{\theta}$). Which of these effects predominates, and to what degree, will of course affect the optimal level of regulation or optimal price of the transfer instrument. They may also affect the choice among instruments, especially if the instrument itself affects either $\hat{\theta}$ or $\hat{\beta}$.

Information provides another putatively major distinction between price instruments and regulation. (Kaplow & Shavell 2002). Recent work by Nussim (unpublished) and Galle (2014) suggests this difference may be overstated. Nussim observes that price instruments do not typically cause victims to reveal their cost of mitigating externalities, casting doubt on whether price instruments reveal enough information for policy to be set optimally. I argue here, however, that Nussim's argument no longer holds in the case of internalities, where victim mitigation is not an issue.

Similarly, I argue that the absence of third-party victims can significantly affect the choice between sticks and carrots. A standard argument against carrots is a particular form of moral hazard in which emitters respond to expected carrots by increasing externality production (Coase 1962). This argument seems much less trenchant in the externality context, raising the possibility that carrots might in many cases be a viable policy instrument. Likewise, as Galle (2012) discusses, carrots and sticks may vary in their effects on victim incentives to mitigate, and this dimension no longer seems important for internalities.

With the possibility of these kinds of strategic responses off the table, income effects remain as the most important factor in distinguishing carrots and sticks. Here again there is a need for ongoing empirical work. As Kaplow (2006) notes, externality sufferers may treat improved budget allocation as an increase in total wealth, but this improved allocation may also be discounted to the extent it occurs in the future. Government's choice of instruments may affect income effects both through $\hat{\theta}$ and $\hat{\beta}$ channels: for example, low-salience taxes may depress income effect responses, while high-salience taxes may increase consumer awareness of potential future benefits from compliance.