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Future of Regulation: Challenges and Opportunities from Emerging Technology

By: Zhoudan Xie & Mark Febrizio | September 19, 2018

On September 12, the George Washington University Regulatory Studies Center (GW RSC) co-hosted an event on the *Future of Regulation* with the Deloitte Center for Government Insights and the Trachtenberg School of Public Policy and Public Administration. Experts from government agencies, think tanks, private sector companies, and universities discussed the challenges emerging technologies pose for traditional regulatory systems, the alternative regulatory mechanisms available to address the challenges, and the opportunities to use new tools to improve regulation. This commentary highlights several themes that emerged from the event and extends the conversations sparked by experts on the panels.

Regulatory Humility

A regulatory action starts with identifying the need for regulation. As Executive Order 12866 states, "Federal agencies should promulgate only such regulations as are required by law, are necessary to interpret the law, or are made necessary by compelling public need…." Among other public needs such as distributional fairness or privacy, regulations are primarily intended to address market failures, such as externalities, information asymmetry, and market power. In her opening remarks, Susan Dudley, Director of GW RSC, reviewed the history of regulatory interventions in private markets in the U.S. and asked how the traditional market failure framework applies to emerging technologies.

Reaffirming the importance of Susan's question, Maureen Ohlhausen, Commissioner of the Federal Trade Commission (FTC), urged that regulatory humility is particularly crucial when considering regulating a new technology. Understanding the need to regulate, the limits of regulation, and the objectives to be achieved are essential to approaching unfamiliar regulatory contexts. As a result, FTC conducts case-by-case evaluations and focuses on real consumer harms when considering regulatory actions. Beginning with the goal of regulation and utilizing incremental approaches can help agencies avoid excessive regulatory burdens while still achieving their objectives.

Alternative Regulatory Tools

Even if the "why regulate" question is clear, agencies also face the question of *how* to achieve regulatory goals. Alternative regulatory tools, including regulatory sandboxes, nudges, and soft law, offer potential methods for producing better regulation.

Regulatory sandboxes—which are sometimes referred to as experiments, pilot programs, or trials—are defined as "controlled environments allowing innovators to test products, services, or new business models without having to follow all the standard regulations." Regulatory sandboxes can lift standard regulatory barriers for new technologies and create an enabling environment for innovation. Carl Burleson, Acting Deputy Administrator of the Federal Aviation Administration, pointed out that sandboxes can help address one of the biggest challenges for regulating new technologies—the lack of data. Taking the Unmanned Aircraft System Integrated Pilot Program for example, testing drones at various locations can produce data on how drones might be used and how to manage possible risks under different circumstances.

As another alternative to traditional regulatory instruments, a panel in the event also highlighted the potential for using "nudges" in regulation. As popularized by Richard Thaler and Cass Sunstein's book, *Nudge: Improving Decisions about Health, Wealth, and Happiness*, a nudge is "any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives." Hence, nudges present an alternative that is "easy and cheap to avoid," as opposed to traditional command-and-control regulations (which forbid options) or taxes and subsidies (which change economic incentives).

Chris Carrigan, Associate Professor at the Trachtenberg School and Co-Director of GW RSC, observed that certain regulatory instruments such as information disclosure and voluntary programs can be seen as regulatory nudges. Alicia Miller, Chief of Partnership and Innovation at the Internal Revenue Service (IRS), offered several examples of using nudges in tax administration. For example, an experiment in which the IRS sent different notices to taxpayers who failed to claim certain tax benefits finds that a simple, low-cost change in the order of information presented in the notices can increase compliance with benefit claims. Nevertheless, Chris and Alicia both noted that although there are many regulatory opportunities for nudges, nudges' limitations preclude them from completely replacing traditional regulations.

In the same spirit, Adam Thierer, Senior Research Fellow at the Mercatus Center at George Mason University, suggested that "soft law" mechanisms can be another alternative to traditional regulatory systems faced by fast-paced emerging technologies. Soft law generally refers to "nonbinding norms and techniques for implementing them," including "private standards, guidelines, codes of conduct, and principles." In general, it is more flexible than "hard law," which involves standardized rulemaking procedures, and thus can be more adaptive to new and rapidly evolving technologies.

Opportunities for Regulators

Although emerging technologies pose difficult challenges for regulation, they also provide many opportunities to improve regulatory outcomes and compliance.

William Eggers, Executive Director of the Deloitte Center for Government Insights, discussed the possibility of "regulatory modernization." He stressed that regulators can use new technological tools such as machine learning and big data to improve agencies' internal efficiency, increase regulatory effectiveness, and reduce compliance burden. For example, the City of Boston cooperated with Yelp by using ratings and reviews data to predict health inspection scores of restaurants, which could decrease the city's inspection efforts by 40 percent.

Technological advances also provide new tools to reduce the cost of retrospective reviews of existing regulations. Sofie Miller, Senior Advisor at the Department of Energy, emphasized that retrospective review not only examines whether a regulation accomplished its intended outcomes, but also provides *ex-post* verifications of agencies' *ex-ante* analyses and assumptions. Matt Gracie, Managing Director at Deloitte Consulting, LLP, demonstrated Deloitte's new *RegXplorer* tool, which employs machine learning techniques to identify regulations that have not been updated for a long time and regulations with a high level of similarity in the *Code of Federal Regulations*. It could potentially save a substantial amount of manual work to identify regulations that warrant a review.

Challenges: New Business Models, Big Data, and Artificial Intelligence

Although the experts at the event suggested many potential approaches to regulating emerging technologies and opportunities to improve regulation, challenges still remain.

For example, Andrew Torrance, Professor at the University of Kansas School of Law, offered several examples of "free innovation." He observed that many innovations today are not accomplished by businesses but by users seeking to satisfy their own needs, such as the real-time glucose monitor initially developed by a private community of diabetes patients and developers. This kind of "free innovation" raises questions on how to regulate people who are not innovating for profits.

Similarly, Daniel Castro, Vice President of the Information Technology and Innovation Foundation, discussed the challenges to regulating decisions made by computers in the realm of artificial intelligence. For instance, how should regulators approach situations where human decision-making is removed from the equation, and what trade-offs could emerge from constraining automation in contexts like medical diagnoses and financial services? Joshua P. Meltzer, Senior Fellow of Global Economy and Development at Brookings Institution, noted that cross-border data flows bring unprecedented challenges for domestic regulatory systems, especially when contemplating the distinct approaches of the US and EU.

Conclusion

A consistent theme throughout the event was the notable uncertainty surrounding the future of regulation and its effects on regulators, businesses, and the public. Nevertheless, uncertainty does not imply passivity, but rather underscores the importance of regulatory humility. When evaluating regulations and assessing new approaches, we should consider why, how, and what could go wrong. Furthermore, regulators should weigh the unintended consequences of an overly precautionary approach along with the risks of alternative regulatory tools.

Continuing to discuss the challenges of emerging technologies, alternative regulatory mechanisms, and opportunities afforded by new tools with a broad range of stakeholders is critical to improving regulatory responses to an unpredictable but exciting future. As Scott Pace, Executive Director of the National Space Council, discussed in his luncheon remarks, these ideas have ramifications not only beyond our national borders but also into space.

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