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ECONOMIC PERSPECTIVES

PERMISSIONLESS INNOVATION: A 10-POINT CHECKLIST FOR PUBLIC POLICYMAKERS

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Technological innovation fuels economic growth. For innovation to flourish, though, policymakers must send entrepreneurs a clear green light signaling a general acceptance of risk-taking that challenges existing business models and traditional ways of doing things.

This approach to policy can be labeled "permissionless innovation." If there were one thing every policymaker could do to help advance long-term economic growth, it would be to commit to making permissionless innovation the lodestar for all future policy pronouncements and decisions.[1]

PERMISSIONLESS INNOVATION VS. PRECAUTIONARY THINKING

Permissionless Innovation

- Experimentation with new technologies and business models should generally be permitted by default. Unless a compelling case can be made that a new invention will bring serious harm to society, innovation should be allowed to continue unabated, and problems, if they develop at all, can be addressed later.[2]

Precautionary Principle

- This is the belief that innovations should be curtailed or disallowed until their developers can demonstrate that they will not cause any harms to individuals, groups, specific entities, cultural norms, or various existing laws, norms, or traditions. The tension between these approaches dominates almost all modern technology policy debates.

A PERMISSIONLESS INNOVATION POLICY CHECKLIST

Policymakers should make permissionless innovation the basis of their technology policy going forward for the so-called Internet of Things,[3] wearable devices, smart cars,[4] commercial drones,[5] Bitcoin,[6] 3-D printing,[7] robotics,[8] advanced medical devices and applications,[9] and the many other new technologies that are emerging.

Policymakers should use this 10-point checklist to help spur the development of dynamic new sectors and technologies, thereby fueling economic growth.

1. Articulate and defend permissionless innovation as the general policy default.

To encourage a culture of permissionless innovation, policymakers should make it clear that innovators will generally be given wide leeway in their creative endeavors and that policy will not be based on hypothetical concerns or addressed through preemptive, ex ante regulatory controls. Instead, innovators and average citizens alike will generally be left at liberty to experiment with new technologies; problems that develop will be addressed in an ex post fashion.

2. Identify and remove barriers to entry and innovation.

Often, the most serious barriers to permissionless innovation are the well-intentioned but counterproductive laws and regulations of the past. For example, occupational licensing regimes were established at the state and local levels ostensibly to protect consumers from a variety of supposed dangers. It does not, however, mean they actually accomplished those goals or that they are still needed today.[10] That is particularly true if those policies are raising prices, limiting competition, or undermining new forms of life-enriching innovation that could better serve the public.[11]

All competitors should play by a common set of rules. But policymakers should not discourage new technologies and sectors by simply rolling old regulatory regimes onto them. The better alternative is to level the playing field by "deregulating down" to put everyone on equal footing, not by "regulating up" to achieve parity.[12]

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3. Protect freedom of speech and expression.

Almost all modern networked technologies enhance speech or expression in some fashion. Accordingly, policymakers should always look to reiterate the importance of the First Amendment and protections for freedom of speech for emerging technologies.[13]

4. Retain and expand immunities for intermediaries from liability associated with third-party uses.

To advance permissionless innovation as a policy guideline, it may be necessary to immunize some intermediaries (i.e., platform providers or device manufacturers) from punishing forms of liability—or at least limit liability to avoid the chilling effect that excessive litigation can have on life-enriching innovation. Current law already partially immunizes online intermediaries for content using their electronic networks.[14]

The creators of newer general purpose technologies, such as 3-D printers or certain robotic technologies, may need to receive certain limited immunizations from liability for third-party uses of their devices. If potential troublemakers use certain general purpose technologies to do harm—cybersecurity violations, privacy invasions, copyright infringement, etc.—it is almost always more sensible to address those problematic users directly and hold them accountable for their actions.

5. Rely on existing legal solutions and the common law to solve problems.

When serious concerns are raised about new technologies, some policymakers—often spurred by regulatory advocates—assert that "*something must be done!*" to address their worries. This typically results in preemptive forms of legislative restrictions or expanded regulation by various agencies.[15]

Before rushing to legislate, lawmakers should exercise restraint and first consider whether any existing laws might address the issues in question.[16] Even in the absence of existing laws or regulation, policymakers should wait to see how common law solutions develop. Many laws and legal standards already exist that can be applied to new challenges before policymakers look to impose additional laws or heavy-handed, technocratic controls on innovation.

6. Wait for insurance markets and competitive responses to develop.

Policymakers should also consider how insurance markets or new forms of competition might solve some perceived problems associated with new technologies. Every new technology involves risks and the possibility of accidents, which is why insurance markets typically emerge to provide greater peace of mind.

Insurance contracts will likely develop to cover risks that might develop for newer technologies, including driverless cars,[17] drones,[18] and 3-D printers.[19] Indeed, it is unlikely that some new technologies—especially autonomous robotic technologies[20]—will achieve mass-market adoption until insurance mechanisms emerge to cover the riskiest scenarios. Solutions and

developments such as these are not always immediately evident and take time to evolve, which counsels patience and humility among policymakers.

7. Push for industry self-regulation and best practices.

The Clinton administration established a framework for e-commerce policy recommending that "governments should encourage industry self-regulation and private sector leadership where possible."[21] Such industry self-regulation can include, but is not limited to, private codes of conduct or "best practice" guidance for developers, third-party certification and accreditation of devices or their standards, and corporate labeling and transparency efforts. Corporations and other organizations have a vested interest in keeping their systems and devices secure from viruses, malwares, breaches, spam, and so on.[22]

8. Promote education and empowerment solutions, and be patient as social norms evolve to solve challenges.

Education is one of the most important—but frequently overlooked—solutions to concerns associated with new technologies. Governments, industries, and other institutions should focus more energy on educating both the public and producers of new technology about its proper uses. "Legislate and regulate" responses are often not productive or effective approaches to safety, security, or privacy concerns because preemptive and prophylactic regulation of technology can be costly, complicated, and overly constraining.

Often, the better approach is to "educate and empower," with a focus on media literacy and "digital citizenship" and encouraging better social norms and coping strategies.[23] Policymakers should realize that new technologies can be "regulated" by more than law.[24] This is yet another reason that they should avoid rushing to legislate and instead exercise regulatory restraint in the face of rapid technological change.

9. Adopt targeted, limited legal measures for truly hard problems.

Policymakers can adopt targeted legislation or regulation as needed to address the most challenging concerns where the potential for clear, catastrophic, immediate, and irreversible harm exists. Specifically, some morally significant issues may exist that demand a more exhaustive exploration of the impact of technological change on humanity. Perhaps the most notable examples arise in the field of advanced medical treatments and biotechnology. Genetic experimentation and human cloning, for example, raise profound questions about altering human nature or abilities as well as the relationship between generations.[25]

The case for policy prudence in these matters is easier to make because the discussion is literally about the future of what it means to be human.[26] Most technology policy issues do not raise such profound, morally weighty issues. Instead, we generally allow innovators and consumers to experiment freely with new technologies, and even engage in risky behaviors, unless a compelling case can be made that precautionary regulation is absolutely necessary.

10. Evaluate and reevaluate policy decisions to ensure they pass a strict benefit-cost analysis.

Even when new laws or regulations are being considered, a strict benefit-cost analysis should be conducted to determine whether the rule would achieve the desired goal without imposing excessive burdens on society. Benefit-cost analyses help policymakers formally identify the tradeoffs associated with regulatory proposals and, to the maximum extent feasible, quantify those benefits and costs.[27]

Existing laws and regulations should also be periodically reevaluated to make sure they are keeping pace with ongoing marketplace and technological realities. If no compelling reason for their continued existence can be identified and substantiated, those laws or rules should be repealed within 18 months to two years. If a rationale for continuing existing laws and regulations can be identified, the rule can be reimplemented.

CONCLUSION

Society stands on the cusp of the next great industrial revolution thanks to technological innovations and developments that could significantly enhance the welfare of people across the world. "Inventions previously seen only in science fiction, such as artificial intelligence, connected devices and 3D printing, will enable us to connect and invent in ways we never have before," notes a recent World Economic Forum report on the amazing technological revolutions that could be coming.[28]

Policymakers can make permissionless innovation the cornerstone of innovation policy to help spur the development of a wide array of new life-enriching technologies and demonstrate, once again, "the endless potential of the human mind to improve the human condition."[29]

LINKS

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