Digital Disruption: How Should Canadian Regulators Respond?

By George N. Addy

Collectively dubbed the "Fourth Industrial Revolution," or Industry 4.0, the era of mass technological innovation is reshaping industries and economies in Canada and across the globe. The unprecedented speed and depth of disruption are posing novel challenges for existing regulatory regimes grappling to keep pace with evolving business models. This paper examines these challenges in detail and sets out principles-based strategies to guide Canadian policy-makers tasked with bringing our regulatory framework into the digital age.

The Rise of the Digital Economy

In just a few decades, the Internet has evolved from a simple research and communications tool to the single most important generator of economic activity since trade began. Peer-to-peer platforms, known as the "sharing economy," are radically transforming markets and rendering geography essentially irrelevant. We've all seen the disruptive impact of Uber and Lyft on the traditional taxi business model and Airbnb on the vacation rental and hospitality space. Yet we've only just begun. Like an iceberg floating off the coast of Fogo Island, Newfoundland, there's a lot more to the digital economy hidden below the surface. Unlike an iceberg, however, the amount of digital economic activity below the surface isn't melting: it's growing at an exponential rate. In August 2014, PricewaterhouseCoopers forecasted that in the sharing economy alone, five key sectors generated $15 billion in worldwide revenues in 2013 and will generate $335 billion by 2025. The McKinsey Global Institute has found that global data flows contributed $2.8 trillion to global GDP growth in 2014 – more than the contribution of global trade in physical goods – after growing 45-fold since 2005.

That type of digital economy growth brings with it an ever-increasing potential for economic and political disruption and complex socioeconomic trade-offs. Public sector policy-makers and a host of academics, private sector think tanks, trade associations and interest groups are turning their attention to the complex and critical examination of our regulatory and governance infrastructure. In its final report, the federal Advisory Council on Economic Growth pointed to the need for an "agile regulatory system

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designed for the new economy" and recommended the creation of an Expert Panel on Regulatory Agility to advise the Treasury Board and Cabinet on the steps to take. It is encouraging to see the growing awareness of the need for an assessment of whether and how to regulate activity in the digital space.

Regulatory Challenges

The pace of change raises serious questions about our institutional and governance models and their ability to adapt. Can our policy, legislative and regulatory processes keep up with new technologies? Do we have the institutional capacity to understand the implications of these changes? While many seem optimistic that in time regulators will be able to catch up and keep up with our new digital reality, in fact the opposite is true: technological change is growing at an exponential rather than a linear pace, meaning that the institutional knowledge gap and its accompanying regulatory lag will only widen over time.

Given the rapid rate of change, the very notion of designing detailed, sound, effective and socially beneficial regulation that can keep pace with technological change is at best extremely challenging and more likely virtually impossible. Digital economy platforms are multifaceted and largely borderless. Market participants are dispersed globally and are increasingly "born global": in one survey, 86% of tech-based startups reported some type of cross-border activity, engaging with foreign customers, suppliers and financing from day one.

Transactions take place virtually instantaneously, often without direct human involvement. And, of course, the digital economy is constantly evolving. Human-to-human, human-to-machine and machine-to-machine interactions are hallmarks of the digital economy and add multi-dimensional elements to an already overwhelmingly complex and dynamic sector.

Many of today's regulatory institutions acknowledge that the speed and unpredictability of technological innovation have created a need for significant adjustment to current regulatory models. Some may even admit that regulation that cannot keep pace with the activities it seeks to regulate is not without consequence, pointing to the innovation chill of direct costs associated with regulatory compliance as well as the indirect costs created by regulatory uncertainty. Add to this mix the fact that the costs of unintended negative consequences flowing from mistaken regulatory intervention can be enormous, and the outcome is clear: the wrong regulatory cure can easily be worse than the perceived disease.

Along with these substantive challenges, decision-makers seeking to craft 21st-century regulation may also face objections from both regulators and old-economy incumbent firms. Existing regulators are unlikely to be willing partners in what could be a complete overhaul or perhaps elimination of their organizations. Institutional dynamics are such that growth tends to be the result of regulatory creep rather than a principled rethinking of the mission and mechanisms of regulatory bodies. Over time, expediency may drive government leaders and decision-makers to agree with such agencies that the epochal changes created by technological change are really just business as usual. And policy-makers and regulators are sometimes encouraged by incumbent firms to adopt such an approach as they "game" the system to delay or dampen the market effects of innovative entry.

Considerations to Inform New Regulatory Structures

In light of the above challenges, it is clear that a fundamentally new approach will be required in order to meet the regulatory objectives of protecting competition and consumers without stifling social and economic progress. When rethinking regulation for the digital era, policy-makers should adopt a rigorously principled approach, informed by the following considerations.

1. A NON-INTRUSIVE REGULATORY ENVIRONMENT PROMOTES INNOVATION.

As we consider the best approach for Canada, it is worth looking to the experience of other jurisdictions for guidance. The global leading position of U.S. firms in this space is undeniable. The non-intrusive legal and regulatory environment unique to the United States has nourished an incubator environment that has produced Google, Apple and Facebook, to name but a few. The approach was not accidental: The Clinton administration's 1997 "Framework for Global Electronic Commerce" directly encouraged industry self-regulation and government restraint. The administration also passed several significant pieces of legislation: (1) The *Communications Decency Act* (particularly section 230, which immunized Internet enterprises from liability for content); (2) the *Digital Millennium Copyright Act*, which balanced the interests of copyright holders and Internet enterprises; and (3) the *Online Copyright Infringement Liability Limitations Act*, which provided safe harbours for commercial Internet enterprises.

The U.S. environment is in stark contrast to Europe and Asia's largely micromanaged command-and-control regimes. The lack of global leaders emerging from those areas is also not accidental. If Canada truly intends to promote innovative growth in the digital economy and in areas such as AI, it would be best to lean heavily toward the U.S. approach and away from European and Asian models.

2. THE DIGITAL MARKET SELF-DISCIPLINES.

It is also worth keeping in mind that downstream user "policing" of breaches can have huge financial implications that may be more timely and more effective at addressing issues than anything a regulator could do. Bad behaviour is often much more quickly and effectively punished in the digital marketplace than by regulatory fiat. Recall the negative financial impact of YouTube footage of a bleeding airline passenger being dragged off a plane or of retailers experiencing a customer credit card database hack. The billions of market value Facebook lost in a matter of days following the news of the recent data breaches will far outweigh anything else that the company may have to endure from any government action.

3. INCUMBENT INTERESTS AND REGULATORY LOCK-IN OFFSET THE GAINS OF INNOVATION.

Often recommendations from established firms and incumbents understandably reflect their own self-interest rather than broader social goals, and their close involvement in any regulatory design process may distort the results of that process and lead to inferior social and economic outcomes. While there will undoubtedly be significant transition issues arising from market disruptive innovation, the voices of incumbent firms and existing regulators must not drown out more fundamental considerations. The Internet-driven digital economy is an extremely efficient means of matching supply and demand for both goods and services, and less efficient suppliers and intermediaries will be driven out. Though consideration for those affected by this transition may be required, the process itself should not be viewed as a negative development but as an opportunity to create new prosperity.

In addition, where decision-makers draw on the knowledge of existing regulators, they need to bear in mind that regulatory institutions may not be prepared to deviate very far from historical approaches or to relinquish authority. This creates the risk of regulatory

"lock-in." The best way to design an appropriate regulatory framework for a new economic reality is unlikely to involve a cumbersome retrofit to an existing institutional design that may carry decades of its own inertia and prejudices; rather, decision-makers should start fresh from first principles with specific and focused goals in mind.

4. UNDUE DELAY ERODES OPPORTUNITIES FOR INNOVATION.

Like incumbency and regulatory lock-in, simple delay also threatens to squander the opportunities presented by the digital economy. Rather than taking an incremental, experimental wait-and-see approach that gives no certainty to innovators and forces them to wait for clarity or migrate to other jurisdictions, decision-makers should act decisively wherever possible and create spaces that are safe for the new business models made possible by technological change. Endless rounds of consultations and inconsistent, spasmodic enforcement may cause the fruits of innovation to wither on the vine.

Guidelines for Regulating in the Digital Era

In light of the principles canvassed above, the following recommendations are proposed to guide policy-makers in redesigning our regulatory frameworks for the digital context.

1. EVALUATE EXISTING MODELS.

In order to optimize the interests of consumer protection and innovation, a critical first step is to revisit the raison d'être of many of our existing regulatory institutions – a *relevance* audit. What was the social objective or market failure that led to its creation? Does the problem still exist? Is the institutional remedy still needed? In many cases, the need for regulation has disappeared altogether, while some seemingly problematic new developments may be threatening to incumbents but not truly harmful. Similarly, even if the digital economy does create entirely new problems that call for new forms of regulation, it's important to carefully study any such problems and reach an evidence-based understanding of their nature and significance before taking any action.

Assuming that the market or social objective remains valid, the next step is to reconsider how the problem should be addressed – a *methodology* audit. Are there better and less intrusive ways that could be used to address the objectives? Will the contemplated approach be able to address the issue at all, or, as with the U.S. FCC's initial attempt at regulating drones, will it take years to design and implement, only to be finally solving a problem that by then has been largely overtaken by technological innovation?

2. ACCEPT MORE RISK.

The technological revolution carries the potential to create prosperity and improve people's lives more than any other development in recent history. But these opportunities can only be fully realized if we are willing to adjust our regulatory framework to reflect that new calculus. This will necessitate a shift away from a highly cautious "Mother may I?" approach toward a general acceptance of increased risk and deference to the judgment of stakeholders and users.

As noted above, one of the key attributes of the digital economy is the way it has profoundly disintermediated and accelerated market feedback effects. These attributes give the digital economy and its participants an unprecedented ability to self-correct. If regulators can tolerate this discomfort and not surrender to short-term issue responses, the reward will be significant benefits to consumers, businesses and the economy as a whole. Timidity, on the other hand, may jeopardize Canada's ability to compete globally in the digital economy, putting us at risk of being left behind.

3. DON'T MICROMANAGE.

The breakneck dynamism of the digital economy also means that regulatory institutions must learn to be less hands-on if they want to be effective. A traditional regulatory approach based on direct oversight and prescriptive, granular rules simply won't work in the digital context. Not only will it be impossible to keep the rules current without stifling innovation or prohibiting it altogether – no one could hope to design a functioning traffic code if new cars doubled their top speed every two years – but in the constantly shifting digital environment, it is often easy to "innovate around" micro-rules, changing them into needless sources of inefficiency.

Oversight in the digital economy should instead be based on general principles whose application can be flexible and contextual, rather than on specific rules that create additional burdens without being truly effective. Innovators need room to experiment without the unnecessary encumbrances of slow and underequipped regulatory regimes second-guessing them. Only by preferring principles-based regulation and choosing to tolerate additional well-considered risk can we create a space to capitalize on innovative potential while ensuring that core interests and values are adequately protected.

4. BE FLEXIBLE.

The pace of change in the digital economy also makes it imperative for our regulatory approach to incorporate a high degree of flexibility. Institutions must be designed in a manner that allows them to be nimble so that they can respond to new questions and challenges (almost) as quickly as digital innovators can dream them up.

To this end, institutional, regulatory and legal lock-in should be avoided. The legislative and regulatory development process is long and laborious, and its results are difficult to change once they've taken root. Wherever possible, less formal tools should be used in order to preserve the greatest regulatory adaptability for what will undoubtedly be significant

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changes in circumstances in the future for the digital economy. While this will inevitably create some tension with the innate desire for predictability, a flexible approach, combined with high levels of transparency, consultation and accountability, will provide better outcomes than a slow-moving and often opaque bureaucratic approach.

5. BALANCE BENEFITS AND COSTS.

Even where some regulation of the digital economy is deemed necessary – for example, for public health and safety reasons – the nature and scope of that regulation, as well as the means of administering it, must be carefully considered. In all cases, the perceived harms that regulation seeks to address must be balanced against the risk of negative unintended consequences and innovation chill arising from hastily designed regulatory institutions or ill-conceived intervention.

6. BE MINDFUL OF TIMING.

Regulation that is daring and flexible, but ill-informed and inattentive, cannot hope to succeed. Conditions should be watched carefully and revisions should be made when necessary. However, monitoring and consultation should not be allowed to unduly delay the processes of regulatory reform or institutional

design and so jeopardize the gains of innovation. Rather, decision-makers should act boldly on the basis of the best available information, but keep a light touch and be prepared to make in-flight course corrections as needed.

7. VIEW GOVERNMENT AS AN ENABLER, NOT A CONTROLLER.

The rapid proliferation of technological development is an opportunity for government to rethink its role in innovation by striving to drive growth, rather than constrain it. For example, the new payment service directive in the United Kingdom, which, as of January 2018, requires all banks to provide third-party providers with access to their customers' account through open APIs, facilitates innovation by enabling fintechs and other companies to build financial services on top of banks' data and infrastructure.

Canada is a small, open country whose ability to succeed depends on policies that encourage entrepreneurship and innovation. The need for such policies has, at times, come into conflict with our cautious approach to regulation, as government tries to cultivate innovation with the left hand, but maintains a heavy regulatory burden with the right. But the enormous payoff of a vigorous digital economy, combined with the digital economy's ability to self-regulate, offers a perfect opportunity to try to find a new mode of support that fully captures its potential.

An optimistic, flexible and principled approach to regulatory oversight will foster a culture of innovation and give all levels of government the necessary tools to promote this growth. Digital technologies offer governments the opportunity to empower citizens and improve access to markets, services and infrastructure. If we had half as much regulation and twice as much education, who knows what we might accomplish?

Closing Thoughts

Whether one calls it the "Fourth Industrial Revolution" or not, the significance of the digital economy today and tomorrow cannot be overestimated. The unavoidable market disruptions and social changes that it brings are, and will continue to be, substantial. The challenges facing politicians and policy-makers will be great. So too will be the temptation to use old approaches to meet these new challenges. But ensuring that society receives the maximum benefits from these developments will require courage and discipline – courage to resist the urge to pursue short-term politically expedient solutions and discipline to stick to fundamental principles applicable to this environment.

ABOUT THE AUTHOR

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