The Rapidly Evolving Role of the Regulator in the Data Economy

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June 20, 2017

5to Congreso Latinoamericano de Telecomunicaciones

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ITIF is a Top Science and Technology Policy Think Tank
Contents

1. How Can Data-Driven Innovation Drive Economic Growth?

2. How Should Regulators Adapt to the Digital Economy?

3. How Can Countries Accelerate Digital Adoption?
The Rise of the Data Economy

Better data:

- More precise
- More accurate
- Higher resolution
- More timely
Data is Transforming Industries
Better data means **better decisions**.

Artificial Intelligence + The Internet of Things = More Automation.

These capabilities can boost **productivity**, improve **public safety**, increase **environmental sustainability**, generate new insights in **health care**, and support **more effective government**.
The Internet of Things is the set of physical objects embedded with sensors or actuators that are enhanced with network connectivity.

There is expected to be up to 50 billion connected devices by 2020 generating $4 - 11 trillion in annual economic value.
Artificial intelligence is the use of software to *imitate intelligent human behavior*, such as learning, reasoning, and making decisions.

AI is expected to generate **$5-7 trillion** annually by automating knowledge work.
How Can Companies Use AI?

- Monitoring
- Discovering
- Predicting
- Interpreting

- Interacting with the Physical Environment
- Interacting with People
- Interacting with Machines
AI Beats Humans At...

- Playing Chess, Poker, Go, Pac-Man
- Detecting heart disease and skin, breast, and lung cancer
- Transcribing speech and lip reading
- Inspecting bridges
And AI Keeps Getting Better
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"Los hombres prácticos, que se creen totalmente exentos de cualquier influencia intelectual, son usualmente los esclavos de algún difunto economista."

John Maynard Keynes
Most Economic Doctrines Do Not Understand Innovation

Conservative Neoclassical

Liberal Neoclassical

Neo-Keynesian
Economic Theories Ignore Innovation at Their Peril

- Technological innovation is not...
  - A black box
  - A toy
  - A tweak
  - “Manna from heaven”
“El proceso de Destrucción Creadora es el hecho esencial del capitalismo”

Joseph Schumpeter
Innovation Economics Emphasizes Economic Evolution

- The central goal of economic policy should be to spur higher productivity and greater innovation.
Contents

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The Private Sector Cannot Solve Digital Adoption On Its Own

- The government should address three main areas:
  - Overcoming market failures
  - Creating an innovation-friendly regulatory environment
  - Promoting equity and access
Government Can Help Overcome Market Failures

- Externalities
- Chicken-and-egg dynamics
- Risk and uncertainty
- Global competitiveness
- Interoperability
- Public goods
Government Can Create Innovation-Friendly Regulations
Government Can Promote Equity and Access
### Elements of a National Strategy for the Data Economy

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<th>Category</th>
<th>Elements</th>
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<td><strong>Funding</strong></td>
<td>• Pilot projects&lt;br&gt;• R&amp;D</td>
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<td><strong>Planning</strong></td>
<td>• Public-private partnerships&lt;br&gt;• Voluntary industry-led standards</td>
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<td><strong>Agency</strong></td>
<td>• Government adoption&lt;br&gt;• Open data initiatives</td>
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<td><strong>Regulation</strong></td>
<td>• Minimize regulatory cost of data&lt;br&gt;• Fast-track regulatory review of “smart” devices</td>
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<td><strong>Trade Policy</strong></td>
<td>• Ensure free flow of data across borders&lt;br&gt;• Promote access to technology</td>
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Thank You!

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