





Working Papers

# Some Simple Economics of the **Blockchain**

#### Christian Catalini & Joshua S. Gans









**WORKING PAPER 22952** 

DOI 10.3386/w22952 **REVISION DATE June 2019**  **ISSUE DATE December 2016** 

We build on economic theory to discuss how blockchain technology can shape innovation and competition in digital platforms. We identify two key costs affected by the technology: the cost of verification and the cost of networking. The cost of verification relates to the ability to cheaply verify state, including information about past transactions and their attributes, and current ownership in a native digital asset. The cost of networking, instead, relates to the ability to bootstrap and operate a marketplace without assigning control to a centralized intermediary. This is achieved by combining the ability to cheaply verify state with economic incentives targeted at rewarding state transitions that are particularly valuable from a network perspective, such as the contribution of the resources needed to operate, scale, and secure a decentralized network. The resulting digital marketplaces allow participants to make joint investments in shared infrastructure and digital public utilities without assigning market power to a platform operator, and are characterized by increased competition, lower barriers to entry, and a lower privacy risk. Because of their decentralized nature, they also introduce new types of inefficiencies and governance challenges.

Download a PDF

Information on access

~
~
<b>~</b>

## **Published Versions**

Christian Catalini & Joshua S. Gans, 2020. "Some simple economics of the blockchain," Communications of the ACM, vol 63(7), pages 80-90.

## Related

TOPICS Microeconomics

Market Structure and Distribution

**Development and Growth** 

Development

Innovation and R&D

PROGRAMS Industrial Organization

Productivity, Innovation, and Entrepreneurship

WORKING GROUPS Entrepreneurship

Innovation Policy Market Design

#### **More from NBER**

In addition to working papers, the NBER disseminates affiliates' latest findings through a range of free periodicals — the NBER Reporter, the NBER Digest, the Bulletin on Retirement and Disability, the Bulletin on Health, and the Bulletin on Entrepreneurship — as well as online conference reports, video lectures, and interviews.



<u>2023, 15th Annual Feldstein Lecture, Mario Draghi, "The Next Flight of the Bumblebee: The Path to Common Fiscal Policy in the Eurozone"</u>

**LECTURE** 

Dr. Mario Draghi, who served as President of the European Central Bank and Prime Minister of Italy, presented the 2023...

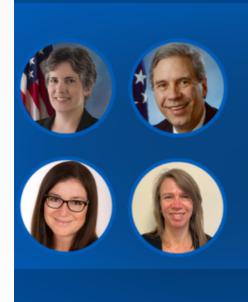


# Methods Lecture: Linear Panel Event Studies Jesse M. Shapiro, Harvard University and NBER Liyang Sun, CEMFI July 28, 2023

2023 Methods Lectures, Jesse Shapiro and Liyang (Sophie) Sun, "Linear Panel Event Studies"

**LECTURE** 

Overview: Linear panel event studies are increasingly used to estimate and plot causal effects of changes in policies...



Panel Discussion:

# Long-Term Dynamics of the Employment-to-Population Ratio

Karen Glenn, Social Security Administration Stephen Goss, Social Security Administration Nicole Maestas, Harvard University and NBER Julie Topoleski, Congressional Budget Office July 26, 2023

<u>2023, SI Economics of Social Security, Panel, "Long-Term Dynamics of the Employment-to-Population Ratio"</u>

Supported by the Alfred P. Sloan Foundation, the National Science Foundation, and the Lynde and Harry Bradley...

#### **National Bureau of Economic Research**

Contact Us
1050 Massachusetts Avenue
Cambridge, MA 02138
617-868-3900
info@nber.org
webaccessibility@nber.org

HOMEPAGE

Accessibility Policy
Diversity Policy
Privacy Policy

**FOLLOW** 









© 2024 NATIONAL BUREAU OF ECONOMIC RESEARCH. ALL RIGHTS RESERVED.