

Why Data is Totally Not Like Oil: The Implications for Economic Statistics

Dr. Michael Mandel

Chief Economic Strategist

Progressive Policy Institute

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MAY 6TH - 12TH 2017

Theresa May v Brussels

Ten years on: banking after the crisis

South Korea's unfinished revolution

Biology, but without the cells

The world's most valuable resource



**Data and the new rules
of competition**

It's often said that
"data is the new
oil"

Economist, May 2017

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That statement is fundamentally misleading
and dangerous



The Policy Relevant Differences Between Oil and Data

Oil	Data
Fixed supply, created millions of years ago.	Exponentially increasing supply, with new types of data being created every day.
The fixed supply of oil can be controlled by a small number of players, allowing them to drive up the price.	The supply of data is soaring in both volume and type too rapidly to be controlled or monopolized.
Unused oil in the ground has a value, set by supply and demand.	Unused data has uncertain economic value. Its value is created by analysis and combination with other data.
Once a barrel of oil is refined and consumed, it is gone.	Data can be duplicated, shared, and reused.
Oil is the single biggest commodity traded on international markets. Every barrel of oil that is exported is one less barrel to be consumed at home.	Data can be 'exported' to another country without reducing use at home. It is better to speak of global connections rather than exports and imports of data.

Oil obeys this fundamental national accounting equation:

$$\text{gross domestic purchases} = \text{gross domestic product} - \text{exports} + \text{imports}$$

Data doesn't.

A country can export data without losing any value from the data at home

Today, our system of national accounts is based on a balance sheet framework. Goods and services are discrete items that can be

- produced
- consumed
- bought
- sold

But data can also be

- duplicated
- shared
- absorbed

A word about capacity for absorption, which is analogous to industrial capacity.

Data needs work to make it useful. You can buy a book, but unless you know how to read, that book is not useful to you. A company can have information about its customers, but unless it knows what to do with that data, it's not useful.

The same thing is true of digital trade. The value of the trade depends not only on the data, but also on the 'absorption' capacity of the receiving country (education, technical capabilities).

- Simple example: Additive manufacturing designs

Increased use of data is already distorting trade and productivity statistics.

One example: In the US, the use of data to operate ecommerce fulfillment centers is making the distribution system far more efficient. Since 2007:

- Ecommerce employment has risen 400,000 (FTE)
- Brick-and-mortar retail has fallen 140,000 (FTE)
- American households have reduced time shopping by 64 million hours/week.

The first two show up in the official data, the third doesn't. So overall US productivity growth may have been underestimated by 0.2 percentage points annually since 2007

We are in the early years of applying data to physical industries such as retail, manufacturing, construction, health and education.

Data is a fundamental challenge to our current understanding and statistical analysis of the national, regional and global economies.

Treating data like oil will lead to regulatory and policy mistakes.

We need to extend national accounting framework to include new operators such as duplication, sharing, and absorption capacity.

Relevant recent papers

“The Coming Productivity Boom,” March 2017 (with Bret Swanson).

“Moving Beyond the Balance Sheet Economy,” June 2017.

“How Ecommerce is Creating Jobs and Reducing Inequality,” September 2017.



The Progressive Policy Institute is a catalyst for policy innovation and political reform based in Washington, D.C. Its mission is to create radically pragmatic ideas for moving beyond ideological and partisan deadlock.

For more information: info@ppionline.org
(202)525-3926
1200 New Hampshire Ave. NW, Suite 575
Washington, DC 20036