The Economics of the Digital Economy

Jacques Crémer

Toulouse School of Economics

WTO Webinar on
The economic characteristics
of data and data-driven markets
Thursday 10 December 2020
Introduction
## Valuations

<table>
<thead>
<tr>
<th>Company</th>
<th>Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple (AAPL)</td>
<td>$2.112 T</td>
</tr>
<tr>
<td>Saudi Aramco (2222.SR)</td>
<td>$2.090 T</td>
</tr>
<tr>
<td>Microsoft (MSFT)</td>
<td>$1.617 T</td>
</tr>
<tr>
<td>Amazon (AMZN)</td>
<td>$1.583 T</td>
</tr>
<tr>
<td>Alphabet (Google) (GOOG)</td>
<td>$1.225 T</td>
</tr>
<tr>
<td>Facebook (FB)</td>
<td>$815.87 B</td>
</tr>
<tr>
<td>Alibaba (BABA)</td>
<td>$729.41 B</td>
</tr>
<tr>
<td>Tencent (TCEHY)</td>
<td>$727.84 B</td>
</tr>
<tr>
<td>Tesla (TSLA)</td>
<td>$593.32 B</td>
</tr>
<tr>
<td>Berkshire Hathaway (BRK-A)</td>
<td>$536.59 B</td>
</tr>
</tbody>
</table>
Disruption / Innovation

- Replacement of old market places: Amazon;
- New social etiquette: eHarmony, Tinder;
- Totally new “intermediaries”: Swyft, Uber and their competitors, energy markets, blablacar.
The characteristics of the digital economy
The “characteristics” of digital industries

- Innovation
- Increasing returns to scale.
- The role of intellectual property.
- Switching costs.
- Data.
- Network effects.
- Two sidedness.
Monopoly is not bad

- Many of these characteristics encourage the creation of monopolies.
- And it is “socially efficient” to have monopolies.
Monopoly is not bad

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And it is “socially efficient” to have monopolies.

BUT We do not know how “competition for the market” should function to discipline large network firms.

⇒ We do not know how much of a problem this is.
Network externalities
There are (direct) network externalities if the ‘utility’ of a participant to a platform increases with the number of other participants on the platforms.

Example: more users ⇒ more data ⇒ better service.
Network externalities: definition

There are (direct) network externalities if the ‘utility’ of a participant to a platform increases with the number of other participants on the platforms.

“If you want to play the odds when it comes to online dating, you need to be swiping where everyone’s swiping.”
Network externalities: definition

There are (direct) network externalities if the ‘utility’ of a participant to a platform increases with the number of other participants on the platforms.

- Sometimes network externalities can be dominated by the consequences of congestion when the number of participants become too large. Example: movie theater.
- Sometimes people also speak of ‘indirect’ network externalities.

**Example:** more people at the movie theater $\Rightarrow$ fresher popcorn.

**Example:** more users $\Rightarrow$ more data $\Rightarrow$ better service.
Network externalities ⇒

- More efficient to have one platform;
- Market outcomes will tend to be one platform.

These effects are reinforced by competitive advantage due to access to data.
Network externalities \[\Rightarrow\]

- More efficient to have one platform;
- & market outcomes will tend to be one platform.

Those are the “goods” aspect of competition between platforms but

- Better price and/or better quality does not guarantee that a platform will attract consumers.

\[\Rightarrow\] Inefficient coordination is possible.
\[\Rightarrow\] Incumbency advantage.
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⇒ Inefficient coordination is possible.
⇒ Incumbency advantage.
⇒ These effects are reinforced by competitive advantage due to access to data.
Two sided platforms
Two sidedness: utility of agents depends on the number of agents on the other side of the market.
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A user is both a client and something which is sold to users on other side.
As in the one sided case

- It is generally more efficient to have one platform.
- The market will tend to monopolization.
- Collectively migrating to a new better platform requires consumers to solve a difficult coordination problem.
New issues
Pricing

- Price structure should aim at getting both sides on board, not to allocate costs “fairly”.
- Price low on one side if users on that side are very valuable to users on the other side.
  - Google charges 0 to consumers — and provide them with a very valuable service.
“Platforms as regulators”

Two sided platforms organize the interactions between the two sides:

- Restrict / encourages entry: iOS and Android apps.
- Regulate prices: no surcharge rules for credit cards.
- Law enforcement: arbitration processes.
- Organize matching: Meetic.

Access to data enables them to

- “regulate efficiently”;
- extract profits from this regulatory activity.