A Market-based Perspective on Technology Evolution and Innovation

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What drives change?

The Internet is a market, like any other.
Consumers of Internet goods and services make purchasing choices.
These consumer choices are what drives the market.
Consumers tend to show cost-based preferences.
Innovation that reduces the cost base of services tend to gain market share.
The greater the cost shift the greater the impact of the innovation on the providers.
There is often a “tipping point” of innovative change that makes it irresistible.
Economics of Innovation

Adoption pressure

incumbent Resistance

incumbent Replacement

Market Destruction!

Unit Cost Reduction

2x 4x 16x 32x 64x
What resists change?

- Volume tends to increase inertial resistance
  - And the digital world has massive volume
- Monopoly incumbency resists change
  - And the digital world is now dominated by a small set of incumbents
- Changes that do not impact the cost base of the service increases resistance
- The emergence of large scale digital incumbents creates its own challenges
Economics of Innovation

Adoption pressure

incumbent Resistance

open markets

“incumbent entrenchment” level

monopolies

incumbent Replacement

Market Destruction!

Unit Cost Reduction

2x

4x

16x

32x

64x
A Gentle Touch

• A continual flow of innovation into competitive markets that alter the cost base tends to create a continuous marginal advantage to the innovator

• The trick is to avoid entrenched monopolies
  As their inevitable eventual displacement is extremely messy and highly disruptive
A Gentle Touch

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Which is all good in theory, but for the Internet it’s all just too late!

The trick is to avoid entrenched monopolies

As their inevitable eventual displacement is extremely messy and highly disruptive.
The Internet's Gilded Age

Tech Giants Amass a Lobbying Army for an Epic Washington Battle

Total 2017 federal lobbying spends by tech giants

<table>
<thead>
<tr>
<th>Company</th>
<th>Spend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alphabet</td>
<td>$18.1 million</td>
</tr>
<tr>
<td>Amazon</td>
<td>$13 million</td>
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<tr>
<td>Facebook</td>
<td>$11.5 million</td>
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<tr>
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<td>$8.8 million</td>
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<tr>
<td>Apple</td>
<td>$7.1 million</td>
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</tbody>
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SOURCE: Open Secrets

With actions and legislation to curb their power, four of the biggest technology companies are amassing an army of lobbyists as they fight to defend their interests.