

Big Data, Digital Platforms, Competition:

Any/what role for policy making (in EU)

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BIG Data, Digital Platforms, Competition

1. Competition in digital platform markets does not imply lack of market failure
2. Market failure in digital platform markets does not imply policy intervention can redress these
3. Suggestions for improving policy intervention

The platform based new digital landscape



Competition and cooperation in the digital ecosystem takes place between and within **platforms**.

Having large scale is an advantage in platform-based ICT sectors. The benefits mostly emerge from **network effects** operating on the two sides of the market: a large user base and a large base of applications and equipment.

When there are also **switching costs**: installed base advantages;

These two-sided network effects and large switching costs create an **advantage for established incumbents**: ie advantage of size and incumbency;

Nevertheless, as **technology changes** rapidly, incumbent advantages may also be quickly depreciated. New entrants offering radical innovations can quickly surpass existing entry barriers.

CONTESTABILITY - COMPATIBILITY

Competition and Market failures in digital platform markets

Compatibility is an important determinant of the (potential) *total value creation* in these markets. It is also important for determining *which part of the ecosystem captures most of this value*, and the incentives for platform providers, developers, equipment providers, telecom providers to invest in innovation.

- When there is compatibility, there is more competition for developers, which have a better bargaining position. With more developers entering the market, the total size of the market and the total value creation will be higher for compatible platforms.
- Nevertheless, despite this market size advantage, platform providers may shun open platforms, as this offers the prospect of greater market dominance (albeit in a smaller overall market).
- Free market forces could thus lead to incompatible platforms (Casadesus and Ruiz, 2009).

Competition for the market may therefore not lead to the socially preferred level of compatibility

Competition and Market failures in digital platform based markets

The competition between incompatible network goods is likely to lead, in the long run, to market dominance by a single good. The dominant good cannot be predicted beforehand and might not be the best available option

On the demand side: challenge of managing consumer expectations on network size

Scope for multiple, unstable equilibria and tipping;

- Excess inertia: nobody buys it because nobody buys it
- Excess momentum: market tips very quickly towards new product even when it does not represent a great improvement
- Dominance of the market by the “wrong” technology
 - The winning technology is not necessarily the best or the one preferred by most consumers; the fittest does not necessarily survive.
 - The ultimate outcome of the battle depends on a series of small historical events;" the outcome is path dependent.

Competition and Market failures in digital platform based markets



New entrants carrying radical innovations can quickly surpass existing entry barriers. This **contestability** feature of new ICT markets constantly challenges incumbent positions.

But technological progress is endogeneous and at least partly shaped by current market structure

- New firms disrupting established platforms is seen as the standard model for technological progress
- But take overs of small start-ups is happening extensively in digital platform markets with the major platform providers taking over start up (application) providers.
 - Scale advantages vs incumbency incentives
- Bargaining position of start-ups in acquisition deals (and there incentives to engage in radical innovations) depends i.a. on compatibility

Size, speed and direction of technological progress may not be optimal

Scope for government intervention given the wide scope of market failure?

Can policy intervention correct (alleviate) market failures in digital platform markets?

- Ex ante interventions (regulatory policy agenda (standardization): shape the competition process among network goods
- Ex post intervention (competition policy): controlling firm's conduct

Both types are fraught with huge challenges

Policy makers should appreciate the dynamics of the ICT ecosystem which is highly non-linear, with high velocity, systemic interdependencies and path dependencies, disruptive technology shocks, fluid boundaries, actors entering, exiting, refocusing and constantly innovating.

CAN THEY?

A standard static equilibrium approach will not do; incentives for investing in new technologies will have to be taken into account in regulatory and competition policy agenda.

Europe's position in the new digital landscape

Will **European users** (final consumers, business users...) be able to enjoy best price/choice/quality/newest services??

European suppliers:

In the platform, content and application providers layer, the EU is weakly present; especially missing platform providers.

- Will European companies be able to capture value from the new and follow-up generations of innovation or as providers of applications and equipment to the platforms of other leading firms.
 - This will depend on the contestability and the compatibility of the platforms.
 - As Europe lacks players that are currently strong platform providers, it has an extra incentive to push for open and compatible models.
- Will European companies be in the driver's seats of the next generation of platforms?
 - Depends on whether barriers for innovation will be removed; most importantly: single digital market; access to finance; access to skills; IP

Implications for EU policy design

- EU **competition** policy: an assessment of dynamic efficiency effects and openness of technology markets shaping the future working of innovative markets should be much higher on their radar.
- **Standards and regulations: Removing fragmentation** and when designing new regulations: with a technology **neutral** and **open** perspective
- Access to digital markets, digital skills and access to finance for **young firms with radical growth projects who want to scale up to world class leadership**: Single market policy agenda

Implications for EU policy design

As there are still too many unknowns about whether and which policy interventions are effective for digital markets, policy should engage in

- **close monitoring of emerging technologies and markets: collection of data & intelligence at large scale**
- **use the opportunity of big data and artificial intelligence to learn more quickly on (i) how to introduce new policy instruments (ii) end running instruments who have become obsolete or failed**

DIGITAL MARKET MONITORING and SMART EXPERIMENTING