

# Internet Platforms as Infrastructures of the Digital Age

*Astrid Krisch und Leonhard Plank*

---

Internet platforms like Google, Amazon or Facebook substantially shape our everyday lives. With their coordinated products, they create their own socio-technical ecosystems and act as gatekeepers that set and control rules. Their economic dominance is increasingly being addressed by competition authorities in Europe. Contrary to how they are often perceived, platforms are not neutral “intermediaries”, but powerful actors that shape opinions and public discourses - so far largely without much public control. Yet recently, debates regarding appropriate regulatory strategies are gaining momentum. To limit market dominance, restrictions to horizontal mergers in the same or similar sectors (e.g. Facebook's takeovers of Instagram or Whatsapp) and the banning of vertical mergers are discussed. This is done to prevent the market dominance of the platforms from spilling over from one business sphere to the next. The case for a closer interlocking of competition law with agendas of consumer and data protection is also being made. Moreover, proposals drawing on public utility regulation are developed since internet platforms can, in many respects, be compared to traditional infrastructures. Understanding internet platforms as a new field of public service provision would, among other things, guarantee universal access, similar to traditional "analogue" infrastructures. As history has shown, it is possible to regulate powerful actors in the interests of society as a whole and subjecting them to democratic checks and balances. This would imply to take a broader perspective on economic dominance and approach the problems pragmatically.

---

## 1 Introduction

For a long time, Silicon Valley tech companies were seen as the epitome of a new economy. With their "disruptive" business models, they have changed the everyday lives of citizens, consumers and companies. Until recently, they were praised for their innovative capacities and the associated advantages. However, lately the dark sides of Google, Amazon, Facebook & Co. have

become a matter of debate. From abuse of data and the exploitation of their dominant market position to tax avoidance, discrimination and threats to democracy - the allegations are extensive. The "Economist" has recently created a new acronym for the new "Tech-Titans", capturing their dark sides: "*BAADD - big, anti-competitive, addictive and destructive to democracy*" (Economist 2018).

This short paper sheds light on the increasing economic and societal power of the big Tech-Titans and sets out the recently discussed regulatory strategies on international and national levels. The underlying assumption is that internet platforms resemble traditional infrastructures and, hence, strategies to regulate them can draw on a well-known set of policies.

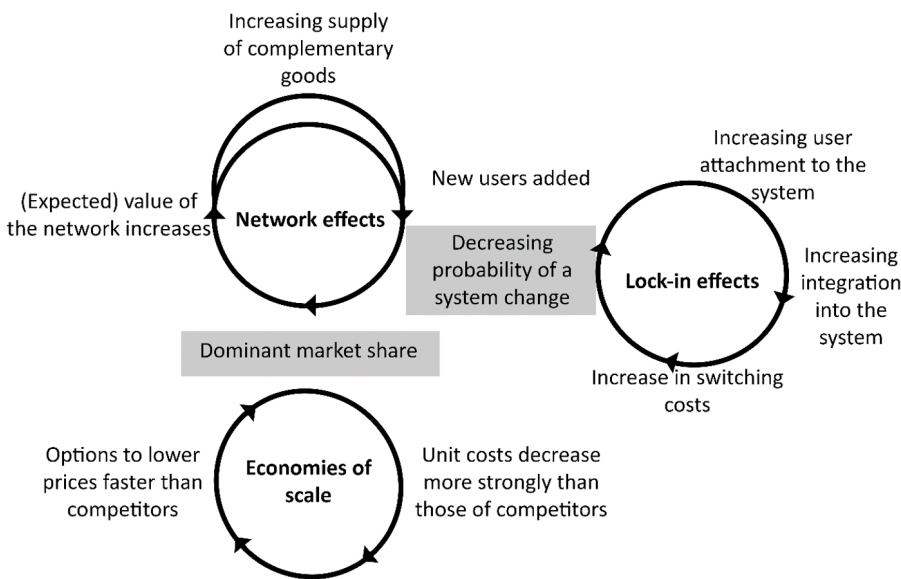
## 2 Increasing power of internet platforms

The increasing concentration of economic power, which competition policy has started to address over the last years, stands out as a key problem. This is largely due to the interplay of different mechanisms, which are familiar to the scholars of infrastructure economics and policy (see Figure 1). These include direct and indirect network effects, economies of scale, and finally lock-in effects due to the increasing integration of the platforms into everyday life of users leading to rapidly rising switching costs.

In addition to these mechanisms, there is a set of political entry barriers that foster market power. These include, on the one hand, intellectual property rights and, on the other, attempts to influence the debate on the regulation of platforms through a variety of channels – from traditional lobbying to more subtle attempts to secure a lasting influence on the discourse (e.g. via commissioned research, think tanks or civil society engagement). While mainstream economics has for a long time failed to address the obvious links between these different mechanisms, and voluntarily limited itself to a narrow analysis of endogenous economic market power, a shift appears to be underway. A recent paper by Luigi Zingales (2017) from Chicago, a heartland of neoliberal thought, has stirred up some debate. His analytical framework explicitly integrates economic and political sources of power. He concludes that in particular the US economy is running the risk of being caught in a “Medici vicious circle” (p. 114) where economic and political power reinforce each other.

In the last decade, platforms have made use of these mechanisms, expanded, and consolidated their economic position (see Table 1). Measured in terms of market

Figure 1: Rings of market power



Source: Clement/Schreiber 2016: 218, adaptations by the authors

Table 1: Selected key figures of Google, Amazon, Facebook and Apple (GAFA) (2017)

	Google	Amazon	Facebook	Apple
Market capitalisation (USD bn)	739	783	538	924
Employees (thousand)	80	566	25	123
Turnover (USD bn)	110,9	177,9	40,7	229,2
Net income (USD bn)	12,7	3,0	15,9	48,4
Cash reserves (USD bn)	107,4	26,0	38,3	261,5
Takeovers (2006-2017)	194	116	67	85

Source: Bloomberg 2017, ORBIS 2018

capitalization, they have even outranked corporations of the “old economy” by now. They are highly profitable, exhibit strong sales and have accumulated large amounts of cash (Srnicek 2017). From this position of strength, they can both drive their own expansion- increasingly into other business areas – and take over potential competitors. Particular attention should be paid to the fact, that platforms not only have high market shares in their core business areas. They increasingly constitute the market, which they shape according to their own rules. Amazon, for instance, has long integrated numerous independent traders on its own third party trading platform, sometimes at very unfavorable conditions, and Google's video platform YouTube has developed from a video interface for amateurs to a commercial advertising marketplace.

However, the problem goes beyond the economic dominance of customers, competitors and suppliers. Platforms impinge deeply on private and commercial everyday life through coordinating their services (e.g. Facebook in combination with WhatsApp or Instagram). They create their own socio-technical ecosystems and act as gatekeeper with rule-setting and controlling powers. Thus, they are not neutral intermediaries (such as telephone companies), but selection instances that shape actions and opinions, and therefore act as curators of social discourses- and this largely without public control (Dolata 2018). The scandal surrounding Cambridge Analytica has suddenly brought to the fore the socio-political wide-ranging significance of these data-driven business models.

### 3 Regulatory proposals for internet platforms

Against this background, economic effects of missing or limited competition are but one concern for regulation. More generally, the question of how to handle the multifaceted dimensions of unaccountable power that these platforms represent is most pressing today. To address this issue, the intellectual legacy of the reformers of the Progressive Era- above all Louis Brandeis and John Dewey- has been rediscovered in the United States in recent years (Rahman 2017).

This reform movement took shape in response to the rise of 19th century monopoly capitalism, which had emerged in the context of far reaching technological change and industrialization. This first “Law & Economics”-movement laid the foundation for modern competition law. In addition to securing the proper working of the market mechanism- not least by smashing trusts- it was also concerned with ensuring the responsibilities and accountability of the new powerful private actors to different stakeholder groups and the public more general. Although these new private actors exerted coercive powers similar to nation

states, they were not subject to the same restrictions and accountability as states.

Inspired by this intellectual and political heritage, proposals for regulating internet platforms are discussed with regard to competition policy and sector-specific public utility regulation. The latter can be both external regulation of private companies and internal regulation in the form of direct provision by public organizations.

Different approaches are discussed in the field of competition law. Alongside the restriction of horizontal mergers in the same or similar sectors (e.g. Facebook's takeovers of Instagram or Whatsapp), a ban on vertical mergers is being discussed. The latter should prevent that the market dominance in one field is spilling over to other business spheres. In this sense, firewalls such as those that have existed for decades in the area of financial market regulation (e.g. the Glass-Steagall Act in the US) are also discussed. This type of structural market intervention should have a prophylactic effect on the openness of markets and reduce occasional lobbying, e.g. in the case of M&A.

Moreover, new or adjusted criteria for merger control, the assessment of market dominance and other abusive behavior are discussed. In addition to the established criteria, such as turnover shares, the number of users in particular should be introduced as an important additional criterion for (apparently free) brokered services on the platforms. Furthermore, the effects on media diversity and data concentration should also be taken into account. With regard to the latter criteria, the argument for a closer integration of competition law with the agendas of consumer and data protection is also increasingly being made.

Furthermore, the establishment of a European dispute resolution body is also being considered, which could be a contact point for consumers and citizens as well as for companies, employees and other affected parties. Although this body would not have the power to impose sanctions- this would remain with courts and regulatory authorities- it could nevertheless have a recommendatory and investigative character. This channel could be used to regulate the deletion of illegal content, discriminatory practices against users, data transparency as well as business relations between companies.

The understanding of internet platforms as infrastructures of the 21st century goes hand in hand with the idea of viewing them as public utilities, of accepting their inherent tendencies towards monopolies and of adapting regulation in the sense of public regulation for private companies. This is an attempt to eliminate competition and to understand internet platforms as a new field of public services (or services of general interest using EU jargon). Among other things, this would guarantee universal access, as we know it from traditional “analogue” infrastructures. For communication networks, this would

mean considering them in analogy to energy or telecommunication networks. Thus, communication networks within internet platforms would either have to be part of the public sector network or make their network available to other providers (in the sense of "common carriage" regulation).

In analogy to net neutrality, for internet platforms this could mean subordinating themselves to the principles of "search neutrality", where non-discriminatory access and equality of all users of the platform are guaranteed. Equivalent to the connection requirements for telecommunications networks (e.g. mobile radio networks and providers), an interoperability solution could be developed for internet platforms.

This is based on the understanding that internet platforms should be seen as public utilities and a new field of services of general interest. They are thus a foundational part of our society and economy that directly and indirectly influences everyday interactions. The guarantee of universal access, as we know it from traditional "analogue" infrastructures, is therefore indispensable. Thus, forms of direct provision by public actors or other collective forms, such as cooperatives, are part of the debate regarding regulating platforms. In light of current tendencies towards authoritarian statehood, however, a critical stance seems justified. Progressive alternatives such as the concept of

platform cooperatives are still in their infancy and, especially in relation to the foundational economic understanding of internet platforms, need further consideration.

## 4 Conclusions

Large internet platforms have become a central part of our everyday lives. In many ways, they can be compared to traditional infrastructures that are foundational for the functioning of our economy and society. Without appropriate regulatory strategies though, these platforms are prone to become even more powerful monopolistic actors. The regulatory debate gained momentum in the last few years. The experience of the first "Law & Economics" movement shows that it is possible to regulate powerful actors in the interests of society as a whole and to subject them to democratic checks and balances. Making this legacy fruitful for the European debate also implies abandoning the narrow perspectives of current competition policy and approaching the problems pragmatically in the best sense of the word.

*This article is a summary of the final report of the research project „Internet-Plattformen als Infrastrukturen des digitalen Zeitalters [Internet platforms as infrastructure of the digital age]“. The project was conducted by the authors of this article from March 2018 until September 2018. It was funded by the Vienna Chamber of Labour. The full report (in German) can be downloaded at: <https://wien.arbeiterkammer.at/service/studien/digitalerwandel/Internet-Plattformen.html>.*

## References

- Bloomberg** (2017): These Are the Biggest Overseas Cash Hoards Congress Wants to Tax. Bloomberg; URL: <https://www.bloomberg.com/graphics/2017-overseas-profits-tax/> (21.02.2019).
- Clement, Reiner/ Schreiber, Dirk** (2016): Internet-Ökonomie. Grundlagen und Fallbeispiele der vernetzten Wirtschaft, Springer Verlag.
- Dolata, Ulrich** (2018): Big Four: Digitale Allmacht? Blätter für deutsche und internationale Politik 5/2018.
- Economist** (2018): Taming the titans. The Economist, Ausgabe 18.01.2018.
- ORBIS** (2018): Unternehmensdatenbank. URL: <https://orbis.bvdinfo.com/> (21.02.2019)
- Rahman, K. Sabeel** (2017): Democracy against domination. Oxford: Oxford University Press.
- Srnicek, Nick** (2017). Platform capitalism. Cambridge: Polity.
- Zingales, Luigi** (2017): Towards a Political Theory of the Firm. In: Journal of Economic Perspectives 31 (3), S. 113-130, DPO: 10.1257/jep.31.3.113.