

Hayek on competition and antitrust in a digital age

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[The market is] a system of the utilization of knowledge which nobody can possess as a whole, which ... leads people to aim at the needs of people whom they do not know, make use of facilities about which they have no direct information; all this condensed in abstract signals ... this mechanism is, I believe, the basis not only of my economics but also much of my political views.

Hayek (1994: 69)

INTRODUCTION

F. A. Hayek's (1899–1992) central idea was that a competitive pricing system is the most effective way to coordinate economic activity and economise on the information and knowledge held by market participants in a world of generalised ignorance and change.

When Hayek formulated this view in the 1940s, he lived in an analogue and mechanical world. He could not have anticipated the spectacular development of computer technology, algorithms, smartphones and the Internet. It is natural to ask whether – given the way the digital economy is altering production, exchange and social relationships – Hayek's faith in the free market still has relevance.

HAYEK ON THE MEANING OF COMPETITION

Competition as a discovery process

For Hayek (1945, 1947, 1948, 1968) competition was a discovery process in a world of general ignorance. The rivalry between sellers generated prices that encoded the scarcity value of resources. The profit motive and entrepreneurship ensure that new opportunities and information are exploited. As a consequence, all the necessary information that producers, traders and buyers need to make decisions are encoded in competitively determined prices. This generates a 'spontaneous order' in which the decisions of buyers and sellers are rendered mutually compatible, and which adapts quickly to changes in circumstances and new information. There is no steady-state set of prices, production levels, investments and/or institutions. The market is constantly in flux and adapting to changing technological and economic factors. Perfect competition – with its assumptions of perfect information, rational behaviour, instantaneous adjustment and equilibrium – means 'the absence of all competitive activities' (Hayek 1948: 96).

For Hayek (1979: 68), competition in the free market was an information processing and transmission system: 'competition must be seen as a process in which people acquire and communicate knowledge.' He distinguished between information and knowledge, and between statistical data and knowledge. Knowledge is the localised understanding of particular circumstances by individuals. The price system economises on knowledge. Prices encapsulate all the information necessary to coordinate individual actions in a world where information and knowledge are decentralised and unknown. Hayek (1984) once referred to prices as the 'telecommunications system of the market'.

His view of competition was not just about economics. As a classical liberal he saw the market as the best guarantee of liberty, by which he meant the individual free from private and state coercion. As Hayek (1945: 45–46) stated: 'Liberalism ... regards competition as superior not only because in most circumstances it is the most efficient method known but because it is the only method which does not require the coercive or arbitrary intervention of authority.'

Competition in a digital world

Hayek's case for a free market rests in large part on the superiority of competition in economising on and transmitting information and knowledge throughout the economy. This was at the heart of Hayek's demolition in

the 1930s of the claims that central planners aided by computers could replace the free market. It follows that any technological innovation that changes the costs and benefits of assembling, processing and disseminating data will influence the way production is organised. It will affect the boundary between market and non-market, and the laws and institutions that arise spontaneously to support or supplant the market. This was the Nobel Prize-winning proposition made by Ronald Coase (1937). For Coase, and the New Institutionalists who followed (Williamson 1985), firms and non-market institutions evolved to economise on the costs of using the price system. To quote Coase: ‘the distinguishing mark of the firm is the suppression of the price system’ and its replacement by internal commands and administrative fiat.

Since Hayek wrote ‘The meaning of competition’ the world has radically changed. The communications and information systems of the developed economies have advanced beyond even the most optimistic visions of half a century ago. The development of data processing and computing power and the penetration of computers, smartphones, the Internet and online services have been phenomenal. Supercomputers can process vast amounts of data at great speed using sophisticated algorithms. Nearly every citizen has a smartphone that can process and receive data from all over the world and from nearly every source, and much commerce is conducted online. More is on the horizon. Quantum computing, still in the experimental stage, can process data at speeds of 100 qubits and is being scaled up to 1 million or more qubits. A quantum computer operating at 300 high performing qubits could simultaneously perform more calculations than there are atoms in the visible universe.¹ It is therefore natural to ask whether Hayek’s views are outdated and need to be modified.

Computerisation and digitalisation have already reduced and will continue to reduce the processing costs of information. Algorithms and artificial intelligence (AI) hold out the prospect of coordination without the decentralised formation of market prices. Immense amounts of personal and other data are collected and used by online platforms with prices often playing no direct role. These developments, known as ‘Big Data’, raise the spectre of algorithmic markets driven by machine-based pricing software with some legal scholars excitedly predicting ‘the end of competition as we know it’ (Ezrahi and Stucke 2016). Others are resuscitating the case for central planning or, as we should now call it, ‘algorithmic socialism’ (e.g. Wand and Li 2020; Plaka 2020).

1 M. Mugia, Quantum computing comes out of shadows into public markets. *Financial Times*, 22 October 2021.

While Big Data and algorithms will alter the structure of production and the contours of the market, claims of the demise of the market are exaggerated. The discussion mistakes data for knowledge and places an exaggerated faith in technology. Yet it is compatible with Hayek's general approach that technological change will alter the boundary between market and authority and will lead to new forms of business structures and practices.

Business models – markets without prices

Many digital markets use personal data instead of prices to mediate transactions. Search and social networking are given 'free' of a monetary price in exchange for the personal data of their users. The data is generated by the activities of online users and monetised by online platform operators through their algorithms to sell products and advertising.

At the heart of the development of online platforms is the notion of a multisided market. Search and social media sites such as Google and Facebook have been described as 'attention markets' where competition takes place over non-price attributes to attract and maintain users' attention to their platforms and away from other platforms. In exchange, Google and Facebook harvest their users' data and monetise it by selling online advertising space. The 'attention' and online advertising 'markets' are related, but one has no 'price' while the other's price serves a more complex function of balancing the two sides of the market and exceeds marginal costs without necessarily being abusive.

This business model is neither novel nor untoward. While not in line with Hayek's focus on prices, it is nonetheless compatible with his broader view of the creativity and adaptability of markets. The advertiser-supported business model deals with the so-called chicken-and-egg problem faced by online platforms, i.e. how to gain sufficient users to attract advertisers to invest in the service. The solution is to give users the service for free and sell exposure to advertisers for a fee. The model has been used successfully since the development of electronic media by television stations (free-to-air or advertiser-supported television) and print media (free sheets).

Innovation

Hayek saw innovation as important but reflected in prices. A radically different view of competition was put forward by fellow Austrian Joseph Schumpeter (1883–1950). Schumpeter was not concerned with the

superiority of free-market pricing, which he derided, but with the way capitalism reinvented itself. The driver of competition was not prices but innovation. 'The fundamental impulse that keeps capitalism in motion,' said Schumpeter (1942), 'is an innovation from new forms of capitalist firms.' Moreover, competition is not orderly but disruptive as encapsulated in Schumpeter's memorable phrase 'the gales of creative destruction.' Simply stated, Hayek's view of competition has become less central to the debate over the digital economy which revolves around innovation and technological progress.

HAYEK ON BIG FIRMS AND MONOPOLY

Hayek did not regard competition as synonymous with markets consisting of many small firms. Monopoly and oligopoly may be the most efficient ways to organise production because they produce goods more cheaply. There was nothing 'wrong in the "monopoly" profit of an enterprise capable of producing more cheaply than anybody else' (Hayek 1979: 83).

Big is not bad

Hayek was not exercised by the size of firms as the proponents of a more 'assertive antitrust' are. According to Hayek (ibid.: 77) 'there is no possible measure or standard by which we can decide whether a particular enterprise is too large.' There can be no general rule about the desirable size since this will depend on the ever-changing technological and economic conditions, and there will always be many changes that will give advantages to enterprises that may appear by past standards an excessive size. The most 'effective' size of the firm is 'one of the unknowns to be discovered by the market process' and would be determined by technological and economic factors.

On the 'big is bad' thesis that lies at the heart of the rise of 'assertive antitrust' Hayek (ibid.: 77) had this to say:

The misleading emphasis on the influence of the individual firm on prices, in combination with the popular prejudice against bigness as such, with various 'social' considerations supposed to make it desirable to preserve the middle class, the independent entrepreneur, the small craftsman or shopkeeper, or quite generally the existing structure of society, has acted against changes caused by economic and technological development. The 'power' which large corporations can exercise is represented as in itself dangerous and as making

necessary special governmental measures to restrict it. This concern about size and power of individual corporations more often than perhaps any other consideration produces essentially-antiliberal conclusions drawn from liberal premises.

The importance of contestability

For Hayek, ensuring the contestability of markets was paramount. Firms in free markets are constantly challenged by rival firms with better ideas, technology and business acumen. Even a market dominated by a large conglomerate corporation will be challenged by other conglomerates 'diversified beyond definable industry categories.' As Hayek (ibid.: 79) aptly put it, 'size becomes the most effective antidote to the power of size.' The best 'antitrust policy was to ensure that there are no government-created privileges and barriers to entry', which Hayek and fellow Austrian economists regarded as the major source of monopoly power.

Hayek's liberal antitrust

While Hayek was sceptical that there was a significant monopoly problem in a free market, he nonetheless accepted that a monopoly could abuse its market power. Hayek (ibid.: 84) wrote: 'While a monopoly may have achieved its market dominance by being more efficient, or by controlling limited resources, or by being more innovative in its earlier years, its behaviour can become problematic if it later uses its dominance to protect and preserve [its] monopolistic position after the original cause of [its] superiority has disappeared.'

Hayek (ibid.: 85) proposed that a monopolist's ability to price discriminate 'ought to be curbed by appropriate rules of conduct' where 'market power consists in a power of preventing others from serving the customer better' (ibid.: 72). This was best done by giving 'potential competitors a claim to equal treatment where discrimination cannot be justified on grounds other than the desire to enforce a particular market conduct' (ibid.: 85). That is, Hayek would prohibit price discrimination designed to exclude competition, but not all price discrimination, much of which is pro-competitive. Hayek (ibid.: 86) also would 'declare invalid and legally unenforceable all agreements in restraint of trade, without any exceptions, and to prevent all attempts to enforce them by aimed discrimination or the like by giving those upon whom such pressures were brought a claim for multiple damages.'

Hayek (ibid.: 87) rejected the public enforcement of antitrust. Public officials lacked the necessary information and knowledge and would inevitably exercise their discretion to distinguish good from bad monopolies, thereby ‘perforating’ the law with exemptions. Discriminatory laws, like discriminatory prices, were for Hayek illiberal. The potential competitors harmed by exclusionary price discrimination or a restraint of trade could sue through the courts for ‘multiple damages assisted by lawyers paid contingency fees.’

ASSERTIVE ANTITRUST

The second theme of these proceedings is the rise of ‘assertive antitrust in the digital economy.’ This refers to the present momentum to modify competition laws and create new regulations of online digital platforms in Europe and elsewhere. Big tech – principally Google, Amazon, Facebook (Meta), Apple and Microsoft – is seen as having run circles around slow-moving competition regulators, who have only suddenly realised that they are ‘monopolies’ intent on crushing competition and gouging their customers. These digital platforms are characterised as ‘gateways’ with considerable market power and who pose a threat to privacy, social relationships and democracy.

Some big tech economics

From an economic perspective many digital markets differ radically from the type of market that Hayek had in mind, such as his example of tin (see Cr  mer et al. 2019; Furman Report 2019; Stigler Center Report 2019). As already discussed, they are multisided markets based on network effects. Loosely speaking, network effects are demand-side economies of scale in the sense that the value of service to consumers increases with more consumers using a platform. Network effects mean greater consumer benefits and would seem to be something that should be viewed favourably. But, say the critics, there is a dark side to network effects. They lead to ‘winner takes all’ competition, which, together with significant cost economies of scale, big data and a host of exclusionary practices, create big tech monopolies impregnable to a competitive attack.

This view is not obviously correct, but it is beyond the scope of this talk to elaborate why (see Veljanovski 2021a,b). Suffice it to say that the major online platforms are vastly different beasts from the stereotypical conglomerate industrial firm. They are dynamic businesses continually innovating and offering consumers new and better services. Google, Microsoft, Amazon and Facebook invested over US\$71 billion in 2017 in

R&D, second only to the pharmaceutical sector, and are ranked year after year as the most innovative firms globally. Big tech is ever-expanding their services, many at no charge to the consumer, unlike the textbook monopolist who reduces output to increase prices. Their customers can easily click on the next platform.

These observations are not to downplay the potential for anti-competitive abuses. Success in the market and the provision of cheap and innovative services do not excuse attempts to exclude competition. Nonetheless, regulators and politicians face a conundrum since the source of big tech's alleged market power is also the source of tremendous consumer benefits.

What Hayek may have said

It would be presumptuous to attribute opinions to Hayek which he did not express. Nonetheless, I will conclude with several 'Hayekian' speculations on big tech and assertive antitrust.

As discussed above, Hayek would not have endorsed the 'big is bad' mantra that is now in the ascendancy. He would have despaired at the largely static approach of much of the analysis of competition and the failure to develop a dynamic information-based approach to such analysis. Hayek would have rejected the idea that one could define a market which is a central feature of modern antitrust and merger clearance laws. Apart from this being narrow, the antitrust market definition fails to take account of dynamic and long-term factors especially in the fast-moving digital sector, and of how market power is likely to be constrained by myriad market factors. To be fair, the approach, like Hayek's, is price-centric. Nonetheless, Hayek would have had sympathy with broader concepts currently being discussed such as 'digital ecosystems' that consider the complex interaction of multisided digital platforms but would have seen this as misconceived. Surprisingly, Hayek would not have endorsed the consumer welfare standard developed in the US as the goal of antitrust and a feature of many antitrust laws.

It is not clear that Hayek would have opposed all aspects of the antitrust actions against the large tech companies. Like Hayek, European and US antitrust laws focus on the exclusionary conduct of 'monopolies'. The recent antitrust cases against Microsoft, Google and Amazon have all involved allegations of *non-price* discrimination designed to exclude their competitors. While Hayek confined his antitrust proposals to exclusionary

price discrimination, this could be read as applying to all discriminatory tactics which are exclusionary. The problem for Hayek and antitrust enforcement generally is how to distinguish exclusionary practices from those which are meeting the competition on its merits.

What may have given Hayek cause for concern is the vertical integration of some large online platforms such as Google and Facebook that provide both the basic infrastructure of commerce and social media and at the same time compete directly with those using their platform. This causes a fundamental conflict of interest as the platform can favour its service while it harvests data on the sales, services and users of its downstream competitor's business. Google, for example, operates the search engine while being a major provider of online advertising space and specialised search services such as comparison shopping. This inevitably creates a conflict of interest as the platform acts as both 'umpire and player'.

Let me end by drawing attention to two controversial and surprising aspects of Hayek's view of competition. Hayek was opposed to intellectual property rights such as patents, trademarks and copyright. He saw these as state-supported monopoly rights which impaired the competitive process (Hayek 1948: 113–14). Secondly, Hayek (ibid.: 116) felt that limited liability and treating corporations as legal persons fostered monopoly: 'I do not think that there can be much doubt that the particular form [limited liability] legislation has ... greatly assisted the growth of monopoly' and 'that size of enterprise has become an advantage beyond the point where it is justified by technological facts.'

References

- Armentano, D. T. (1986) *Antitrust Policy – The Case for Repeal*. Washington, DC: Cato Institute.
- Coase, R. H. (1937) The nature of the firm. *Economica* 4: 386–405.
- Crémer, J., de Montjoye, Y.-A. and Schweitzer, H. (2019) *Competition Policy for the Digital Era: Final Report*. Brussels: European Commission.
- Ezrachi, A. and Stucke, M. E. (2016) *Virtual Competition: The Promise and Perils of the Algorithm-Driven Economy*. Cambridge, MA: Harvard University Press.

Furman Report (2019) *Unlocking Digital Competition. Report of the Digital Competition Expert Panel*. London: HM Treasury.

Hayek, F. A. (1945) The use of knowledge in society. *American Economic Review* 35(4): 519–30.

Hayek, F. A. (1947) [1948] 'Free' enterprise and competitive order. Paper presented to the Mont Pelerin Society, April. In *Individualism and Economic Order* (F. A. Hayek). University of Chicago Press.

Hayek, F. A. (1948) The meaning of competition. In *Individualism and Economic Order* (F. A. Hayek). University of Chicago Press.

Hayek, F. A. (1960) *The Constitution of Liberty*. London: Routledge & Kegan Paul.

Hayek, F. A. (1968) [2002] Competition as a discovery procedure. *Quarterly Journal of Austrian Economics* 5(3): 9–23.

Hayek, F. A. (1979) *Law, Legislation and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy, The Political Order of a Free People*, Vol. 3. London: Routledge & Kegan Paul.

Hayek, F. A. (1984) *Unemployment and the Unions*. Hobart Paper 87, 2nd edn. London: Institute of Economic Affairs.

Hayek, F. A. (1994) *Hayek on Hayek: An Autobiographical Dialogue*. University of Chicago Press.

Plaka, P. (2020) Algorithmic central planning: between efficiency and freedom. *Law and Contemporary Problems* 83: 125–48.

Schumpeter, J. A. (1942) *Capitalism, Socialism, and Democracy*. London: George Allen and Unwin.

Stigler Center Report (2019) *Stigler Committee on Digital Platforms – Final Report*. George Stigler Center. University of Chicago.

Veljanovski, C. (2021a) The competition economics of online platforms. *Singapore Economic Review* (in press). (doi.org/10.1142/S0217590821420017. Available at SSRN: <https://ssrn.com/abstract=3923884>.)

Veljanovski, C. (2021b) Algorithmic antitrust – a critical overview. In *European Algorithmic Antitrust* (ed. A. Portuese). Berlin: Springer.

Wang, B. and Li, X. (2017) Big data, platform economy and market competition: a preliminary construction of plan-oriented market economy system in the information era. *World Review of Political Economy* 8(2):138–61.

Williamson, O. E. (1985) *The Economic Institutions of Capitalism*. New York: Free Press.