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Executive Summary of the Hearing on Competition Economics of Digital Ecosystems

Annex to the Summary Record of the 134th Meeting of Competition Committee held on 1-3 December 2020

3 December 2020

This Executive Summary by the OECD Secretariat contains the key findings from the discussion held during the 134th Meeting of the Competition Committee on 1-3 December 2020.

More documents related to this discussion can be found at https://www.oecd.org/daf/competition/competition-economics-of-digital-ecosystems.htm

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Executive Summary of the hearing on Competition Economics of Digital Ecosystems

By the Secretariat*

On 3 December 2020, the OECD Competition Committee held a hearing on competition economics of digital ecosystems chaired by Professor Frédéric Jenny.

Considering the written contributions submitted by five expert panellists (Marc Bourreau, Daniel Crane, Amelia Fletcher, Nicolas Petit and Georgios Petropoulos) and two delegations (Greece and Mexico), as well as the discussion by delegates and by the expert panellists, the following key points emerged:

1. Digital ecosystems of complementary products and services centred around core service offer a line of products and services with a technological linkage increasing the complementarity between them. Large economies of scope and scale across markets, and network effects facilitate the development of ecosystems on the supply side, while consumers synergies due to technological linkages play an important role on the demand side.

Competition in the digital economy is increasingly a competition between ecosystems. Hardware and software are integrated, the Internet connects devices to online services and a few large tech companies offer a very broad range of services often highly integrated with one another. The most successful digital companies in recent years have increasingly been building their business model around large ecosystems of complementary products and services centred around their core service.

These digital ecosystems offer access to their consumers to a line of products and services with a technological linkage increasing the complementarity between them. For example, Google, in addition to its search engine, has a strong position in browsers, operating systems and video streaming. Also, Facebook, from its origins as a social network, has expanded into messaging, devices, gaming and retail.

There are several key characteristics of the digital economy that facilitate and encourage the development of digital ecosystems. For example, large economies of scope and scale across markets, and network effects play important roles on the supply side, while consumption synergies due to technological linkages are crucial on the demand side. The complementarity of services on offer may be seen as advantageous by some customers, who then become locked in to that particular ecosystem. Also, by collecting, analysing and aggregating large amounts of data, digital ecosystems can generate significant benefits and a comparative advantage against competing firms that cannot access the data. Moreover, the value created from data and the information it incorporates is reinforced through the data feedback-loop, which is enabled through machine learning and AI technologies.

* This executive summary does not necessarily represent the consensus view of the Competition Committee. It does however identify key points from the hearing on Competition Economics of Digital Ecosystems, including the views of the expert panellist, the delegates' oral and written contributions.

2. Competition in ecosystems may differ from competition between traditional firms. For example, digital ecosystems may exhibit intensive competition among firms that do not necessarily offer substitutable products or services. Also, dynamic capabilities, among others, of an ecosystem are critical to its survival and success.

Digital ecosystems work by operating in many markets simultaneously, some related to their primary market, others not. As their markets often overlap, these big digital firms sometimes compete with one another in many areas as an ecosystem, but they may also face the competition of specialist firms.

Business models adopted by ecosystems are different from those of traditional firms, and thus competition between ecosystems may also differ from competition between traditional firms. Digital ecosystems may exhibit intensive competition among firms that do not necessarily offer substitutable products or services, and hence fall outside of traditional substitutability notions. Considering the example of middleware and operating system, in ecosystems, firms are competing not to sell substitute products or services, but rather to identify or control value or differentiated nodes or propositions and to commoditise other ones. For example, the development of independent middleware could eventually commoditise the operating system by making software developers indifferent as to the operating system on which their programs would run. Middleware did not evolve to take the place of operating systems, it evolved toward commoditising operating systems and transferring the differentiated value in computer programs to the programs (and programmers) themselves.

Some ecosystems have succeeded while others failed. Dynamic capabilities, among others, of an ecosystem are critical to its survival and success. Dynamic capability is the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments. In practice, dynamic capabilities cover three sets of activities: the sensing of unknown futures; the seizing of business opportunities, value and needs; and the management of change by reconfiguration. Dynamic capabilities provide us with a preliminary understanding of the determinants of competition between ecosystems, and what drives their success and failure.

3. Digital ecosystems may have benefits from economies of scope and scale, and demand side synergies can enhance value of the products and services for consumers. However, digital ecosystems can leverage their market power into adjacent markets and may also represent a barrier to entry for new innovative firms.

Digital ecosystems may benefit from economies of scope and scale. Integration of a wide range of products and services can deliver efficiency savings, potentially reducing prices. They can also potentially improve the consumer experience overall, by offering demand-side synergies which increase the ease with which a range of different services are accessed.

However, there may also be potential competition concerns regarding digital ecosystems. Digital ecosystems can leverage their market power in one of their products or services into adjacent markets, giving themselves an advantage over potential competitors and undermining competition in those markets. Digital ecosystems may also represent a barrier to entry for new competitors and play a gatekeeper role with great information advantage, which allows them to shield their most profitable services from competition.

Some experts emphasised governance rules in ecosystems are important. A set of rules for how ecosystems are going to function can be pro-competitive in that it makes the whole

area safe and trustworthy for the various users. However, it can also be anti-competitive if those rules are designed disproportionately or if they are mainly used to keep out, or weaken, rivals.

4. Competition law enforcement should reflect the complex features of digital ecosystems. *Ex ante* regulations could arguably be used to address competition concerns of digital ecosystems.

Competition law enforcement should reflect the complex features of digital ecosystems since, when analysing the dynamic efficiency of ecosystem competition, it is hard to predict exactly who the competitors will be and what kinds of interventions are good or bad for final consumers and innovation.

Some experts suggest that competition concerns regarding digital ecosystems are arguably better addressed through *ex ante* digital regulation since it is far from obvious that standard antitrust intervention, with its threat of sanctions for breach, is the right way to handle the complexity of digital ecosystems.

Furthermore, to deal with the large information asymmetry from digital ecosystems, information-sharing mechanisms can be an effective *ex ante* regulatory intervention to redistribute value in a fair way among all market participants, through which data will confer value not only to market leaders but also to their competitors and other firms of the ecosystem to the benefit of consumers.