Overview of Digital Platforms

There are different kinds of digital platforms. But there are no agreed definitions or any universal consensus on how to classify them. There is the “platform economy”, a “collaborative economy”, “sharing economy”, “gig economy”, “on-demand economy” and “peer economy”. These are supposed business models digital platforms create. Kenny and Zysman (2016) call a “platform economy” or “digital platform economy” a more neutral term. They say it encompasses the growing number of digital activities in business, politics, and social media. For them, “platform” is simply a set of online digital arrangements with algorithms organizing and structuring economic and social activity.

A platform is the catalyst that allows value to be created through interactions between various groups of market participants (Evans and Schmalensee 2007, Evans 2018). Two-sided platforms link two distinct types of participants more readily and enable them to gain through trade or other interaction (like ride-hailing apps). The two groups need each other because they cannot capture the value created on their own. Each participant’s demand for the service depends on the other’s as a result of externalities between the two types. Multi-sided platforms involve more than two types of participants (such as search engines, content providers and advertisers that connect users).

Network effects distinguish platforms from other business models (Evans 2016). As more people use a platform, the more attractive the platform becomes to potential new users. A dynamic is created that triggers a self-reinforcing cycle of growth. There are two kinds of network effects: (i) direct network effects where more users attract more users on the same side of the platform; and (ii) indirect network effects where more users on one side of the platform attract more users on the other.

Platforms themselves are not new. Classified ads and shopping malls have long been part of the economy. Newspaper classifieds are a platform linking advertisers to consumers, while shopping malls draw consumers to retailers, restaurants and entertainment. Today, most platforms digitally capture, transmit and monetize data—including personal data over the internet (Evans and Gawer 2016). Overall, most digital platforms share three basic characteristics: they are (i) technologically mediated; (ii) link user groups; and (iii) allow these groups to do particular things (Koskinen, et al. 2019).
Types of Digital Platforms

Different types of digital platforms and classifications have been proposed. Ardolino et al (2016) developed a typology based on the likely interactions arranged through a multisided platform: (i) matchmaking platforms that match requests by (usually) two sides based on user expectations (for example, dating and job-seeking platforms; (ii) external exchange platforms that match similar user requests but handles the transaction outside—the platform cannot check whether a transaction is completed or not (such as classifieds websites); (iii) exchange platforms that facilitate a transaction between users with all transaction activities managed through the platform (such as product marketplaces); and (iv) maker platforms that provide the tools or instruments needed to “make” the products or services used by the consumer (for example, video-game and desktop operating system platforms).

Kenny and Zysman (2016) identify retail platforms, service-providing platforms, platforms that make online digital tools available to support other platforms, foundational platforms (“platforms for platforms”—such as smartphone operating system platforms on which massive ecosystems are built), and platforms that mediate work. Across all these categories, algorithms underpin online activity. Within a subset of platforms, there could be a variety of arrangements too. In digital labor markets for example, Schmidt (2017) distinguishes between cloud work and gig work, where cloud work applies to web-based digital labor and gig work based on location—such as those hired for transportation and delivery services.

Following Evans and Gawer (2016), another classification system in Koskinen, et al. (2019) groups platforms on function and how they create value. Transaction platforms link parties more easily (for example, businesses and consumers, drivers and passengers), thus reducing costs and some possible frictions in the transaction process. They say most of the biggest digital platforms in the global “South” are transaction platforms—which could have both positive and negative impact on local institutional settings. Innovation platforms are technological building blocks used to develop other services or products. Integration platforms are a third category with aspects of both. Apple, Google, and Amazon are the top three integrated digital platforms (Evans and Gawer 2016). Koskinen, et al. (2019) also say the vast majority of digital platforms able to have a societal impact in developing countries are transaction platforms—although some also have characteristics of an innovation platform that offer tools to create complementary services.

Digital platforms can also be classified by profit motive. For-profit platforms typically use one of several revenue models (Van Gorp and Batura 2015): (i) subscriptions where end users pay for the provision of a service (like Netflix or Spotify); (ii) advertisements where end-users access free services with the platform sustained by advertising revenue (YouTube or Facebook); and (iii) an access model where content or app developers pay platforms to reach end-users (app stores).

Significance of Digital Platforms

A global survey of platform companies by Evans and Gawer (2016) found 176 platform companies valued at $4.3 trillion with an employment base of at least 1.3 million direct employees (and millions of others indirectly employed). The survey for Asia (Evans 2016) identified 62 major platform companies with a combined market capitalization of over $1.1 trillion. Platforms in the People’s Republic of China dominated, with a nearly 75% share of the collective market value, followed by those in Northeast Asia (22), India (4%), and finally ASEAN (1%).

According to UNCTAD (2019), the combined value of platform companies with market capitalization over $100 million was estimated at more than $7 trillion in 2017—a 67% increase over 2015. Some platforms are digital
giants in their respective markets. Google controls 90% of the market for internet searches while Facebook captures 66% of the global social media market. It is also the top social media platform in more than 90% of economies globally. UNCTAD (2019) says their rapid rise is attributed to several factors. The first is related to network effects (the more users, the more valuable). This is one reason why Facebook maintains its market position. Ride-hailing apps and marketplaces illustrate indirect network effects; where users are attracted by the number of drivers (passengers) or sellers (buyers). The second factor is a platform’s ability to extract, control and analyze data. As they position themselves as intermediaries, platforms accumulate data from each interaction, which gives them a major competitive advantage over non-platform companies. The wealth of data is a digital knowledgebase that allows the company to better understand the market and improve its products. The third factor relates to switching costs. As a platform gains traction and offers different integrated services, the costs to users of switching to an alternative service provider increases.

Possible Development Impacts

Digital technologies such as the internet have created powerful technologically enabled networks or marketplaces that significantly lowered the cost of acquiring and using information, thus, lowering transaction costs and production costs. With these reduced costs, the internet affects economic development in three major, interrelated ways (World Bank 2016):

- **Inclusion (search and information)** - The internet can help overcome data gaps and information asymmetries. The emergence of e-commerce platforms, for example, has made it much easier for small producers to find and connect with customers and to sell even whether within national or overseas markets (that were not previously available to them).

- **Efficiency (automation and coordination)** - The internet also augments the factors of production. It reduces the cost of existing transactions (e.g., inventory management), which significantly improves efficiency allowing firms to make better use of their capital and labor. Higher efficiency can be experienced by different sectors of the economy from households, enterprises, industries, and the public sector.

- **Innovation (scale economies and platforms)** - the internet enhances innovation by enabling firms to exploit economies of scale through online platforms and services that compete with conventional business models, such as Facebook (in media), Amazon and Alibaba (in retail), Uber and Grab (in transport), and Airbnb (in lodging).

According to UNCTAD (2019), the two main drivers of value creation in the digital era are digital data and platformization. Understanding the interplay of these factors and their implications not only on value creation but on the distribution of the gains is important for managing the impacts of digital platforms in our economies. Policy responses will need to anticipate and consider the structural transformation and distributional impacts on welfare of digitalization. Koskinen, et al. (2019) believe that digital platforms hold promise especially in the context of developing countries in solving different societal and developmental challenges. Digital platforms are particularly useful in removing market frictions which exist in abundance in many developing countries due to insufficient information, weak institutions and poor infrastructure.

While digital platforms deliver significant benefits there are also risks that need to be understood and effectively managed as UNCTAD (2018) cautions. For example, the winner-takes-all dynamics typical in platform-based economies means that whoever controls the platform also controls the distribution channel giving the platform
owner considerable market power. Formulating appropriate policy responses will be needed to mitigate possible negative impacts from the abuse of dominant position. The growth of the digital economy relies heavily on the generation, storage, processing and transfer of data, both within and across borders. The need for companies to collect and analyze data for innovation and efficiency gains, on the one hand, and the concerns of other stakeholders with respect to security, privacy and movement and ownership of data, on the other, will need to be balanced. Policymakers also face the challenge of taxation in the digital economy and must ensure the availability of domestic resources for development. The role of online labor platforms in creating new income-generating opportunities for people in developing countries with the adequate connectivity and relevant skills is also well recognized. Such platforms match tasks across the whole skills spectrum and are transforming labor markets by favoring certain types of contracts (freelance and contract work over regular employment) as well as enabling the entry of new competitors. These new arrangements, however, have implications for how benefits, health care and pensions are organized, and for the provision of education and training. With respect to the protection of consumers, while they have greatly benefited with the variety of new and more customized products and services as well as lower prices, the lack of face-to-face transactions entails greater risks with respect to disclosure and transparency, data protection and applicable law and responsibility of platforms and peer providers.
References


