

THEME 02

Digital disruption for the service economy

SERVICES

ONLINE
MARKETPLACES

DIGITAL
ECONOMY

Online marketplaces create new market processes and alter the structure of economic interaction by significantly reducing transaction costs. By enabling online marketplaces, digitization has brought disruption to many sectors and industries. However, the service economy has been proven relatively resilient against digital disruption, with a low degree of services being provided on online marketplaces. But a new generation of online marketplaces is set to disrupt the service economy as well.

Our observations

- The service economy (i.e. the tertiary sector) accounts for two-thirds of [global GDP](#). Services now account for more than half of [global employment](#), up from a third in 1991. In most advanced economies, these shares are even higher (e.g. 77% and 80% for U.S. GDP and employment), as economies generally shift towards services and away from agriculture and industry (i.e. the primary and tertiary sectors) as they develop.
- With the rise of the service economy across economies, [world trade structure](#) is changing. Manufacturing goods remain the largest source of exports, valued at \$11.6 trillion in 2016, but their export value only grew by 3.2% per year during 2006 and 2016. In contrast, global service exports increased from \$2.9 trillion to \$4.8: trillion: a 51% annual growth rate.
- Many service providers are licensed and service jobs certified. More than a quarter of all employed people in the U.S., such as doctors, architects, psychologists, maintenance and repair, as well as [floral designers](#), have a [license and/or certificate](#) to perform their job. More than half of all employed people have a master's or doctoral degree.
- [Online marketplaces](#) sold \$1.86 trillion in 2018, growing 23% from 2017 and now accounting for 52% of global web sales. However, all of the largest online marketplaces are marketplaces for goods, such as Amazon, eBay, Wish, Marktplaats, Alibaba, JD.com.
- We have written before how innovations in ICT have boosted economic globalization in the past decades, primarily by [reducing transaction costs](#), thereby creating a level playing field for competitors with a global reach. However, ICT cannot take away all transaction costs, such as language barriers, cultural differences, or the problem of trust, hindering trade and integration between certain regions. These "softer" transaction costs are of primary interest for the service economy, given their increased complexity, large trust issues as well as the heterogeneity of quality assessment.
- We have written before how the internet and corresponding [digital platform economics](#) fundamentally alter markets. Previously, the limited number of suppliers versus consumers and high delivery costs gave distributors who controlled supply lines an advantage. Consumers came second. Online platforms and marketplaces diminish this asymmetry and undermine the market power of sellers. Instead, they reduce transaction costs in the market (e.g. by reducing search costs, improving the matching process based on interests, automating the payment procedure). As such, these online marketplaces have shifted the focus to consumer experience, and create trust by leveraging the collective wisdom of user ratings and reputation mechanisms.
- An increasing number of online marketplaces actively manage the quality of supply (i.e. provided services) on their platform, such as [Exzbit](#) (shows), [Karen care](#) (elderly care), [Urban Sitter](#) (babysitting), [Curafides](#) (nursing services and assistance), [Booksy](#) (beauty and wellness). By doing so, they have higher operational costs and only work for services that require a high degree of trust and those that compete on quality and non-binary terms of success (e.g. How trustworthy is judicial advice? What degree of care is good enough for your children or your parents?).

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Connecting the dots

Many economists believe that economic growth and international trade are highly correlated. In 2016, global trade grew at a [slower pace](#) than world GDP for the first time in 15 years. Research [suggests](#) that half of this slowdown is explained by stagnation in international production fragmentation, suggesting that most low-hanging fruit from freer trade and offshoring production chains has been picked. The other half is explained by shifts in consumer demand (particularly in China) from goods to services, such as education or going to the barber. But in contrast to goods, services are often performed in regional and local value chains, thus contributing less to global trade. However, there is more that differentiates the economics of services from goods. First, most services are provided by economic actors who occupy various if not all stages of the service value chain. For example, the barber shop has simultaneous consumption and production by the same person, as the barber investigates your hair style preferences, cuts your hair and finalizes the transaction. In contrast, the value chains of (manufactured) goods are highly dispersed globally, and are increasingly fragmented: a car is composed of parts that come from all over the world, shipped across the world, and stored with various dealers in a region. Furthermore, there are fewer standardized and objective criteria for assessing the quality of the provided service: one person may like your new haircut, while others do not. This heterogeneity of consumer experience stems from the fact that services generally have more attributes in their value function, making them more complex economic provisions. While this might not be the case for a barber, it certainly holds for services where stakes are higher, such as healthcare, elderly care or babysitting. Furthermore, the quality of the services can vary even with the same provider (e.g. a cleaner's job differs every time he cleans your house), making it more difficult to capture the relevant market information for services. This makes solutions to the "game of trust" between buyer and seller, consumer and service provider, generally much more complex for services. Lastly, as services are intangible and don't require a transfer of ownership, most services are delivered by officially certified professionals. This is to protect the general public from incompetent and unscrupulous service providers, as consumers often have less knowledge and information about the service they consume (e.g. most of us cannot validate a construction blueprint, determine whether a device has been adequately repaired, and supposedly cannot

properly judge a flower bouquet). This also means that supply of them is sometimes artificially constrained (e.g. study programs with a *numerus fixus* or the instatement of a [certain wage level](#)), benefitting incumbent service providers who have less incentive to compete on online marketplaces. No wonder the service economy is lagging behind in digitization. However, this service economy is becoming disrupted by digital economics. Historically, there have been [four paradigms of services marketplaces](#). The first online service marketplaces merely consisted of digitized lists of service providers (e.g. MindVox, Craigslist), who were unbundled by specialized verticals for specific tasks and consumer needs (e.g. TaskRabbit, hipages). However, these marketplaces still tasked the consumer with most of the work, having to initiate all the stages of the transaction (e.g. accessing the service provider, making an assignment, paying and closing the deal), and there was little possibility to digitize services that required immediate action. This changed with the advent of on-demand service marketplaces that leveraged rapid smartphone adoption by matching location-based services in real-time with consumers. These focused on single-use cases (e.g. ride-hailing with Uber, renting a room on Airbnb) and automated matching using user data. Trust was created by harnessing collective wisdom in the form of user ratings and reputation mechanisms. However, complex and certified services that can be delivered with a lag (e.g. judicial and doctor advice) are still less suitable for this model, as significant "soft" transaction costs remain. However, a new generation of online service marketplaces are now taking on additional operational value by managing and controlling service delivery and distribution as well as the quality of supply on their marketplace. Instead of only enabling customers to discover and build trust with the end provider via ratings and reputations on the marketplace, they take on the task of actually creating trust by validating quality. In this way, trust is again placed in the platform that has now taken on a curative and moderating function. This digitization of services ties in with the current "as-a-service" trend, in which our daily lives are increasingly approached with an [as-a-service](#) mindset. As companies are trying to increase the perceived value of our daily lives by the power of ICT, economies of scale and integrated scalable services, this new generation of online service marketplaces will digitize service industries that have eluded the previous waves of digitization, such as judicial advice, healthcare, education.

Implications

- The digitization of services enables new consumer practices, such as [fintech](#), the [gig](#) and [sharing](#) economy for services, [smart home solutions](#) (e.g. consultancy on implementing and organizing 5G small cells in your house), [local](#) and [digital](#) healthcare provisions, [urban food production and delivery](#), as well as new forms of civic engagement (e.g. creating [direct forms of democracy](#)). However, as significant "soft transaction" costs remain, other jobs can gain additional service components to abridge the "last service mile".
- Digitizing the service economy can be highly disruptive for jobs that have survived the current digital disruption, as well as service jobs that [don't add real value](#) to society. On the other hand, it brings opportunities for developing countries, as they often have large informal economies that can now be digitized, reducing friction and improving regulations. As economies are running out of [industrialization opportunities](#) ever sooner, this also provides leapfrog opportunities for countries that already have comparative service advantages given their stage of development (e.g. [India](#)).
- As more and more local services can be found and accessed via online marketplaces, [living maps](#) might become the primary interface in consuming these services, further [augmenting](#) the virtual (i.e. a digital map) with (real-time) information from the physical realm.