

Covid-19 and the Increasing Centrality and Power of Platforms in China, the USA, and Beyond

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Abstract

The covid crisis is showing how powerful and resilient the platform giants are and they become even more clear winners in terms of adoption and value capture. Even as the platforms are showing their centrality to society and resilience, the covid crisis is leading to mass bankruptcies for enormous numbers of firm. Remarkably, despite the enormous differences in social and economic organization, the mega-platform firms whether they be China, the USA, or any other nation have been central to the national responses.

In 2016, we argued that global society had entered the era of the Platform Economy (Kenney and Zysman 2016). At that time, no one thought about whether these platforms would make the socio-economic system more resilient. What was obvious is that over the last two decades, a massive digital communication, collaboration, and connection infrastructure engineered to be resilient has been built.¹ The covid crisis is showing exactly how powerful and resilient the platform giants are and they become even more clear winners in terms of adoption and value capture. Even as the platforms are showing their centrality to society and resilience, the covid crisis is leading to mass bankruptcies for enormous numbers of firm. Remarkably, despite the enormous differences in social and economic organization, the mega-platform firms whether they be China, the USA, or any other nation have been central to the national responses.

With lockdowns and social distancing, platforms are the intermediaries for ever-increasing amounts of societal interaction be that chatting or posting on WeChat or Facebook, searching for information through Google or Baidu, or transacting as is the case with Amazon, Alibaba, or JD.com. These firms, through smartphones, personal computers, software and apps connect hundreds of millions and even billions of people – they are a global infrastructure on a scale never before known. These platforms are increasingly the integument connecting institutions and individuals and arguably made it possible to move so much economic and social activity online so quickly – in a word, resilient.

Online platforms have been a vital part of the response to the pandemic, and their systemic importance has grown. A new normal will emerge after the shutdowns and ongoing necessity for social distancing; it will be one with changed patterns of consumer activity globally. While

¹ The Internet is based on a packet-switching network that was designed to be resilient to a nuclear attack (Baran 1964)

platforms provided services and tools that made the lockdowns tolerable, the lockdowns accelerated their growth in power and centrality. Effectively, by virtue of being digital and connecting enormous numbers of citizens, they also became the infrastructure for the societal response.² In many respects, despite the many differences between a Chinese government able to act decisively and the chaotic US response, in both societies, platforms are now the central corporate actors.

The pandemic resulted in the panicked migration of entire industries, such as, education and significant portions of the work in a wide variety of other industries online in a matter of weeks. The infrastructure composed of networks, software, smart phones, and the internet of things enabled the society and economy to operate even as everyday physical contact was reduced to a minimum. This was possible because the platform firms were already the digital infrastructure that intermediated all manner of activities. The pandemic will end, but what will remain virtual and what will be the position of the platform firms in the new normal?

Platform Firms as Vital Infrastructure

During the covid, population lockdowns has resulted in the confinement of large percentages of the population to their homes. In a bid to slow the virus spread, all except the most essential businesses and retailers closed, and commerce moved online even more rapidly. For bricks-and-mortar retailers, this movement was catastrophic – the availability of platforms meant that many of them were not resilient.³ As a result, the US and Chinese mega-platforms,

² Plantin et al. (2018) argue that platforms have become infrastructure and should be studied as infrastructure.

³ If the platform firms had not existed, they would not have been as challenged. As an aside, often unexpected events lead to mass extinction events classes of organisms and even societies. Covid appears to have been such an event for bricks-and-mortar retail.

Alphabet (Google), Amazon, Apple, Facebook, Microsoft, Alibaba, and Tencent became key societal links. Their increased centrality is reflected in the changes in their stock market valuations (See Figure One) even as the overall stock market declined. The more recent statistics suggest that the five US mega-platforms comprise about 21% of the value of the S&P 500 and indicates the market's perceptions of a firm's business prospects.

Figure One: Ten Most Valuable Firms in the World, May 29 and January 2020

May 29, 2020		January 2020	
•Microsoft	\$1390B	•Apple	\$1393B
•Apple	\$1278B	•Microsoft	\$1262B
•Amazon	\$1218B	•Alphabet	\$1001B
•Alphabet	\$976B	•Amazon	\$919B
•Facebook	\$641B	•Facebook	\$621B
•Alibaba	\$557B	•Alibaba	\$606B
•Tencent	\$523B	•Berk Hath	\$548B
•Berk Hath	\$451B	•Tencent	\$482B
•Visa	\$429B	•Visa	\$451B
•J&J	\$392B	•JPMorgan	\$415B
US Platforms	\$5503B	US Platforms	\$5187B

In terms of stock value, Amazon had the greatest increase. Facebook and Microsoft experienced smaller increases in value. Interestingly, Apple, whose main business is selling gadgets, experienced the greatest value loss, while Google declined slightly. Among the Chinese mega-platforms, Alibaba lost some value, while Tencent, which owns WeChat and a massive gaming empire, increased its value. For the mega-platforms, the covid pandemic has not been a crisis, but rather an opportunity to cement their centrality in the global economic system.

With physical retailers closed, many to never reopen, purchasing online through platforms accelerated the shift already underway. In percentage terms, the greatest US beneficiary was Amazon whose employment increased 95,000 from March 31, 2020 when it had 840,400 full- and part-time to April 30, 2020 when it had 935,400 employees (Nickelsburg 2020). Their growth in revenue was remarkable as consumers shifted online for all manner of goods and services. For example, the world's three largest online retailers from January 1, 2020 to March 30, 2020 experienced remarkable growth. Alibaba experienced a 22% increase year over year, while JD.com, China's second largest online retailer, benefited from a 20.7% increase. Amazon's sales were up 26% during the period. Further, these increases are continuing.

Of course, being a platform did not guarantee success. For example, sectoral platforms such as Airbnb, Booking.com, Didi, Expedia, Lyft, and Uber not only lost market value, but also undertook staff layoffs in an effort to survive. Relatively young platform firms such as Zoom and Slack, benefited greatly as they provided the technical means for people to meet and work remotely, and experienced enormous usage spikes. In China, Alibaba's Ding Talk occupied this space.⁴ With the prohibition on in-restaurant dining, food delivery firms such as Deliveroo, DoorDash, GrubHub, Uber Eats, and their Chinese counterparts experienced heightened demand, as consumers increasingly ordered food from restaurants. Online grocery sales also boomed particularly for Amazon and Walmart.com.

The mega-platforms, in particular, are not just firms; they are a part of societal infrastructure. Whether it is WeChat and Alipay "taxing" purchases (as do credit card firms in the US), Amazon taxing its enormous vendor base, or Google using advertisements to tax

⁴ For a discussion of what we term the "Chinese platform business group model," see Jia and Kenney (2020).

businesses that want to be found; these platforms are becoming central pillars of economy. They provide services to society and have a set of capabilities that seems ideally fitted to addressing a pandemic.

There are differences between the way that platforms have been used in China and the US in response to the covid epidemic that are, in part, socio-cultural and political and, in part, due to the path-dependent development of the Platform Economy in the two societies. We use two technologies, covid smartphone apps and mobile payment systems to illustrate these differences.

Smartphone Apps to Manage Covid

One way to understand platform-based responses to covid is to draw upon the literature that understand software and computers as “incomplete” products. The idea is that digital artifacts, inherently and by design, are built to be reused and extended (Garud et al. 2008). Digital objects “afford” yet other parties the ability to create new objects or services by repurposing older one (Kallinkos et al. 2013; Zittrain 2008). This incompleteness and the resources that operating system software provides, such as software development kits and application programming interfaces, allow software programmers to build new applications very rapidly (Henfriddsson et al. 2018). Today’s smart phones have many built-in affordances. They can be located extremely accurately, have Bluetooth capability, and other technologies, this made it trivial to build a smartphone app that could sense and record other phones around it and constantly transmit where it was, thereby improving traceability.

In East Asia, where the mobile phones are ubiquitous and sensitivity regarding privacy is less salient, smartphones were quickly pressed into service monitoring individual observance of

quarantines and conformance to lockdown instructions. The apps were used utilized to not only track and trace individuals with covid infections, but also, as important, inform those that may have been in proximity that they may have been exposed. In China, with nearly 100% smartphone penetration and QR codes already ubiquitous, it was trivial to create a software app that would provide every individual with a personal scannable QR code revealing the holder's possible exposure to subsequently diagnosed covid carriers. The QR code operates like a passport that permits individuals to access to various venues.

While in the West there are similar smartphone trackers, their release and adoption has been fitful due to privacy concerns and one jointly designed by Google and Apple has not yet been released. The effectiveness of such trackers, of course, is dependent upon adoption. In China and Korea, adoption of a contact tracing and quarantine-monitoring apps were mandatory and, many stores and other venues forbid access without QR code certification. In contrast, in the US where digital tracing is unused and there is no pressure for adoption, usage is minimal. As a result, this public health measure is ineffective. In the cases of both China and Korea, though different socio-political systems, smartphone apps were aspects of a massive organized response to a public health crisis and contributed to societal resilience in facing a pandemic. Given both country's success, these applications were a resource for resiliency.

Mobile Payments

Prior to the pandemic, China was already the global mobile payments leader. As a result, with the severe lockdowns, even more remote service payment moved online. To illustrate, in 2019, Chinese nonbank online payment platforms (of which WePay and AliPay are the most important) processed nearly \$41 trillion of payments (Klein 2019). In China and other parts of Asia, the already near-universal usage of smartphones for transactions increased further during

the pandemic and is accelerating the move to a cashless society (Rooney 2020). In the west, mobile payment adoption has been slower, perhaps, in part due to the ubiquity of credit cards. If the covid crisis to severely curtails the use of cash, Chinese payment systems may be adopted in other countries particularly the developing world.

Platforms and Covid

In both countries, platform firms are playing a central role in the societal response to the covid pandemic and, conversely, the pandemic is increasing their centrality. Platforms and remote working digital technologies made it feasible to undertake lockdowns and practice social distancing – something that only twenty years ago would have been impossible. To illustrate, video conferencing software such as Zoom, Tencent Meeting, Google Meeting, and others made it possible to move all manner of in-person activity online in very short order. Internet retailers such as Amazon, Alibaba, and JD.com made it possible to order products online and have them delivered with no face-to-face contact. In Asia, apps were important tools vital contact tracing and identification of potential covid carriers helping to bring about a rapid and near complete eradication of the virus. Online delivery of entertainment, whether Netflix, TikTok, Douyin, YouTube, Youku, or various online gaming platforms, eased the boredom of isolation. In this respect, the platforms are important contributors to the resilience of both Asian and Western societies and economies.

Platforms have been vital in the response to the pandemic, and conversely reinforced concerns about the increasing power of these very same platforms. Perhaps, at no time in history have such a small group of firms concentrated in a single sector been so powerful – a concentration that should decrease resiliency. Yet, because they enable networks and are built on the packet-switching networks pioneered by Paul Baran, resilient they were “born” resilient.

Paradoxically, the new normal may be increased resilience based upon the remarkable digital infrastructure owned by these mega-platforms even as nearly every other societal actor is subordinated. The platform firms are concentrating power, wealth, and social influence and thereby contributing to increase in inequality – in China, the USA, indeed, the world – even as they play a vital role in response and recovery.

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