Protecting consumers and competition in the digital economy

Abstract: Government intervention is essential to promote competition and protect consumers, both of which might be neglected if left to natural market forces.

The digital economy is largely characterised by three factors: the use of data as a key competitive tool, network externalities and large economies of scale. The digital economy revolves around data, transforming it into a commodity indispensable to digital firms. Due to the difficulty in placing a monetary value on data, coupled with the fact that the digital economy tends to tip towards a natural monopoly, we believe that competition and consumer protection laws must be dynamic and involve value judgement rather than number-crunching. In addition, the crafting of digital laws must be participatory in nature - governments should consult stakeholders and experts to better frame digital laws which are still in the nascent stages.

Under competition laws, we identify algorithms as a facilitator of collusion, and propose the creation of a regulatory sandbox for companies to test the compliance standards of their algorithms. Greater attention must also be placed on keeping markets contestable by ensuring the portability of data and considering non-price factors of competitions when assessing mergers.

Under consumer laws, we identify two main areas of concern - privacy of data and unregulated content. Digital companies must provide greater clarity to users with regards to how user data is collected and used, and to place a monetary value on their services for users who are unwilling to disclose their data. Companies must also take greater responsibility with regards to regulating the content on their platforms.

In ambiguous cases, assessments by the CCCS should err on the side of competition and consumer protection. Singapore should also work with regional and even international bodies to harmonise global efforts in intervening in the digital economy.

1. Introduction

Competition and consumer protection laws seek to enhance consumer welfare, and are built on the belief that government intervention is necessary due to the inadequacies of the free market.

The rise of the digital economy is characterised by the seamless integration of technology into business operations. This places the spotlight on the relevance of competition and consumer protection laws which were crafted in the pre-digital age. In particular, the characteristics of the digital economy gives rise to new forms of anti-competitive conduct and creates a profound effect on how we should approach competition and consumer protection laws.

This essay seeks to explore whether current laws in Singapore are optimal to deal with new digital threats and provide suggestions on how the role of the Competition and Consumer Commission of Singapore ("**CCCS**") can be enhanced to be a beacon of light helping Singapore navigate the stormy seas of the digital economy.

2. How the Digital Economy Changes the Nature of Competition and Consumer Exploitation

The digital economy is characterised by three dominant traits, and both competition and consumer protection laws have to adapt in line with these traits.

First, the prevalent usage of data. Data is the newest commodity of the 21st century, yet it is already being touted as the world's most valuable resource. Being an integral part of the digital age, it is seen as a major engine for the growth of digital and non-digital businesses alike.

However, the characteristics of a data-driven economy can raise competition concerns. In particular, data can serve as a barrier to entry in the digital economy. While it must be acknowledged that the nature of the digital economy is inherently

disruptive where incumbents can easily be overtaken by new entrants despite having access to more data sets, certain ways through which incumbents utilise hard-to-replicate data sets can still result in competitive advantages and stifle competition.

Additionally, data can also raise consumer exploitation concerns. Specifically, data cannot be monetarily quantified, which obfuscates the boundaries of both anti-competitive conduct and consumer harm. Governments can no longer rely on quantifiable factors like pricing or output to determine if firms are treating consumers fairly. The means through which data is collected also raises privacy concerns which itself is a morally grey area, making it an unprecedented challenge.

Second, businesses can benefit from network effects. The more users utilise digital services, the more other users will be incentivised to use the same services. This is prevalent in the digital economy, be it from social media sites where more users generate more content which in turn generates more users, to online retailers where consumers are more inclined to make purchases on platforms that have more reviews. This results in a perpetual cycle that allows already dominant firms in the digital realm to secure an ever-increasing advantage over their peers.

Third, companies can benefit from large economies of scale - digital firms generally have high start-up costs, yet they enjoy low marginal costs which allows them to serve a large number of customers.

A combination of the factors above suggests that the digital economy “tips” towards a winner-takes-all situation, a prominent example being Amazon which has grown from its humble beginnings as an online marketplace for books to the digital titan it is today. In the light of this, we propose a two-prong solution to intervention in the digital economy.

2.1 Dynamic Intervention

Standard notions of using price and market power as static guidelines for assessments lose their footing in the digital economy. Hence, authorities must form value judgements based on a nuanced and qualitative understanding of market structure and competitive processes that give rise to dominant firms.

2.2 Participatory Intervention

Given that intervention in the digital economy is in its nascent stages, and that there may be a lack of understanding on how digital systems work, CCCS should work with digital companies to craft legislation that can reap the benefits of improving contestability and consumer welfare while minimising loss in profits. In fact, Facebook has already been working with France and New Zealand on what content regulation could look like in the light of the Christchurch shootings which was live-streamed on their platform[1]. To employ the most beneficial dynamic intervention, there needs to be constant discussions between governments and firms to form an industry-wide consensus on what is equitable and to ensure that timely competition laws and regulations can be imposed in line with emerging trends.

[1] Zuckerberg, M. (2020). *Big Tech needs more regulation*. Retrieved from https://www.ft.com/content/602ec7ec-4f18-11ea-95a0-43d18ec715f5

3. Current Legislation

We believe that current legislation under CCCS are robust and are still relevant to the digital economy, though improvements can be made to enhance their applicability.

<table>
<tr><th>Competition Act</th><th>Consumer Protection Act</th></tr>
<tr><td>Anti-competitive agreements
Price fixing
Bid rigging
Market sharing
Production control</td><td rowspan="3">An Act to protect consumers against unfair practices and to give consumers additional rights in respect of goods that do not conform to contract, and for matters connected therewith.

Also protects consumers from:
Deception
False claims
Exploiting consumers who do not understand contractual obligations</td></tr>
<tr><td>Abuse of dominance
Exclusive dealing
Predatory pricing
Discount schemes
Refusal to supply</td></tr>
<tr><td>Anti-competitive mergers
Market share of merged entity ≥ 40%
OR
Merged entity market share between 20% and 40%
Post-merger combined market share of 3 largest firm ≥ 70%</td></tr>
</table>

Beside legislation under the CCCS, we note that two other laws, the Personal Data Protection Act ("**PDPA**") and the Protection from Online Falsehoods and Manipulation Act ("**POFMA**"), are of particular interest and can be incorporated under CCCS to protect consumers from the harms of the digital economy.

With reference to how legislation is categorised under the CCCS, we will examine how the advent of digitalisation changes the necessity and extent of government intervention in four key areas.

4. Anti-competitive Agreements

Algorithmic pricing has become ubiquitous in the online retail sector and raises two potential problems: formal and tacit collusion.

Formal collusion, which refers to an agreement to fix prices and output, can be facilitated under a "hub-and-spoke" algorithmic system where companies (spokes) collude through the use of a third-party provider's (hub) pricing algorithm.

A quintessential example is the ***'Eturas' UAB and Others v. Lietuvos Respublikos konkurencijos taryba*** Case C-74/14 (2016). E-TURAS is an online booking system that contracts with travel agencies to offer bookings on their website. In 2016, E-TURAS forced 30 travel agencies under contract to limit discounts under 3 percent, notifying them through email. As the agencies did not explicitly object, they indirectly expressed their common intention to fix their prices on the market through E-TURAS, and all parties were held accountable for collusion.

We believe that such forms of digital collusion are extensions of present collusive agreements and still fall within the existing enforcement framework by CCCS.

On the other hand, tacit collusion can be an inadvertent result of autonomous algorithms. Already, recent studies show that even relatively simple pricing algorithms systematically learn to play collusive strategies[2]. Self-learning algorithms might internalise that collusive strategies are the most beneficial for companies, and allow companies to collude even without prior agreement. Current policies are certainly not equipped to deal with algorithm-induced tacit collusion, as the only collusive intent would be found in the algorithm's self-determined strategy, which may be unknown even to the creator. Seeing that artificial intelligence is a burgeoning field, governments still have the leeway to analyse the role of machine learning in pricing algorithms before coming up with nuanced policies that do not hamper the similarly growing benefits of algorithms.

4.1 Areas for Improvement

We believe that companies should take responsibility for their algorithms; vigorous testing and tweaking is necessary to ensure compliance to competition laws.

Just as MAS uses the MAS FinTech Regulatory Sandbox to foster innovation in data analytics for financial firms, MTI can construct a similar sandbox for pricing algorithms. This allows relevant authorities to work with companies to test and mould pro-competitive algorithms. Such an approach will hold producers responsible for testing their algorithms, while not placing the entire blame on producers should their algorithms go rogue despite passing government’s standards, encouraging the cautious use and growth of pricing algorithms.

5. Abuse of Dominance

Amassed data on digital platforms are key enablers to exploitation of dominance in this era, especially to sectors that benefit from network externalities such as the platform economy. While concrete examples of data-derived abuse of dominance are rare in the

[2] Calvano, E., Calzolari, G., Denicolò, V., Pastorello, S. (2019). *Artificial Intelligence, Algorithmic Pricing and Collusion*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3304991

current age, we propose taking an ex-ante approach to the matter to limit any potential anti-competitive behaviour.

5.1 Areas for Improvement

Rather than imposing punitive actions when firms abuse their dominance, focus can be placed on making the digital market more contestable to keep firms on their toes. We believe that data portability and interoperability can both act as speed bumps to companies expanding too aggressively.

In February, CCCS launched a discussion paper on data portability in collaboration with the Personal Data Protection Commission ("**PDPC**"), which suggests that CCCS is already looking at improving competition in the digital economy by allowing consumers to switch to services provided by competitors with ease; it also shows that CCCS is cognizant of the inherent privacy risks associated with such a service. Additionally, CCCS should also consider partnering with international digital giants under the Data Transfer Project to reach a consensus on guidelines with regards to data portability.

6. Anti-competitive Mergers

Merger and acquisition control is increasingly important in the digital economy. In the current age, the modus operandi of digital giants is to buy up their competition by acquiring up-and-coming rivals with a growing consumer base. While anti-competitive mergers are traditionally characterized by high market power, ability to set prices, and exclusive access to factors of production, data and network effects have become so competitively advantageous that they should be factored in when evaluating a merger.

Notably, a total fine of $13 million was imposed on Grab and Uber after CCCS deemed their merger in 2018 as anti-competitive. CCCS's assessment was supported by feedback from smaller firms in the industry which indicated that without any intervention from

CCCS, it would be difficult for them to attain a sufficient network of drivers and riders to compete effectively against Grab.

The consideration of non-price factors of competition like network effects and consultation of new entrants show that the current lens through which CCCS views anti-competitive mergers is sufficiently dynamic and participatory in nature to adapt to the digital age.

7. Consumer Harm

Consumer protection laws came under the ambit of Singapore's competition authority in 2018. Thus, greater focus should be placed on revising said laws to better suit the new digital economy.

First, the prevalent usage of data poses privacy issues for consumers. In the age of "Surveillance Capitalism", sensitive data is collected before being repurposed into behavioural analysis products to be sold, thereby depriving consumers of the right to their own data. In Singapore, the PDPC oversees data protection and administered the PDPA in 2012 to ensure the compliance of firms to protect the data of their customers. Yet, we believe that current measures are still insufficient and that more stringent rules must be imposed on digital firms to protect the rights of consumers.

Second, the unregulated flow of information facilitated by social media platforms is problematic as it can lead to misinformation. In particular, there needs to be more rigorous content regulation to prevent consumer harm in the form of fake news, radical ideology, hate speech and echo chambers, inter alia.

7.1 Areas for Improvement

To tackle privacy concerns regarding data, we propose supplementing current efforts with a two-prong approach.

First, digital companies must explain to users how their data will be collected and used. This should be done in a simplistic yet informative manner, such as an infographic, rather

than using legal jargon and hiding behind one-click mystifying agreements. Providing greater clarity to consumers enables them to make more informed decisions, promoting consumer welfare.

Second, we propose the implementation of hybrid pricing. As it stands, firms that offer "free" online services profit by collecting, packaging, then repurposing consumer data. As such, these services pose insidious harm to consumers that transcend traditional monetary concerns. Therefore, a monetary option should be made available for consumers who are unwilling to use their data as payment for services. Should consumers decide that they are still willing to commercialise their data in exchange for services even after gaining greater clarity as mentioned in the preceding paragraph, they should also be allowed to continue with the status quo.

To tackle the issue of misinformation in the digital economy, digital firms should be subjected to greater accountability. While the institution of POFMA has done well for Singapore in the area of fake news, it is often lambasted for being overly-politicised. Courts should play the role of arbiters on what is considered "fake", and to provide the "truth" after issuing a POFMA directive provided that it does not go against national interests. Additionally, local authorities need to partner with digital tech giants such as Facebook and place greater responsibility on them to regulate the content on their sites.

8. Potential Concerns and Solutions

8.1 Burden of Proof

Given the tendency for the digital economy to "tip" to a single winner, we believe that assessments should always err on the side of competition. In cases where companies pose a significant threat to competition, the burden of proof should be reversed - defendants must show that their behaviour is pro-competition and beneficial to consumers.

8.2 International Cooperation

Singapore's authority over multinational companies could diminish when it enforces over-aggressive policies despite her small domestic market, or when she contradicts the policies set by other nations. Singapore can benefit from greater regional, and possibly international consensus on intervening in the digital economy.

In 2017, Singapore published the Handbook on E-Commerce and Competition in ASEAN member states, sparking discussion on competition concerns in the digital economy. CCCS also hosted the first meeting of the ASEAN Competition Enforcers' Network to facilitate cooperation on competition cases in the region. Singapore can hence leverage on her credentials as a pioneer in the field to expedite the cooperation between member states, pushing out an ASEAN-backed competition and consumer protection law for digital firms seeking to operate in the region.

Upon cementing regional consensus, ASEAN can then look towards coordinating with international organisations like the EU to achieve international harmonisation on intervention in the digital economy.

9. Conclusion

The tide of digitalisation has brought in a new set of challenges and rules that competition authorities have to grapple with to produce an equitable outcome. At the heart of this change is data, which revolutionizes the ways corporations interact with consumers and competitors. In response, governments must adapt to the changing landscape by consulting the opinions of experts and stakeholders, foreseeing potential problems and enacting targeted laws that address new concerns raised by digitalisation. Constructing a revised set of laws specifically for the digital economy is key to maintaining competition and addressing market failure in the future.

Bibliography

CCCS, IPOS, PDPC. (2017). *Data: Engine for Growth – Implications for Competition Law, Personal Data Protection, and Intellectual Property Rights.* Retrieved from https://www.cccs.gov.sg/-/media/custom/ccs/files/media-and-publications/publications/occasional-paper/ccs-big-data-paper-16-aug-2017nonconfi-final.pdf?la=en&hash=D2390598C1CE3B805C2A9E711EEAB1456CDE7C53

Digital Competition Expert Panel. (2019). *Unlocking digital competition.* Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf

European Commission. *Competition policy for the digital era*. doi: 10.2763/407537

Khan, L. M. (2017). *Amazon's Antitrust Paradox.* Retrieved from https://www.yalelawjournal.org/note/amazons-antitrust-paradox

The Economist. (2017). *Data is giving rise to a new economy.* Retrieved from https://www.economist.com/briefing/2017/05/06/data-is-giving-rise-to-a-new-economy

The Economist. (2017). *The world's most valuable resource is no longer oil, but data*. Retrieved from https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data

Zuboff, S. (2019). *The Age Of Surveillance Capitalism.*