CCCS-ESS Essay Competition

"Free market and buyers beware? Where are we today and what is the optimal level of government intervention to protect competition and consumers in Singapore?"

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Executive Summary

This essay will forward that in today's rapidly digitalising economy, CCCS is adapting to the growing threat to competition and consumers but still requires a more robust response. Hence, the extent and range of government intervention must increase to attain an optimal level.

In Chapter 1, the context of a rapidly digitalising Singapore is set. We further outline the main objectives of government intervention: minimising anti-competitive and anti-consumer behaviour while not stifling growth and innovation.

Chapter 2 analyses the emerging dangers from the digital economy-- increased risk of collusion through pricing algorithms, increased risk of market consolidation, use of data that threatens consumer welfare and the need for cross-border collaboration. Next, we analyse CCCS' response in 3 key areas-- **Identification, Intervention and International Collaboration** (**3Is**). We conclude in **Identification** that while CCCS considers a wide range of metrics in identifying market failures, it still lacks a clear framework for non-quantifiable metrics and lacks digital expertise. In **Intervention**, we find that while current methods of intervention have worked previously, the voluntary notification system and degree of punishments remained problematic. In **International Collaboration**, we observe that despite CCCS' commitment to tackling transnational market failures, there is a lack of an ASEAN-wide digital economy response for competition and consumer protection.

Chapter 3 uses the same **3Is** to propose methods to achieve the optimal level of intervention. In **Identification**, we support more metrics for quantifying market power and defining markets. In **Intervention**, we propose reconsidering the voluntary notification system, harsher punishments, improved data protection and more stringent technological regulation. In **International Collaboration**, we suggest the creation of ASEAN-wide agreements for the digital economy alongside existing regional guidelines on competition policy. We also address the concerns with increased extent and range of government intervention, namely reduced innovation, lowered economies-of-scale and increased costs.

Word Count: 297

1. Introduction

1.1 Background

From ride-hailing to online shopping, Singapore's economy is witnessing disruptive innovation. In particular, the COVID-19 pandemic has increased adoption of digital platforms. Coupled with Industry 4.0 and Smart Nation initiatives, Singapore's economy is rapidly transforming into a digital economy. However, this introduces novel challenges for consumer protection and market competitiveness.

1.2 Objectives of government intervention

Governments intervene to ensure consumer welfare and economic efficiency in a free market. An optimal level is achieved when authorities can keep up with evolving market trends to minimise anti-competitive and anti-consumer behaviour, while avoiding heavy-handed regulation that stifles innovation and growth[1].

This essay will explore the novel challenges faced by Competition and Consumer Commission of Singapore ("**CCCS**") in Singapore's digital economy. It will then argue that the current competition and consumer protection regime is not sufficiently robust for the digital economy, advocating for a greater extent and range of government intervention.

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[1] Posner, R. A. (2019). *Antitrust law*. Chicago: The University of Chicago Press.

2. Where are we today?

2.1 Emerging challenges of a digital economy

The digital economy increases the risk of anti-competitive behaviour and can undercut consumer choice.

2.1.1 Increased risk of collusion

The use of dynamic pricing algorithms can facilitate collusion. Firms can program collusive agreements into algorithms by fixing the agreed equilibrium price and allowing their algorithms to track adherence, increasing the ease of collusion. In the first of such cases in 2015, the US Department of Justice charged poster sellers on Amazon for using algorithms to price-fix[2]. Even without human input, pricing models could lead to tacit collusion as they tend towards a collusive "agreement" by monitoring and matching prices of competitors.

A KPMG-CCCS study[3] found that in sectors like digital media and ride-hailing, there is already mature adoption of data analytics as part of pricing models. Even conventional businesses such as taxi operator ComfortDelGro have adopted dynamic pricing.

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[2] OECD (2017), Algorithms and Collusion: Competition Policy in the Digital Age
www.oecd.org/competition/algorithms-collusion-competition-policy-in-the-digital-age.htm
[3] KPMG (2017), Understanding the Data and Analytics Landscape in Singapore
https://www.cccs.gov.sg/-/media/custom/ccs/files/media-and-publications/publications/occasional-paper/understanding-the-data-and-analytics-landscape-in-singapore--kpmg-16-aug-2017final.pdf

Especially with off-the-shelf algorithms and increasing ease of use, algorithmic pricing could become the norm in Singapore.

2.1.2 Increased risk of market consolidation that lessens competition

The digital economy also presents new factors that could result in market consolidation, significantly reducing competition. This in turn makes other businesses and consumers reliant on their services, allowing them to raise prices and reduce innovation.

Firstly, the convenience of using a platform increases with the number of users. For example, the usefulness of food delivery platforms to consumers depends on the number of restaurants on the platform and vice versa. This network externality favours incumbents with more users over new platforms with less users even if they are better or lower cost. Secondly, incumbents could offer bundled services and discounts, incentivising users to use their platform for other services in different markets. Ride-hailing platform Grab has grown into a "super-app" which provides services in other industries including rides, shopping, e-payments and insurance[4].

There is also the added challenge for competition authorities to identify the relevant markets digital firms operate in as their services may cut across sectors and may be

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[4] Pangarkar, N. (2019, September 10). The rise of the ASEAN superapps. Retrieved from https://www.businesstimes.com.sg/asean-business/the-rise-of-the-asean-superapps

serving different customer groups with interdependent demand conditions, such as food delivery platforms serving both restaurants and consumers[5].

2.1.3 Use of consumer data

Consumer data can be used to undermine consumer sovereignty. Firms can adopt first degree price differentiation by analysing data to assess their need for the good and charge according. Online travel booking sites and ride-hailing services like Grab are known to track frequency of a user's searches, thereby determining habituality of consumption and raising prices. Additionally, the current lack of data portability, which is the ability to transport data between platforms, decreases the ability of consumers to switch away from incumbents.

2.1.4 Need for cross-border collaboration

The CCCS may be unable to regulate digital start-ups if they are based abroad or if their infringements are transnational. With the creation of the ASEAN Digital Integration Framework which facilitates digital trade and seamless digital payments[6], the risk of foreign-based digital companies affecting competition and consumer welfare in Singapore increases.

[5] Rysman, M. (2009). The Economics of Two-Sided Markets. *Journal of Economic Perspectives.* doi:10.1257/jep.23.3.125

[6] Sagar, M. (2019, January 17). Thailand pushes for ASEAN Digital Integration Framework Action Plan. Retrieved from https://www.opengovasia.com/thailand-pushes-for-asean-digital-integration-framework-action-plan/

2.2 Evaluating enforcement efforts by the CCCS

There are 3 key areas for enforcement--**Identification**, **Intervention** and **International Collaboration**.

2.2.1 Identification

CCCS has applied generic indicators set out in the Competition Act and Consumer Protection Act to effectively identify market failures. Similar to a doctor looking at a patient's vital signs, the health of a market can be told by quantifiable indicators. The Grab-Uber merger was deemed to significantly lessen competition as in the identified private hire car market, the new firm occupied over 80% of market share, well beyond the legally set 40%[7]. Beyond market share, the CCCS has considered other factors like data. In the 2014 assessment of the proposed merger between SEEK and JobStreet, the CCCS required the sale of Jobstreet's database as the merged data controlled by both firms would pose a significant barrier to entry[8].

However, the CCCS has yet to implement a clear framework to consider other non-quantifiable metrics. Currently, the CCCS adopts the Small but Significant and Non-

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[7] Grab/Uber merger: CCCS Provisionally Finds that the Merger Has Substantially Lessen Competition, Proposes Directions to Restore Market Contestability and to Impose Financial Penalties. (2018, July 5). Retrieved from https://www.cccs.gov.sg/media-and-consultation/newsroom/media-releases/grab-uber-merger-pid

[8] Data: Engine for Growth – Implications for Competition Law, Personal Data Protection, and Intellectual Property Rights. (2017, August 16). Retrieved from https://www.cccs.gov.sg/resources/publications/occasional-research-papers/data-engine-for-growth

Transitory Increase in Price (SSNIP) test[9] in determining the extent of market dominance. The SSNIP test may be insufficient in the digital economy as price is not the most relevant factor in consumers' decisions to switch products. Other metrics such as data portability affect how likely consumers will switch to a new competitor or the existence of multi-homing may mean the stated market share of firms exaggerates their actual market power. Without an established framework to consider these metrics, CCCS may misidentify market failures. Additionally, analysing market failures in the digital economy requires deep technical expertise. Without which, CCCS cannot identify and build a case against highly technical market failures such as algorithmic collusion.

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[9] The SSNIP test determines the smallest relevant market where a monopolist could impose a significant increase in price and still be profitable

Motta, M. (2009). *Competition policy: Theory and practice*. Cambridge: Cambridge University Press.

2.2.2 Intervention

Through financial penalties and injunctions, CCCS ends anti-competitive behaviour and unfair trading. For instance, the $989,000 fine and ban on exclusivity agreements for SISTIC ended its anti-competitive behaviour[10]. CCCS also conducts market studies into industries that show signs of market failure. For instance, a market study was conducted on the online travel booking sector where misleading claims and prices were found. While it concluded that no intervention was required then, it reflects pre-emptive action by CCCS[11].

However, the current voluntary notification system, where companies may choose to notify authorities before mergers and acquisitions, means actions taken by CCCS are retrospective and could be ineffective at restoring competitiveness. Some argue the 2018 Grab/Uber merger exploited the voluntary system as CCCS could not unwind the merger and could only remediate through behavioural solutions such as removing exclusivity arrangements, unable to address the root concern of a loss of competition[12]. Furthermore, the current financial penalties framework by CCCS may be inadequate. Especially for firms who operate transnationally, a cap of 10% on annual local turnover may be insufficient deterrence.

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[10] CCCS. (2010, June 4). Abuse of Dominant Position by SISTIC.com Pte Ltd. Retrieved from https://www.cccs.gov.sg/public-register-and-consultation/public-consultation-items/abuse-of-dominant-position-by-sisticcom-pte-ltd?type=public_register

[11] CCCS. (2019, September 30). Market Study on Online Travel Booking Sector in Singapore. Retrieved from https://www.cccs.gov.sg/resources/publications/market-studies

[12] Chew, M. (2019, October 30). SMU Lexicon: Grab-Uber merger: Observations and implications for Singapore's competition regime. Retrieved from https://learn.asialawnetwork.com/2019/11/05/grab-uber-merger-observations-implications-singapores-competition-regime/

2.2.3 International collaboration

As evidenced by CCCS championing the "Handbook on E-Commerce and Competition in ASEAN member states", CCCS has shown a commitment to working with other ASEAN states to tackle transnational market failures. However, specific to the digital economy, there have been no ASEAN-wide agreements on multilateral competition and consumer protection action.

3. What is the optimal level of government intervention?

3.1 Areas for improvement

Continuing from Chapter 2, the **3Is** framework will explain how CCCS can achieve the optimal level of intervention through increased extent and range of intervention.

3.1.1 Identification

Assessing market power

The CCCS can consider other relevant criteria to determine market power. For instance, Germany considers metrics such as switching costs between services from different providers or direct and indirect network effects[13]. This will enable more accurate assessments of the impact of mergers and acquisitions.

Defining markets

Optimal government intervention also requires accurate definition of affected product markets. The SSNIP could be used alongside tests that assess other criteria such as privacy and quality of product. For instance, the EU has begun using the "Small but Significant Non-transitory Decrease in Quality (SSNDQ)" test as a framework for assessing dominance in zero-price markets[14].

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[13] Grunwald, A., Hackl, J. and Schwalm, J. (2017, March 9). Significant Competition Law Changes in Germany. Retrieved from https://www.mofo.com/resources/insights/170309-significant-competition-law-changes-in-germany.html

[14] Capobianco, A. (2018, November 28). Quality considerations in the zero-price economy – Note by the European Union. Retrieved from https://one.oecd.org/document/DAF/COMP/WD(2018)135/en/pdf

The test should also be tailored to assessing profitability in multi-sided markets. Given the volatile nature of the digital economy, relevant market definitions must be regularly updated to enable effective monitoring of competition.

3.1.2 Intervention

Reconsidering the voluntary notification system

Singapore may consider a mandatory notification system for significant mergers, as is standard practice in the European Union or United States. This could empower the CCCS to take preventative action and deter companies from abusing the system, especially with the increased risks of market consolidation in the digital economy.

Alternatively, the CCCS may choose to increase market surveillance of non-notified mergers. Alongside this, strengthening measures to respond to and deter infringements can increase the CCCS's effectiveness. Harsher punitive action, such as pegging financial penalties to a firm's global profits, rather than annual local turnover, as the authorities in jurisdictions such as the EU have done may be necessary.

Data Protection

The prevalence of data as the "currency" of the digital economy means that governments must also intervene to safeguard personal data. The Personal Data Protection Act ("**PDPA**") was primarily targeted at protecting the privacy of individuals but new personal data regulations should also aim to preserve competition. For instance, the right to data portability must be safeguarded. This is already practiced in other jurisdictions, such as in the 2018 EU General Data Protection Regulation. How far firms can use data to categorise consumers such as for price differentiation should also be regulated. The CCCS can collaborate with other agencies such as the Personal Data Protection Commission to introduce such protections.

Regulating Technology

Given the rapid pace of technological developments, a dedicated market research unit may be necessary to monitor and keep up-to-date with the use of algorithms, improving the ability of competition authorities to identify collusive algorithms and artificial intelligence. This has been adopted in the UK, where a technology team is being established under the Competition and Markets Authority, and in Australia, where the Competition and Consumer Commission has established a data analytics unit[15].

The CCCS may further wish to advocate for "antitrust compliance by design", a principle forwarded by EU Competition Commissioner Margrethe Vestager[16]. This involves collaboration with legal and technical experts to set guidelines for incorporating competition compliance when coding algorithms. More pre-emptive measures could be taken as well, such as subjecting algorithms to auditing and introducing transparency obligations to ensure that specifications of the algorithms are open to scrutiny[17]. Such actions will allow the CCCS to better regulate technology and enable firms themselves to be aware of the guidelines to abide by when implementing algorithms.

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[15] Unlocking Digital Competition: Report of the Digital Competition Expert Panel. (2019, March). Retrieved from
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf

[16] Vestager, M. "Algorithms and competition." Speech, Bundeskartellamt 18th Conference on Competition, Berlin. (2017, March) Retrieved from https://ec.europa.eu/newsroom/comp/newsletter-specific-archive-issue.cfm?newsletter_service_id=221&newsletter_issue_id=2831&page=2&fullDate=Fri%2017%20Mar%202017&lang=default

[17] Lee, K. (2018). Algorithmic Collusion and Its Implications for Competition Law and Policy. *SSRN Electronic Journal*. doi:10.2139/ssrn.3213296

3.1.3 International Collaboration

Finally, cooperation between competition and consumer protection authorities is necessary to ensure a standardised framework for regulation. The existing ASEAN Regional Guidelines on Competition Policy can be expanded to include guidelines targeting the digital economy, such as harmonising intellectual property regimes and frameworks for regulatory bodies to collaborate in addressing cross-border infringements. This will not only strengthen regulators' ability to promote competition, but also provide clarity for businesses seeking to expand operations to ASEAN, making ASEAN a more attractive destination for digital firms.

3.3 Limitations of government intervention

Competition and consumer protection is a balance between maximising market welfare and giving firms the freedom to grow and innovate. Hence, increased intervention may come with the following drawbacks.

3.3.1 Increased costs of monitoring and compliance

Increased surveillance and intervention incurs higher costs for CCCS. An example is maintaining a mandatory notification system as many mergers do not require further action – from 2000 to 2007, only 4.1% of notified mergers in the EU required further investigation[18]. Furthermore, the high compliance costs for businesses may be a barrier to market activities, running counter to Singapore's aim to establish a pro-business environment[19]. However, given the CCCS' track record of being judicious and efficient in pursuing cases, the increased costs are unlikely to be significant.

3.3.2 Reducing incentive to innovate

Intervention may reduce the ability and incentive for innovation, as firms have less capital for research and development and will not choose to innovate if they are unable to retain the profits. According to the Schumpeterian model of creative destruction, large firms, motivated by the prospect of monopoly profits, innovate to protect market share, and

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[18] Chew, M. SMU Lexicon: Grab-Uber merger: Observations and implications for Singapore's competition regime.
[19] Oral reply to PQ on CCCS. (2018, July 11). Retrieved from
https://www.mti.gov.sg/Newsroom/Parliamentary-Replies/2018/07/Oral-reply-to-PQ-on-CCCS

innovation involves the creation of new industries often dominated by a few players[20]. Intervention to reduce market power may stifle, rather than encourage innovation.

Nevertheless, intervention is important to ensure that new, innovative firms can enter the market while ensuring incumbents face enough pressure from existing competition to innovate. Crucially, authorities must strike a balance to avoid over-regulation through staying up-to-date on the latest trends in technology.

3.3.2 Lowering economies of scale

Over-regulation may prevent companies from increasing economies of scale that could bring about lower costs and better product quality. This is especially so in the digital economy, where network effects can benefit consumers – for instance, social networking sites like Facebook increase in value the more people join the site. Here, a high market share may not be harmful, and intervention to break up large companies may be counterproductive.

However, updating non-quantifiable metrics to assess the impact on consumer welfare mitigates this harm by helping authorities to determine whether network effects are beneficial to consumers or potentially harmful[21].

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[20] Schumpeter, J. (2017). *Theory of Economic Development.* Routledge.
[21] Maher, M., Reynolds, P., Mysert, P., & Wandschneider, F. (2016, October). Resetting competition policy frameworks for the digital ecosystem. Retrieved from https://www.gsma.com/publicpolicy/wp-content/uploads/2016/10/GSMA_Resetting-Competition_Report_Oct-2016_60pp_WEBv2.pdf

4. Conclusion

Through our **3Is (Identification, Intervention and International Cooperation)** framework, we observe that the CCCS has adapted existing competition policy to the digital economy but a greater extent and range of intervention is needed to remain effective. We have also suggested how intervention by CCCS can reach its optimal level while addressing their limitations.

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