

E-commerce Platforms Market Study

Findings and Recommendations

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E-commerce Platforms Market Study

Findings and Recommendations

I. EXECUTIVE SUMMARY

Introduction

1. The Competition and Consumer Commission of Singapore (“**CCCS**”) has observed a growing trend of e-commerce platforms that compete in multiple market segments offering distinct products and/or services in Singapore and the Southeast Asian region. For example, Grab has embarked on a journey to become a regional “super app”, by offering a range of services such as e-payment, marketplaces, ride-hailing and food delivery services within a single mobile app.

2. In order to better understand the growth of such e-commerce platforms, CCCS embarked on a market study focusing on e-commerce platforms that generally have the following core characteristics:

- a. The business operates at least one **multi-sided platform**;
- b. The platform facilitates **e-commerce as its primary activity**; and
- c. The platform business operates in **more than one market segment in Singapore**, offering distinct products and/or services.

3. The aim of the market study is for CCCS to gain an in-depth understanding of the business models of such e-commerce platforms and the competitive dynamics within which they operate. The market study also identifies potential competition and consumer issues which may arise from the proliferation of such e-commerce platforms, and recommends ways to ensure that CCCS’s assessment framework and toolkits are future-ready and appropriately contextualised to address such issues.

4. As part of the market study, CCCS appointed Frontier Economics Pty. Ltd. to conduct (a) interviews with industry stakeholders; (b) an online survey of e-commerce platform users; and (c) a literature review covering relevant economic literature and experiences in other overseas jurisdictions. Taking into consideration the findings from the market study, CCCS reviewed whether its assessment framework and toolkit are future-ready to deal with the possible competition and consumer protection issues. Part of this assessment included a review of the suite of CCCS Guidelines, in order to ensure that CCCS’s overall assessment framework remains relevant and appropriate when assessing conduct involving digital

platforms. CCCS also sought to identify areas where more guidance can be provided to digital companies to increase their understanding of how competition issues may be viewed and assessed in Singapore.

5. The market study is part of CCCS's ongoing effort to monitor key developments in the digital economy and understand the impact of these developments on competition and consumers in markets within Singapore.

Key Findings

6. CCCS observed that e-commerce platforms generally start off as a player in a single market segment, and incrementally expand into other market segments. In order to establish viability in the first market segment, e-commerce platform operators face a major challenge to gain a critical mass of multiple user bases on board. As part of their user acquisition strategies, e-commerce platform operators engage in considerable efforts to convert offline consumers to online consumers. Some of the strategies employed by e-commerce platform operators include supplementing their online business with physical brick-and-mortar stores to build consumer confidence in the platform. Other strategies include the use of online reviews and ratings, feedback systems for consumers, comprehensive customer protection policies, and the integration of offline experiences into online experiences to build trust in the platform. These strategies are elaborated upon in paragraphs 44 to 5469 below.

7. Upon establishing viability in a single market segment, an e-commerce platform operator may be motivated to expand into another market segment if it believes this will increase the profits that its business will generate in the future. The decision as to which market segments to enter appears to centre on two key questions – (a) whether the new market segment has unmet demand and/or strong growth prospects; and (b) whether the e-commerce platform has a way to achieve a competitive advantage.

8. One manner in which an e-commerce platform may achieve a competitive advantage in the second or subsequent market segment is through leveraging the existing user base from the first market segment. E-commerce platform operators may be more effective in leveraging its existing user base if users are loyal to the platform. In this regard, e-commerce platform operators seek to engender greater platform loyalty through both price and non-price strategies. In relation to price strategies, e-commerce platform operators may use financial incentives such as discounts or cashback schemes, or reward programmes and subscription-based benefits to build user loyalty. In relation to non-price strategies, e-commerce platform operators may leverage data collected from platform users in the first market segment in order to better understand customers' preferences and

deliver better quality products/services in the second and subsequent market segments. E-commerce platform operators may also leverage on a trusted brand to gain customers in the second or subsequent market segment or gain economies of scope as it produces more types of products/services. These strategies are discussed in greater detail in paragraphs 55 to 66 below.

9. E-commerce platform operators face certain challenges associated with expanding into the second or subsequent market segments. The key entry cost, much like for entry into the first market segment, is the investment required to acquire a critical mass of users. E-commerce platform operators also face other costs such as software development costs or costs of integrating products/services into a single app. Additionally, e-commerce platform operators may face issues raising sufficient funds in order to viably expand into the second or subsequent market segments. They may also face incumbent or potential future competitors within the market segment of interest. These challenges are discussed in greater detail in paragraphs 67 to 69 below.

10. Based on the information gathered from industry stakeholders, no major competition concerns involving e-commerce platforms in Singapore have been identified at this time.

11. The platform user survey revealed that overall, whilst customers do display a certain degree of platform loyalty due to non-price factors and strategies employed by e-commerce platform operators, price continues to play an important role in attracting and retaining customers as a significant number of customers currently practise multi-homing. The findings also indicate that the provision of e-payment services in Singapore is unlikely to be a pre-requisite for an e-commerce platform's success at this point of time. In many cases, the decision of the e-commerce platforms to launch e-payment services appear to be driven by factors that are extraneous to Singapore.

12. In addition, the findings from the market study suggest that whilst data collected by e-commerce platforms is beneficial in allowing platform operators to improve the quality of the service offered to customers, the absence or lack of data is not currently regarded as an insurmountable barrier to entry or a severe limitation on the ability of e-commerce platform operators to compete effectively against other competitors. Further, in relation to the protection of personal data, e-commerce platforms appear to perceive data protection as an important part of building trust with their users. However, consumers do not seem to view data protection as a key feature in their choice of e-commerce platform(s) at this point in time.

13. The market study found that CCCS's existing competition framework is currently sufficiently robust to address the competition issues that may arise from the proliferation of e-commerce platforms that compete in multiple market segments offering distinct products and/or services in Singapore. Notwithstanding the above, certain key areas were identified where further clarity and guidance by CCCS could be beneficial to assist businesses in the application of the Competition Act (Cap. 50B) (the "**Competition Act**") in the digital space. These areas include:

- a. Providing clarity in relation to the market definition exercise in cases involving multi-sided platforms;
- b. Providing guidance on how CCCS may assess market power in cases involving digital platforms, as the indicators for digital platforms may differ from standard indicators such as market shares;
- c. Providing guidance on CCCS's approach to cases involving digital platforms that compete in multiple market segments offering distinct products and/or services in Singapore, but are not dominant in any of the segments in which it is active;
- d. Keeping up-to-date with theories of harm identified by overseas jurisdictions and assessing whether such theories would apply in a Singapore context, so as to provide greater clarity to businesses on how to avoid engaging in such anti-competitive conduct; and
- e. Providing further guidance on how CCCS will assess mergers and acquisitions involving digital platforms.

Market Definition

14. A market definition exercise is useful as a tool to provide a framework for competition analysis. In particular, market definition serves as a framework to identify and assess the competitive constraints that the seller of a focal product or service (i.e. the digital platform) faces. However, the characteristics of digital platforms raise several challenges when performing the market definition exercise. Broadly speaking, the features and challenges that the multi-sided nature of digital platforms raise for market definition can be distilled into the following:

- a. Firstly, there is the question of whether separate but interrelated single-sided markets should be defined for each side of the multi-sided platform,

or whether a single multi-sided market comprising all sides of the platform should be defined.

- b. Secondly, there is a need to account for the presence of externalities, which are a common feature in multi-sided platforms. These externalities usually include indirect network effects and usage externalities.
- c. Thirdly, due to the interdependencies between the various sides of a platform, a multi-sided platform can determine both the price levels as well as the price structure (i.e. ratio of prices between different groups of users) of its user groups in order to get these users on-board the platform. This can affect the ability of the platform to profitably sustain prices above competitive levels, which may in turn affect the definition of the relevant market.
- d. Fourthly, it is often the case that a multi-sided platform may not charge a positive price for its service to users on one side of the platform while charging a positive price to users on other side(s) of the platform. This raises questions of whether the side of the platform that is not charged a positive price should be accounted for in the market definition, as well as how one can practically apply the hypothetical monopolist test to a side of the platform that is not charged a positive price.

15. In addition, the trend of e-commerce platforms competing in multiple market segments and offering distinct products and/or services raises questions as to how the market should be defined in such cases. In this regard, such e-commerce platforms could conceivably build up a product ecosystem comprising the various distinct products and/or services. Where complementarities in demand or supply exist, it may be appropriate to define a market for a product ecosystem comprising a mix or range of distinct products and/or services.

16. A more complete discussion of these issues, and CCCS's views, is set out in Chapter VI of this report. Given the discussions on the implications of the multi-sided nature of digital platforms and the applicability of the concept of product ecosystems, CCCS has considered that it may be opportune to update the *CCCS Guidelines on Market Definition* so as to improve its clarity and relevance to businesses operating in the digital era. Amendments to the *CCCS Guidelines on Market Definition* would provide greater clarity on (a) how market definition exercise may be adapted to consider specific features of multi-sided platforms; and (b) how CCCS may consider consumption synergies as an additional

factor when assessing whether the focal product may be a product ecosystem comprising distinct products sold by the same seller.

Market Power

17. Market power is usually understood as the ability to profitably sustain prices above the competitive price level, or to restrict output or quality below competitive levels. A firm will be dominant if it has substantial market power. However, the characteristics of e-commerce platforms may raise challenges in the assessment of their market power. Some of these challenges include:

- a. Whether the key indicators of market power are likely to be materially different from traditional indicators such as market shares.
- b. Whether there should be a greater emphasis on dynamic over static competition outcomes (given the rapid changing nature of the industry).
- c. Whether the network effects and data accumulation by e-commerce platforms that compete in multiple market segments mean they intrinsically have more market power.

18. In addition, CCCS is mindful of certain theories of harm that may be more prevalent with the rise of e-commerce platforms that compete across multiple market segments and offer distinct products and/or services. In this regard, practices such as personalised pricing, exclusive dealing, leveraging (tying and bundling), and self-preferencing may find more prominence in cases involving e-commerce platforms.

19. A more complete discussion of these issues, and CCCS's views, is set out in Chapter VII of this report. Taking into account the findings of the market study and the discussions of these issues, CCCS has considered that it may also be opportune to update the *CCCS Guidelines on the Section 47 Prohibition* to provide greater clarity on (a) how CCCS may place less emphasis on market shares in the assessment of dominance for cases involving digital platforms; (b) how CCCS may take into account additional factors such as barriers to entry, network effects and the control or ownership of data in the assessment of dominance for cases involving digital platforms; and (c) the relevant theories of harm.

Mergers and Acquisitions involving Digital Platforms

20. Digital platforms, including e-commerce platforms that compete in multiple market segments and offer distinct products and/or services, may engage in mergers and

acquisitions as part of their growth strategy. CCCS recognises that not all mergers give rise to competition issues. Mergers can often have pro-competitive effects by positively enhancing the level of rivalry in a market, such that the merged firm has a greater ability to reduce price, improve quality, enhance efficiency or innovate to introduce new and better products. Some mergers could also be competitively neutral. Only mergers that substantially lessen competition and have no net economic efficiencies will infringe the Competition Act.

21. Nonetheless, CCCS notes that there is on-going debate overseas on whether existing merger control regimes in other jurisdictions are equipped to pick up “killer acquisitions” by digital platforms, in which an incumbent platform acquires a smaller innovative company with a quickly growing user base to eliminate competition. CCCS also notes that concerns have been expressed in some jurisdictions that such acquisitions may escape scrutiny by their respective competition authorities, as the merging parties’ turnovers may fall below the jurisdictional turnover thresholds required for mergers to be notified due to the potentially small turnover(s) of the target firm.

22. In light of these concerns, CCCS has reviewed its present merger regime, and on balance, takes the view that the regime in Singapore is sufficiently robust and flexible to deal with the challenges of “killer acquisitions”. CCCS can investigate a merger situation where there are reasonable grounds for suspecting that the section 54 prohibition will be or has been infringed, including potential “killer acquisitions”, regardless of the merger parties’ respective turnovers. CCCS also recognises that not all mergers give rise to competition issues, regardless of whether they involve digital platforms. Overall, there is currently no strong impetus to revamp the voluntary merger notification regime in Singapore.

23. That said, businesses should be fully mindful of the seriousness and consequences of anti-competitive mergers and acquisitions. To this end, CCCS will assess the competition effects in cases involving markets where innovation is an important feature of competition and where one or more of the merger parties is an important innovator, as well as mergers between digital platforms that are active in different market segments. CCCS will also monitor the emergence of new theories of harm that may be more applicable in mergers or acquisitions involving digital platforms, including merger situations that may involve access to data. A more in-depth discussion of these issues is found in Chapter VIII below.

24. Having reviewed the literature in relation to these issues, CCCS recognises that there is scope to provide further clarity in the *CCCS Guidelines on the Substantive Assessment of Mergers* in relation to how CCCS may apply the existing merger assessment framework to mergers involving digital platforms, so as to improve its relevance to

businesses. In this regard, CCCS aims to (a) provide greater clarity on how CCCS may assess mergers involving markets where innovation is an important feature of competition, and one or more of the merger parties is an important innovator; (b) provide greater clarity that data protection can be an aspect of competition on quality that CCCS may consider in its assessment; and (c) provide greater clarity on how conglomerate mergers may be assessed.

Access to Data

25. Access to data can confer a competitive advantage to digital platforms, especially where a platform has exclusive access to a large amount of individual-level data. Such large caches of data could be used by machine-learning algorithms deployed by digital platforms to better customer insights and improve their services, which in turn attracts more users, who could then contribute more data on an ongoing basis.

26. Based on the findings of the market study, the importance of data is likely to increase over time, as more data is collected and as data becomes increasingly integrated with the development of artificial intelligence (“AI”) and algorithms. Data could increasingly become a key input, in view of the increasing prominence that data has in informing an e-commerce platform’s business strategy.

27. Competition concerns may arise where a dominant undertaking refuses to supply or provide access to key inputs, such as data. In this regard, existing case precedents indicate that a dominant firm’s refusal to supply or provide a competitor access to data may constitute abusive conduct, and thereby infringe section 47 of the Competition Act.

28. Competition concerns may also arise with the increased deployment of AI and algorithms. Where AI or algorithms are used to support or facilitate any pre-existing or intended anti-competitive agreement or concerted practice, such activities will likely infringe section 34 of the Competition Act. Further, the increased use of AI or algorithms to make pricing decisions could increase the likelihood of other forms of potential collusion between sellers, including e-commerce platforms. In this regard, undertakings should be alert to such competition law risks, and ensure competition law compliance when designing or deploying AI or algorithms. As a start, undertakings can take reference, and comply with, existing frameworks in Singapore that address key ethical and governance issues when developing and deploying AI solutions.

29. A more in-depth discussion of these issues is found in Chapter IX below. CCCS has considered that it may be opportune to update the *CCCS Guidelines on the Section 47 Prohibition* to provide greater clarity in relation to the role of data as an input, and the competition concerns that may arise from limited access to data. CCCS will also continue to

closely monitor further developments in the area of AI and algorithms, with the view of ensuring that its toolkit is forward looking and fit for purpose in the future.

Consumer Protection

30. Successful e-commerce platforms rely on providing a good customer experience and fostering trust to sustain business from consumers. This has encouraged e-commerce platforms to institute a range of measures to not only earn and keep consumer trust, but to also protect consumers from unfair practices. As the intermediary between sellers and consumers and sometimes as a direct seller to consumers, e-commerce platforms play an important role in safeguarding consumers' interests. Some e-commerce platforms have put in place targeted measures to protect consumers against unfair practices. However, despite the various measures by e-commerce platforms, some consumers indicated that they have encountered some form of unfair practices.

31. CCCS considers it important that e-commerce platforms help raise sellers' awareness of the Consumer Protection (Fair Trading) Act (Cap. 52A) ("**CPFTA**") and advocate the adoption of good practices by sellers. Raising consumers' awareness on the unfair practices that consumers may experience when transacting on e-commerce platforms will also help consumers better protect themselves.

32. A more detailed discussion of the consumer protection measures put in place by e-commerce platform operators, and the perceptions of consumers is found at Chapter X below.

Conclusion

33. Whilst the findings of the market study may reflect the business strategies and competition dynamics, and consumer behaviour at this point in time, e-commerce is fast evolving and more changes can be expected in the future. It is impossible to predict with complete certainty how the business strategies of e-commerce platforms, and the competition dynamics in which they operate will continue to evolve. After all, digital markets are characterised by rapid technological change, and changing consumer behaviour. CCCS will continue to monitor market developments in Singapore in order to ensure that its framework and toolkit remains future-ready and appropriately contextualised to address any potential issues.

II. INTRODUCTION

1. Digitalisation has opened new ways for people to work, play and do business. Recent years have seen a proliferation of digital platforms, both globally and domestically. These digital platforms facilitate interactions between two or more groups of users over the internet, and provide value for users on one side of the platform by matching or connecting them with users on the other side(s) of the platform and vice versa. Digital platforms can be broadly categorised into platforms providing services such as search, social media, digital content aggregation and e-commerce.¹

2. With the growing prevalence of digital platforms, there is also a growing trend of e-commerce platforms that compete, or potentially compete in multiple market segments offering distinct products and/or services. Some of these e-commerce platforms could start their growth in a single product or service market segment, before expanding to other market segments, while others could launch in multiple market segments simultaneously. Over time, “super apps” that integrate a range of distinct products and/or services have emerged. An example of a well-known “super app” is WeChat, a platform that integrates communication services with e-commerce, e-payments, ride-hailing, and social media services, all within a single digital application.² In Singapore and the Southeast Asian region, such e-commerce platforms are gaining prevalence, with players such as Grab embarking on journeys to become regional “super apps”.³

3. CCCS has thus embarked on a market study to better understand the growth of e-commerce platforms that compete, or potentially compete in multiple market segments offering distinct products and/or services. The market study is part of CCCS’s ongoing effort to monitor key developments in the digital economy and understand the impact of these developments on competition and consumers in markets within Singapore.⁴

¹ This categorisation was used by the Australian Competition and Consumer Commission (“ACCC”) in its report [“Digital Platforms Inquiry”](#), published in June 2019.

² Business Insider Australia, [“This Chinese super-app is Apple’s biggest threat in China and could be a blueprint for Facebook’s future. Here’s what it’s like to use WeChat, which helps a billion users order food and hail rides.”](#), 22 December 2019.

³ Grab media release, [“Grab introduces four new services in Singapore in its Super App”](#), 23 April 2019; Grab Tech Blog, [“Making Grab’s Everyday App Super”](#), 3 July 2019.

⁴ CCCS has, over the years, conducted studies to understand new market developments, as part of its ongoing effort to monitor key developments in the digital economy and understand the impact of these developments on market competition and consumers in Singapore. In September 2019, CCCS published a [market study](#) report on the online travel booking sector in Singapore. Following the study, CCCS developed a set of guidelines on price transparency to provide guidance to suppliers. Following public consultation on the draft guidelines, the *CCCS Guidelines on Price Transparency* were published on 7 September 2020, and are available [here](#). In February 2019, CCCS collaborated with the Personal Data Protection Commission (“PDPC”) to publish a [discussion paper](#) on data portability, setting out the benefits and concerns which might arise with the introduction of a data portability requirement. These two studies were built on the earlier studies in 2015 and 2017. In 2015, CCCS had looked into the e-commerce markets in [Singapore](#) and [ASEAN](#) respectively. In 2017, CCCS collaborated with the PDPC

4. Such studies have also been undertaken by the governments or competition authorities in other jurisdictions to understand the growth of digital platforms, in an effort to determine if their existing competition regulatory frameworks and policies should be revised to better address the issues arising from the growth of digital companies.⁵

5. The market study seeks to understand the business models of such e-commerce platforms, and the competitive dynamics within which they operate. The market study also identifies the potential competition and consumer issues which may arise from the proliferation of such e-commerce platforms, and ensure that CCCS's assessment frameworks and toolkits are future-ready and appropriately contextualised to address such competition and consumer issues.

6. The market study has focused on the growth of e-commerce platforms that compete, or potentially compete in multiple market segments offering distinct products and/or services, which so far has not been the focus of studies overseas. The players operating in the e-commerce space in the region also tend to be more localised, with the effects on competition within the Singapore market and on customers potentially being more direct and immediate. With the Association of Southeast Asian Nations (**ASEAN**) Digital Integration Framework⁶ anticipating an increase in seamless digital-enabled trade of goods within the Southeast Asian region, the market study has covered the business models and competitive dynamics of e-commerce platform companies that operate in both Singapore and the Southeast Asian region to ensure that the findings from the market study are forward-looking and support on-going efforts to deliver the full potential of digital integration within the Southeast Asian region.

and the Intellectual Property Office of Singapore on a [research project](#) to study the implications of the proliferation of data analytics and data sharing on competition policy and law, personal data protection regulation and intellectual property law in Singapore. These studies assisted CCCS in its understanding of digital markets as they develop.

⁵ This includes the United Kingdom Digital Competition Expert Panel's review of competition in digital markets, and the accompanying report "[Unlocking Digital Competition](#)", which was published on 13 March 2019; the European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019; the digital platforms inquiry conducted by ACCC, and the accompanying "[Digital Platforms Inquiry Report](#)" which was published on 26 July 2019; and the United Kingdom Competition and Markets Authority's market study into online platforms and the digital advertising markets, and the [final report](#) published on 1 July 2020.

⁶ [ASEAN Digital Integration Framework](#).

III. REGULATORY FRAMEWORK IN RELATION TO COMPETITION AND CONSUMER PROTECTION

7. CCCS is a statutory board under the purview of the Ministry of Trade and Industry. It is responsible for maintaining, enhancing and promoting efficient market conduct as well as fair trading practices among suppliers and consumers. CCCS administers and enforces the Competition Act, which empowers CCCS to investigate and enforce against practices that have an adverse effect on competition in Singapore. CCCS is also the administering agency of the CPFTA, which protects consumers against unfair trade practices in Singapore.

8. CCCS's mission is to make markets work well to create opportunities and choices for businesses and consumers in Singapore. CCCS achieves this mission through a combination of enforcement action, market studies⁷, and advocacy. Market studies allow CCCS to gain an in-depth understanding of a specific sector, including the market structure, regulatory regime, commercial practices, and the state of competition underpinning the sector. This allows CCCS to better identify whether there is scope to improve the functioning of the sector, as well to better deal with cases involving this sector.

Competition Act

9. Enacted in 2004, the Competition Act aims to promote the efficient functioning of our markets and enhance the competitiveness of the Singapore economy, by providing a generic law to protect businesses and consumers from anti-competitive activities.

10. The Competition Act prohibits specified activities which adversely affect competition within a market in Singapore, including:

- a. agreements that prevent, restrict or distort competition ("**section 34 prohibition**");
- b. abuse of a dominant position ("**section 47 prohibition**"); and
- c. mergers that substantially lessen competition ("**section 54 prohibition**").

⁷ The Straits Times, "[Competition watchdog doing more market studies](#)", 5 June 2017. Examples of past market studies conducted by CCCS include the market inquiry into the supply of [formula milk](#) for infants and young children in Singapore completed in May 2017, the market inquiry on [car parts](#) in Singapore and the market inquiry on [retail petrol prices](#) in Singapore, both completed in December 2017. More recently, in September 2019, CCCS concluded its market study on the [online travel booking](#) sector in Singapore. This was the first market study conducted by CCCS that examined both competition and consumer protection issues, since CCCS took on the additional function of administering the CPFTA with effect from 1 April 2018.

11. **Section 34 prohibition.** The section 34 prohibition covers agreements (both formal and informal) between undertakings⁸ which have the object or effect of preventing, restricting or distorting competition within Singapore. The section 34 prohibition applies even when the agreement has been entered into outside Singapore or any party to the agreement is outside Singapore. An agreement covers agreements between undertakings, decisions by associations of undertakings and concerted practices (which may include co-operation without any agreement or decision⁹).

12. **Section 47 prohibition.** The section 47 prohibition covers conduct by one or more undertakings which amounts to an abuse of a dominant position in any market in Singapore. The section 47 prohibition relates to the *abuse* of a dominant position: there is no prohibition against an undertaking *being* in a dominant position. There is a two-step test to assess whether the section 47 prohibition has been infringed: whether an undertaking is dominant in a relevant market; and if it is, whether it has abused that dominant position to foreclose competition in a market in Singapore.

13. **Section 54 prohibition.** The section 54 prohibition covers mergers, which have resulted, or may be expected to result, in a substantial lessening of competition within any market in Singapore. The prohibition applies to both anticipated and completed mergers.

14. To assist businesses in how CCCS applies the Competition Act, CCCS has published a set of twelve (12) guidelines to provide greater guidance on the factors and circumstances that CCCS may consider in its competition assessment, as well as to provide information about CCCS's processes.

CPFTA

15. Under section 4 of the CPFTA, it is an unfair practice for a supplier¹⁰, in relation to a consumer transaction¹¹:

⁸ Section 2 of the Competition Act defines an "undertaking" as "any person, being an individual, body corporate, an unincorporated body of persons or any other entity, capable of carrying on commercial or economic activities relating to goods to services."

⁹ As elaborated upon in paragraphs 2.18 to 2.20 of the *CCCS Guidelines on the Section 34 Prohibition*, a concerted practice may exist where there is informal co-operation, without any formal agreement or decision. A concerted practice would be found to exist if parties, even if they did not enter into an agreement, knowingly substituted the risks of competition with co-operation between them.

¹⁰ Section 2 of the CPFTA defines a "supplier" as "a person who, in the course of the person's business (a) provides goods or services to consumers (b) manufactures, assembles or produces goods; (c) promotes the use or purchase of goods or services; or (d) receives or is entitled to receive money or other consideration as a result of the provision of goods or services to consumers, and includes any employee or agent of the person."

¹¹ Section 2 of the CPFTA defines a "consumer transaction" as "(a) the supply of goods or services by a supplier to a consumer as a result of a purchase, lease, gift, contest or other arrangement; or (b) an agreement between a supplier and a consumer, as a result of a purchase, lease, gift, contest or other arrangement in which the

- a. to do or say anything, or omit to do or say anything, if as a result a consumer might reasonably be deceived or misled;
- b. to make a false claim; or
- c. to take advantage of a consumer if the supplier knows or ought reasonably to know that the consumer is not in a position to protect his/her own interests or is not reasonably able to understand the transaction or any matter related to it.

16. Suppliers should also note that under the Second Schedule to the CPFTA, 27 specific unfair practices have been listed.

17. Under the CPFTA, CCCS is empowered to apply for an injunction against a supplier who has engaged, is engaging or is likely to engage in an unfair practice. Injunction applications can also be made against person(s) who knowingly abet, aid, permit or procure supplier(s) to engage in an unfair practice.

18. The CPFTA was also designed to empower consumers to seek civil redress against unfair trade practices in Singapore. The Consumers Association of Singapore (“**CASE**”) and the Singapore Tourism Board (“**STB**”) remain the first points of contact for local consumers and tourists respectively to file their complaints. CASE and STB will assist aggrieved consumers to obtain redress, and in some cases, compensation through negotiation and/or mediation. Errant retailers may enter into a Voluntary Compliance Agreement with CASE or STB, where they will agree in writing to stop the unfair practices, and in some cases, compensate affected local consumers or tourists. Errant retailers who persist in unfair trade practices will be referred to CCCS for investigation.

supplier is to supply goods or services to the consumer or to another consumer specified in the agreement, but does not include any transaction specified in the First Schedule”.

IV. THE IMPETUS FOR, AND THE OBJECTIVES AND METHDOLOGY OF THE MARKET STUDY

Impetus for the market study

19. The growth of e-commerce platforms in Singapore is facilitated by a population which has ready access to internet and smartphone devices. Internet usage rates in Singapore continues to grow steadily – in 2019, about 89% of residents used internet (in the last three months), up from 87% and 84% in 2018 and 2017 respectively.¹² Similarly, mobile phone penetration in Singapore continues to grow, rising to a high of more than 150% in the first half of 2019.¹³ Even at home, almost all residents used internet-enabled mobile phones as the top equipment of choice to access the internet while the use of computers declined by 8 percentage points to 86%.¹⁴

20. While instant messaging, social networks and getting information remain the top three most common online activities on mobile equipment, there has been a significant increase in the use of mobile equipment for the purchase or ordering of goods or services. Further, the share of Singapore residents who made online purchases on their mobile equipment increased by 6 percentage-points, as compared to 2018, to hit 66% in 2019.¹⁵ Although apparel remained the most popular item purchased online (65%), online purchases of food or groceries (45%) and transportation (44%) gained popularity in 2019.¹⁶ Additionally, around 63% of online shoppers spent at least S\$100 in the past three months on their online purchase.¹⁷

21. Likewise, businesses in Singapore continue to engage in e-commerce activities¹⁸. In 2019, the proportion of businesses engaged in e-commerce activities reached 19%, an increase from 13% in 2017.¹⁹ Businesses in the education, wholesale and retail trade sector, and infocomm and media sectors were more likely to engage in e-commerce activities compared to other sectors.

¹² IMDA. [Annual Survey on Infocomm Usage in Households and by Individuals for 2019 report](#), last updated on 1 June 2020.

¹³ IMDA, [data on mobile penetration rate](#), last updated on 6 January 2020.

¹⁴ IMDA. [Annual Survey on Infocomm Usage in Households and by Individuals for 2019 report](#), last updated on 1 June 2020.

¹⁵ IMDA. [Annual Survey on Infocomm Usage in Households and by Individuals for 2019 report](#), last updated on 1 June 2020.

¹⁶ IMDA. [Annual Survey on Infocomm Usage in Households and by Individuals for 2019 report](#), last updated on 1 June 2020.

¹⁷ IMDA. [Annual Survey on Infocomm Usage in Households and by Individuals for 2019 report](#), last updated on 1 June 2020.

¹⁸ In the context of the survey, “E-commerce activities” refer the sale or purchase of goods and services over computer mediated networks or the internet. Payment and delivery of the good or service can be offline. IMDA, [Annual Survey on Infocomm Usage by Enterprises for 2019 report](#), last updated on 1 June 2020.

¹⁹ IMDA, [Annual Survey on Infocomm Usage by Enterprises for 2019 report](#), last updated on 1 June 2020.

22. The shift in consumption behaviour towards e-commerce has supported the emergence of a vibrant e-commerce platform industry in Singapore. There is a range of e-commerce platforms providing e-commerce services, such as marketplaces for new and/or used goods, groceries, food delivery services, point-to-point transport services and e-payment services. Sellers, based in Singapore or overseas, offer their products and/or services through these marketplaces. Many sellers, who had in the past only sold their products or services from a physical retail store, have also started to sell their products or services online. Furthermore, a range of ancillary services providers, such as third-party logistics providers, have emerged to support e-commerce activities in Singapore.

23. Alongside the growing prevalence of e-commerce platforms in Singapore, there is a growing trend of e-commerce platforms that compete in multiple market segments offering distinct products and services in Singapore and the region. The rise of the “super apps” in Singapore and Asia is one such example. For example, Grab has embarked on a journey to become a regional “super app” which bundles together a range of services like e-payment, marketplaces, ride-hailing and food delivery services in a single app. The growing mobile phone penetration enables consumers to access the internet through mobile phones (rather than a personal computer), and “super apps” serve the needs of these consumers through providing a range of products and/or services through a single mobile app. Further, the lack of an entrenched credit card culture and use of cash for transactions in many parts of Asia has provided an opportunity for “super apps” to incorporate e-payment services into their mobile apps and facilitate the rapid adoption of mobile payment.

24. Like traditional firms that want to expand their product portfolio, diversify their activities and expand internationally, e-commerce platforms have commercial incentives to enter new markets. Often, these markets are adjacent and/or complementary to existing products or services, and/or the geographical locations, as the e-commerce platforms seek to maximise synergies and network effects²⁰. For example, an e-commerce marketplace may offer services such as logistics, fulfilment, delivery and forecasting to the sellers using its platform. While these services are usually optional to the sellers, they can confer significant benefits to the e-commerce platforms by increasing the value proposition and therefore “stickiness” of the platform to the sellers, thereby strengthening the network effects experienced by the e-commerce platforms. Operating across several market segments also provides e-commerce platforms with a more holistic visibility of consumer behaviour and

²⁰ Network effects refer to how the number of users for a product or service impacts the value of the product or service to other users. Network effects can be direct, where the value of a platform’s product or service (e.g. email) to a user depends on the number of other users on the same side of the platform; or indirect, where the value of a platform’s product or service to a user depends on the number of users on another side of the platform (e.g. computer’s operating system).

spending as well as key data that may be used to stimulate sales across multiple market segments.

Focus of the market study

25. In view of the above trends, CCCS's market study focuses on e-commerce platforms²¹ that generally have the following core characteristics:

- a. The business operates at least one **multi-sided platform**. A platform facilitates interaction between two or more groups of users. The platform creates value for consumers or producers on one side by matching or connecting them with consumers or producers on the other side. This differs from the economic activities of non-platform businesses that operate along a supply chain where businesses generally add value to inputs obtained from upstream providers, and sell them with a margin to downstream customers.
- b. The platform facilitates **e-commerce as its primary activity**. In other words, the platform facilitates the commercial transaction of products and/or services between different groups of users over the internet, including through mobile apps. This covers the sale of goods and services, such as apparel, food or groceries and transportation; as well as subscription-based models (e.g. subscriptions to Spotify, Netflix and Amazon would be covered).
- c. The platform business operates in **more than one market segment in Singapore**, offering distinct products and/or services.²²

26. Some platform businesses can be clearly identified as e-commerce platforms that meet the core characteristics above, for instance, Grab (i) operates a platform that facilitates interactions between groups of users by providing matching and connecting services; and (ii) facilitates the supply of a range of non-substitutable e-commerce services, including ride-sharing, food delivery, e-payment and other services. However, the characterisation of other platform businesses is less straightforward due to the diversity of business models and operating practices adopted by e-commerce platforms.

²¹ For the avoidance of doubt, this market study did not focus on digital advertising, search, social media content or other non-e-commerce platforms.

²² The practical application of this core characteristic may be illustrated through two separate examples. The first example is an online marketplace platform that offers many different types of goods (e.g. electronics and beauty products) for sale. Depending on the facts, the marketplace may be a single market segment, as opposed to separate segments for electronics and beauty products, as the focal service offered by the marketplace platform is the matching or connecting of suppliers and consumers. The second example is an e-payment service developed or operated by a business to support its platform service. The e-payment service may be a distinct service from the platform service, since it is not a substitute for the platform service.

27. For the avoidance of doubt, regardless of whether the platform operator offers multiple applications for each distinct product or service, or consolidates the sale of its products or services within a single app, the platform operator may still be categorised as a single e-commerce platform that competes in multiple market segments, so long as the abovementioned three core characteristics are met.

28. CCCS has applied the core characteristics set out in paragraph 25 above to a set of platforms with a presence in Singapore to identify e-commerce platforms that compete in multiple market segments offering distinct products and/or services in Singapore. A summary of such examples, including those which are likely to be considered e-commerce platforms competing in multiple market segments offering distinct products and/or services, in Singapore can be found in Table 1 below.

Table 1: E-commerce platforms that compete in multiple market segments offering distinct products and/or services in Singapore

COMPANY	DOES THE BUSINESS OPERATE AT LEAST ONE MULTI-SIDED PLATFORM?	DOES THE BUSINESS FACILITATE E-COMMERCE AS ITS PRIMARY BUSINESS ACTIVITY IN SINGAPORE?	DOES THE BUSINESS OPERATE IN MORE THAN ONE MARKET SEGMENT?	COMMENTS
More likely to be e-commerce platforms that compete in multiple market segments offering distinct products and/or services in Singapore				
Grab	✓	✓	✓	Ride sharing, food delivery, e-payments, courier, attraction tickets, hotels and insurance
Lazada	✓	✓	✓	Marketplace and groceries
Fave	✓	✓	✓	Vouchers for goods and services, and e-payments
Amazon	✓	✓	✓	Marketplace and groceries
Carousell	✓	✓	✓	Second-hand goods, property, automobiles
Shopee	✓	✓	✓	Marketplace (and gaming and payments via its parent)
FoodPanda	✓	✓	✓	Food delivery and groceries
Less likely to be e-commerce platforms that compete in multiple market segments offering distinct products and/or services in Singapore				
Gojek	✓	✓	X	Only operates a transport platform in Singapore
Ryde	✓	✓	X	Only operates a transport platform
Deliveroo	✓	✓	X	Only operates a food delivery platform
Facebook	✓	X	✓	E-commerce is not the primary business
Google	✓	X	✓	E-commerce is not the primary business
Apple	✓	X	✓	E-commerce is not the primary business
DBS	✓	X	✓	E-commerce is not the primary business
Singtel	✓	X	✓	E-commerce is not the primary business
Singapore Airlines	✓	X	✓	E-commerce is not the primary business

Objectives of the market study

29. The objectives of the market study are to understand the business models of e-commerce platforms that compete, or potentially compete in multiple market segments offering distinct products and/or services, as well as the competitive dynamics within which they operate. The market study also aims to identify the potential competition and consumer issues which may arise from the proliferation of such e-commerce platforms, and how to ensure that CCCS's assessment framework and toolkits are future-ready and appropriately contextualised to address such issues.

30. Issues that the market study set out to examine and address include:

- a. The reasons for the increasing prevalence of e-commerce platforms that compete, or potentially compete in multiple market segments offering distinct products and/or services;
- b. The business strategies of such e-commerce platforms, and the role and importance of data as well as e-payment services in the overall strategies of such e-commerce platforms; and
- c. Competition and consumer protection issues, if any, that may be raised by the proliferation of such e-commerce platforms. These issues include whether the existing framework for the assessment of market definition, market power and mergers amongst such e-commerce platforms need to be adapted to be fit for purpose in the digital era.

31. Understanding these issues in the context of the existing industry landscape assists CCCS in its review of whether the existing assessment frameworks and toolkits need to be adapted and refined, so as to better assess and address competition and consumer protection issues in the digital era and/or to provide greater clarity and guidance to businesses operating in the digital space.

Methodology used in the market study

Appointment of economic consultant

32. As part of the market study, CCCS appointed economic consultant, Frontier Economics Pty. Ltd. ("**Frontier Economics**"), to assist with the following work streams in the market study:

- a. Interviews with industry stakeholders;

- b. An online survey of e-commerce platform users; and
- c. A literature review covering relevant economic literature and experiences in other jurisdictions.

33. The interviews with industry stakeholders were conducted from October 2019 to March 2020, while the online survey of e-commerce platform users was conducted from November to December 2019.

Interviews with industry stakeholders

34. Frontier Economics conducted in-depth interviews with a range of industry stakeholders, including companies operating platforms and non-platform companies that interact with platforms in Singapore. The focus of these interviews was to better understand the competitive strategies of platforms, including:

- a. the reasons for, as well as the costs and benefits of, operating in multiple market segments that offer distinct products and/or services;
- b. the challenges of customer acquisition;
- c. the role and importance of data as well as e-payment services in the overall strategies of e-commerce platforms; and
- d. the differences between operating e-commerce platforms and ‘brick and mortar’ stores.

35. A total of 13 interviews were conducted. In identifying the stakeholders for interviews, a representative sample was obtained by approaching companies of varying sizes, operating a variety of business models.²³

²³ These companies include (i) e-commerce platforms that compete, or potentially compete in multiple market segments offering distinct products and/or services in Singapore or in the Southeast Asian region; (ii) e-commerce platforms that offer their own dedicated e-payment services (e.g. e-wallets); (iii) e-commerce platforms that do not offer their own dedicated e-payment services; (iv) companies that offer e-payment services; (v) companies supplying services relating or adjacent to e-commerce platforms; and (vi) specialist consultancy that advises platform companies on business strategy.

Online survey of e-commerce platform users

36. An online survey of platform consumers²⁴ and platform suppliers²⁵ was conducted to better understand the preferences and behaviours of platform user groups in Singapore. This was to assist with the analysis of the competitive dynamics between e-commerce platforms.

37. The following factors were tested in the online survey:

- a. use of and preferences for e-commerce platforms that compete in multiple market segments offering distinct products/services;
- b. experience and preferences for switching and multi-homing;
- c. experience and preferences for data protection and the benefits of sharing personal data; and
- d. experience, if any, with unfair practices or exclusionary conduct.

38. In total, there were 972 respondents, of which 67% were platform consumers and the remaining 33% were platform suppliers. The consumer survey included five segments covering (a) point-to-point transport, (b) food delivery, (c) groceries/goods, (d) in-store payments and (e) online payments. The supplier survey included four segments covering (a) providing point-to-point transport, (b) food delivery²⁶ and (c) selling groceries/new or used goods and (d) selling of cooked food²⁷.

Literature review

39. In addition to the interviews and survey, Frontier Economics performed a literature review covering economic literature and relevant studies by other competition authorities, to identify and inform CCCS of the potential competition and consumer protection issues, and outline possible appropriate regulatory responses that CCCS could consider. This included whether other jurisdictions have observed similar kinds of transformational changes in e-commerce markets and their proposed responses, and developments in recent economic literature relating to the analysis of markets, market power and specific competition concerns pertaining to markets in which digital platforms compete.

²⁴ Platform consumers refer to individuals who purchase products or services on an e-commerce platform.

²⁵ Platform users refer to either businesses or individuals who supply products or services on an e-commerce platform.

²⁶ This segment refers to platform users who provide food delivery services on the platform.

²⁷ This segment refers to platform users who operate food and beverage businesses (e.g. restaurants) that sell cooked food to consumers on the platform. These cooked food orders are then collected and delivered by users who provide food delivery services on the platform.

Review of framework and toolkit

40. Following the completion of the work by Frontier Economics, CCCS carefully reviewed whether its assessment framework and toolkits are future-ready to deal with the possible competition and consumer protection issues identified in the market study. Part of this assessment included a review of the suite of CCCS Guidelines, in order to ensure that CCCS's overall assessment framework remains relevant and appropriate when assessing conduct involving digital platforms. CCCS also sought to identify areas where more guidance can be provided to digital companies to increase their understanding of how competition issues may be viewed and assessed in Singapore.

41. CCCS also took into consideration relevant academic literature, as well as the policy positions and enforcement actions undertaken by overseas competition authorities. In addition, CCCS engaged relevant government agencies in Singapore to obtain inputs on CCCS's findings and recommendations.

42. All stakeholders participated in this study voluntarily. CCCS thanks all stakeholders for providing their time and valuable inputs.

V. KEY FINDINGS ARISING FROM THE MARKET STUDY

43. Based on the information gathered through the interviews with industry stakeholders, the online survey of e-commerce platform users and literature review, CCCS gleaned useful insights about industry players including their motivations for expanding into multiple markets, the competitive strategies adopted and their use of e-payment services. These findings provide a better understanding of the business strategies and incentives behind e-commerce platforms' decisions to operate in multiple market segments and offer distinct products and/or services. The findings also provide insights into the rising prevalence of such e-commerce platforms in Singapore. The findings related to the objectives noted in paragraph 30 above, are discussed at paragraphs 44 to 69 of this chapter. Additional findings in relation to multi-homing behaviour by platform users, e-payment services as one of services offered by e-commerce platforms, the importance of data to e-commerce platform operators and data protection as a parameter of competition amongst e-commerce platforms are discussed at paragraphs 70 to 86 of this chapter.

Understanding the business strategies of e-commerce platforms that operate in multiple market segments offering distinct products/services

Establishing viability in a single market segment first

44. CCCS observed that e-commerce platforms usually start off as a player in a single market segment, and incrementally expand into other market segments. The market study did not find any examples of e-commerce platforms that began its operations in multiple market segments at the outset. It would therefore appear that platform operators seek to first establish a position of viability in one market segment before looking to expand into additional market segments.

45. In order to establish viability in the first market segment, e-commerce platform operators face a major challenge to gain a critical mass of multiple user bases on board (e.g. for a marketplace platform, the user bases would comprise sellers on one side and buyers on the other) to use the platform so as to generate indirect network effects.²⁸ Indirect network effects refer to externalities that relate to *membership* on a platform, and reflect the fact that the value of a platform to users on one side of the platform is dependent on the number of users on the other side of the platform.²⁹

²⁸ A more detailed discussion of indirect network effects is found in Chapter VI below.

²⁹ Michael L. Katz and Carl Shapiro, *Systems competition and network effects*, Journal of Economic Perspectives 8, no. 2 (1994), pp. 93-115. Paul A. Johnson, *Indirect network effects, usage externalities and platform competition*, Journal of Competition Law and Economics, Oxford University Press, Vol. 15, Issue 2-3 (2019), pp. 283-297. A more detailed discussion about the role of indirect network effects is found in Section VI below.

46. As part of their user acquisition strategies, e-commerce platform operators indicated that they seek to convert offline consumers to online consumers. Most e-commerce platform operators provided feedback that they view brick-and-mortar product/service providers as competitors. While the number of transactions on e-commerce platforms is growing, the number is still relatively small compared to the number of offline transactions. For example, in November 2019, estimated total retail sales in Singapore was \$3.6 billion, of which online retail sales made up an estimated 8%.³⁰ In June 2020, with the introduction of circuit breaker measures in Singapore due to the COVID-19 pandemic, the estimated proportion of online retail sales out of total retail sales value increased to 18.1%.³¹

47. Given the larger size of the offline market, a number of e-commerce platform operators indicated that it took considerable effort to convert offline consumers into online consumers. There are many reasons why a consumer may choose to purchase goods in a physical store. These include:

- a. consumers distrusting online transactions;
- b. consumers wanting to physically touch and test goods before purchasing them; and/or
- c. consumers not wanting to wait for delivery.

48. The strategies used by e-commerce platform operators vary. Some e-commerce platform operators have supplemented their online business with physical brick-and-mortar stores where customers can view the products before purchasing them on the app. Such brick-and-mortar stores serve to build consumer confidence in the e-commerce platform operator and the platform itself, as they allow customers to assess the quality of the products. This strategy also encourages customers to install and use the app, which may lead to further online purchases in the future.

49. That said, it is not clear if the benefits of maintaining a physical store are applicable to all types of products sold on e-commerce platforms. For instance, consumers may be less inclined to purchase fresh produce such as fruits, vegetables and meat online even when provided with the prior opportunity to view the fresh produce at a physical store, since it is easier for consumers to ensure the freshness of the produce by purchasing at a physical store. Similarly, consumers may want to have the opportunity to test different brands or types of

³⁰ Department of Statistics of Singapore, [Retail Sales Index and Food & Beverage Services Index](#), November 2019. A part of these offline sales is likely to be spending by tourists that are temporarily in Singapore and are less likely to be converted to online shopping. It should also be highlighted that these figures pre-date the COVID-19 pandemic.

³¹ Department of Statistics of Singapore, [Retail Sales Index and Food & Beverage Services Index](#), June 2020.

beauty products before choosing one they wish to purchase. This would mean that it would be more convenient for the consumer to purchase beauty products at a physical store. This stands in contrast to other types of goods, such as fast-moving consumer goods, which are relatively standardised, have a low engagement (i.e. little or no effort to choose them), a low price and are generally consumed fairly rapidly. These factors suggest that consumers may be less picky when it comes to deciding whether to purchase these goods online or offline.

50. Some e-commerce platform operators use other strategies to build trust in the platform, in order to convert offline consumers to online consumers. For example, online reviews and ratings may be used to assure consumers of the quality of goods. Feedback systems for consumers, as well as customer protection policies (e.g. a comprehensive refund or returns policy) designed to shield consumers from the risk of undesirable outcomes also serve to convince consumers about the trustworthiness of sellers on their platforms.

51. Some e-commerce platform operators may also try to integrate offline experiences into their app (e.g. through the use of e-payment services at brick-and-mortar stores). Such integration strategies may help to allay the misgivings that consumers may have in relation to the e-commerce platform operator and its platform.

52. Industry stakeholders provided feedback that entry strategies and associated success factors vary widely across platform types, geographies and time. Anything that facilitates the attractiveness of one or both sides of a platform is a key advantage for market entry. Factors such as user data (e.g. the availability of data about individuals who may become prospective users of the e-commerce platform), as well as access to financing which alleviates the need for charging participants in the early days or the quality of its matching and connecting service, will help its entry and scaling.

53. Further, e-commerce platform operators have to be nimble, often adapting their strategies to reflect changing consumer demands, to better serve market niches and/or to build scale on both sides of the platform in order to facilitate the requisite network effects for the platform to be a success. Such strategies include the waiving of certain fees in order to grow its platform, or the use of financial incentives to encourage new users to try the platform.

54. Once customers have been acquired and are regularly using the platform, indirect network effects will tend to favour customer retention because it supports higher service quality and/or lower cost for platforms and users.

Motivations and strategies of e-commerce platforms to expand into multiple market segments

55. An e-commerce platform that is active in a single market segment may be motivated to expand into another market segment if it believes that this will increase the profits that its business will generate in the future. This increase in profits might derive from two key sources:

- a. in the activities that the business undertakes in the second market segment; and/or
- b. where the activities that the business undertakes in the second market segment increases the profits that the business earns from the first market segment.

56. For example, where the e-commerce platform operator is aware that consumers value being able to purchase multiple products together through a single app for reasons such as convenience, it may seek to enter into other market segments by re-purposing its app in order to establish a new marketplace at a lower cost. The e-commerce platform may also gain from the extension of brand trust across the different products and/or services.

57. The decision by an e-commerce platform operator to enter another market segment will be affected by conditions in the market that influence the costs and benefits of entry. Some relevant market conditions may be³²:

- a. the profits presently earned by the existing market players;
- b. the static or structural entry barriers into the market, such as economies of scale, extent of sunk costs and network effects;
- c. the incumbents' expected reactions to entry;
- d. other potential entrants and their likely behaviours;
- e. any relevant resources already in the hands of the entrant, for example, data on consumer and supplier preferences, or existing physical assets such as warehouses and delivery vehicles; and

³² Caves and Porter, "From entry barriers to mobility barriers", *The Quarterly Journal of Economics*, Vol. 91, No. 2 (May, 1977), pp. 241-262.

- f. the sunk costs of gathering information and making the decision to enter the market.

58. It follows that an e-commerce platform operator's decision on which markets to enter largely involves identifying which markets are likely to provide the business with the greatest profit earning potential. This decision appears to be essentially reduced to two key questions particularly where the decision relates to entry in immature markets. The first is whether the new market segment has unmet demand and/or strong growth prospects. It is axiomatic for a profit maximising business to seek to identify and enter markets that provide the greatest potential for future growth.³³ The second is whether the e-commerce platform has a way to achieve a competitive advantage. A competitive advantage refers to the ability of a business to outperform its competitors.

59. One manner in which an e-commerce platform may achieve a competitive advantage in the second or subsequent market segment is through the leveraging of existing users from the first market segment. An e-commerce platform that is able to market its new products or services to an existing user base will face lower entry costs and better achieve scale.³⁴ In this regard, e-commerce platform operators might be more effective in leveraging its existing user base if users are loyal to the platform. E-commerce platform operators may seek to engender greater platform loyalty through both price and non-price strategies. Based on the findings of the platform user surveys, both price and non-price factors (such as ease of use, user familiarity, platform reputation) are regarded as important by a significant proportion of platform users.³⁵ The overall picture presented by the survey results and the industry stakeholder engagements indicates that price may be key in winning over users, but non-price factors play an important role in retaining users over the longer term.³⁶

60. E-commerce platform operators indicated that they utilise a range of strategies to engender platform loyalty. One such strategy included the use of financial incentives to increase user stickiness, including the use of discounts and cashback schemes. Feedback from industry stakeholders indicated that discounts are not particularly useful in building user loyalty, as local users tend to be platform agnostic. One platform operator observed that small differences in prices between platforms will lead to large changes in the number of orders and cancellations. A number of e-commerce platforms offer cashback schemes, through which

³³ Two industry players expressed that their decisions to enter into a new market segment was driven by expectations of strong growth in that market segment, notwithstanding the presence of existing players.

³⁴ Two industry players explained that they were able to leverage on existing supplier bases that were providing existing services in the first market segment to expand into other market segments, as these same suppliers could offer similar services in the second or subsequent market segments.

³⁵ A more detailed discussion about platform loyalty and multi-homing behavior by platform users is found at paragraphs 70 to 74 below.

³⁶ At least three industry players indicated that financial incentives may be useful in attracting new users, but that customer retention required much broader consideration of non-price factors that affected the quality of the product/service provided.

consumers have the ability to receive cash rewards following purchases made on the platform, which can be used to offset future purchases on the platform. These cashback schemes are designed to encourage consumers to come back to the platform, and make additional transactions.

61. Another means of achieving user loyalty is through reward programmes and subscription-based benefits. These programmes reward users with financial benefits upon increased spending on the platform, or provide preferential types of products/services to specific groups of users. These programmes are designed so that the benefit received by users increases with use of the platform, such that users will be encouraged to continue making additional transactions on the platform.

62. Another manner in which a competitive advantage may be gained is through the leveraging of data collected from users of the platform in the first market segment in order to better understand user preferences and deliver products or services that are better aligned to these preferences.³⁷ Feedback gathered from industry stakeholders indicated that data plays an important role for e-commerce platform operators to understand the most effective strategies for engendering user loyalty, and allows them to tweak their strategies to better suit their users' needs. For example, e-commerce platform operators indicated that user data is analysed in order to assess how users react to various strategies employed by the platform operator to improve user loyalty. This allows them to better time the rollout of financial incentives to encourage increased user spending on the platform, as well as to adjust website/app layout in order to optimise user traffic.

63. In addition, e-commerce platform operators also indicated that their data analytics capabilities give them a competitive advantage over their competitors. E-commerce platform operators indicated that they use the data collected to improve the quality of products/services offered to customers. As noted in paragraph 59 above, such non-price factors help to improve customer stickiness.

64. Other ways in which a business could gain a competitive advantage is through leveraging on a trusted brand to gain customers in the second or subsequent market segment, as well as through economies of scope³⁸ as it produces more types of products or services.

³⁷ Two industry players explained that data collected from users on the platform in the first market segment led to observations that assisted the business to launch new value-added services for users.

³⁸ Economies of scope arise when a firm's average cost of production falls as it produces more types of products/services. Economies of scope typically arise from commonality of production processes and expertise, and cost savings are achieved by sharing a firm's resources and know-how across the production of multiple types of products/services. Industry players shared that they may be able to achieve economies of scope through the sharing of physical infrastructure or through the sharing of internal corporate functions.

65. In addition, an e-commerce platform operator's decision to expand into a second or subsequent market segment in Singapore may be informed by considerations or strategies relevant to the Southeast Asian region. For example, industry players active across multiple countries in the Southeast Asian region may choose to introduce a new product/service in Singapore, following a successful introduction in other countries in the Southeast Asian region or due to considerations external to the Singapore market. By the same token, e-commerce platform operators may decide to enter a new market segment in another country but decide not to introduce that product/service in Singapore.

66. In this regard, most of the industry stakeholders interviewed for the market study have their regional headquarters in Singapore and local offices in each of the countries they operate in. In general, operational decisions in each country are made locally but major strategic decisions are made by the regional headquarters in Singapore. For e-commerce platform operators that are active across multiple geographical areas, operational decisions in each country appear to be driven by localised conditions which take into account differences in economic, political, social and other factors between the various countries. E-commerce platform operators recognise that what works in one country may not automatically work in another. Such specialised local knowledge assists to establish a presence more quickly, and serve to capitalise on gaps in the market.

Challenges associated with expanding into subsequent market segments

67. The key entry cost for e-commerce platform operators that seek to expand into second or subsequent market segments, much like for the first market segment, is the investment required to acquire the number of users sufficient to achieve the network effects. E-commerce platform operators also face other entry costs, including software development costs to build the app's functionality that allows customers to access the service, and potentially the costs associated with integrating the new product/service with the app offering the first product/service. While presumably the cost of integrating services into a single app can be avoided by keeping separate apps, industry players indicated that improving ease of use by having all services in a single app can be an important factor in ensuring customer retention.

68. In addition, industry stakeholders also indicated that e-commerce platforms have largely developed as start-ups rather than from the expansion of brick-and-mortar stores. As a consequence, funding has been a key issue for the expansion of many e-commerce platform operators. Historically, achieving fresh funding has required ongoing expansion into different geographic or product markets to grow revenue or gross merchandise value. This appears to

have become more difficult in recent years with a shift in investor expectations from revenue growth to profitability.³⁹

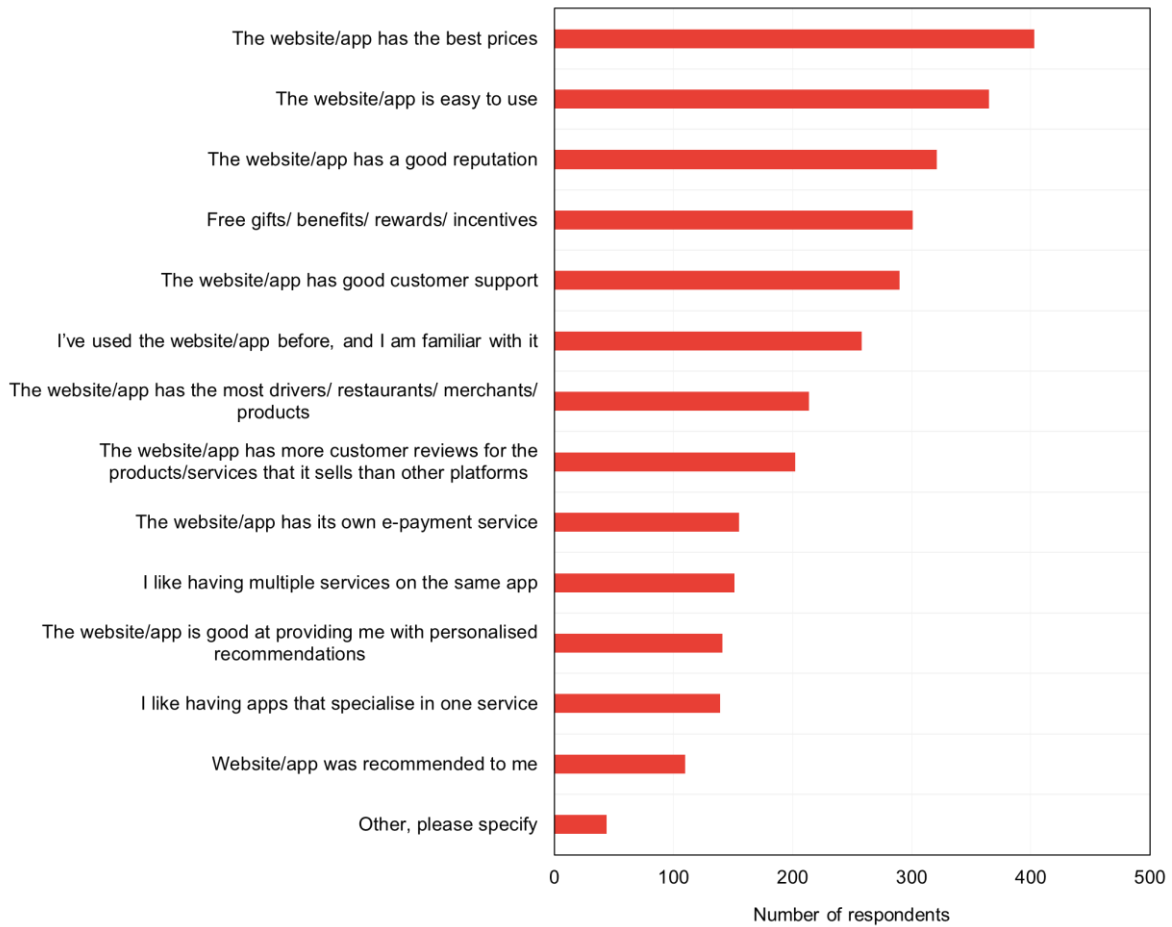
69. Other challenges identified by e-commerce platform operators include the existence of incumbent or potential future competitors within the market segment of interest. CCCS noted with interest that e-commerce platform operators tended to identify both online and offline product/service providers within a specific market segment as their closest competitors. In addition, e-commerce platforms that expand into subsequent market segments may compete with other suppliers who specialise and only compete in one market segment. For example, specialised e-commerce platforms dedicated to specific types of products and/or services, such as fashion (e.g. Zalora), exist alongside general e-commerce marketplaces (e.g. Lazada, Qoo10).

There are indications that customers multi-home on multiple platforms to check for better offers

70. As noted in paragraph 59 above, the user survey indicates that price is a very important factor for a large majority of surveyed consumers in respect of their initial choice of e-commerce platforms. This is illustrated in Figure 1 below.

³⁹ CNBC, "[SoftBank's Masayoshi Son mulls more cautious investment strategy for Vision Fund 2 as market shuns Uber and WeWork, sources say](#)", 11 October 2019.

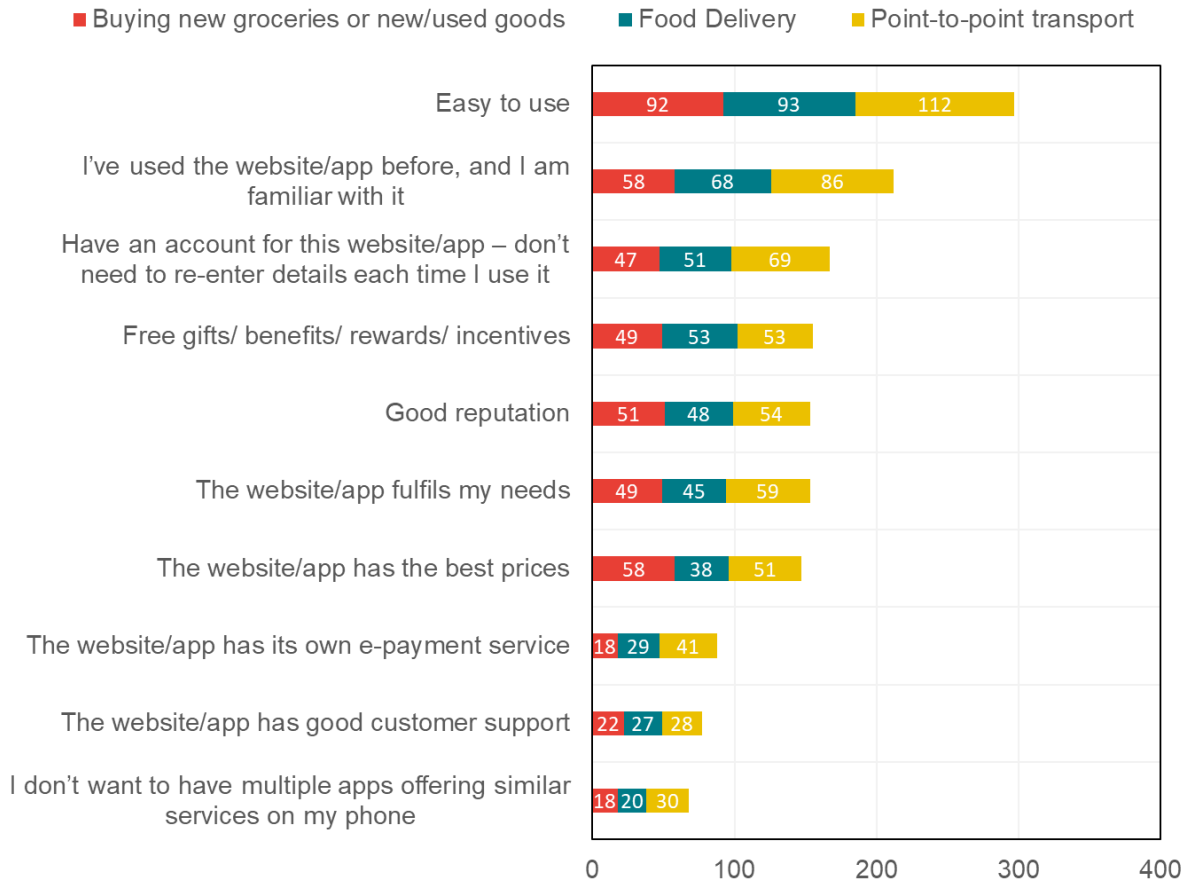
Figure 1: Factors considered by consumers to be “very important” in their choice of platform



Source: Frontier Economics and Kadence. C1 - Below you will see a list of statements. On a scale of 0 to 3, with 0 being not important and 3 being very important, please indicate for each statement how important it is as a reason for you to choose to use a website/app. Notes: N = 650.

71. Interestingly however, in the longer term, the user survey results indicate that customer loyalty is often derived from non-price factors such as ease of use, trust and familiarity with the platform. In this regard, the user survey examined reasons for why customers tended to always or often use selected apps for defined uses, and the responses are set out in Figure 2 below.

Figure 2: Reasons for tending to always or often use the app for this service



Source: Frontier Economics and Kadence, B7 - Why do you tend to use (platform) for (usage type)? Notes: N = point-to-point transport (204); food delivery (194); buying new groceries or new/used goods (185), multiple responses allowed.

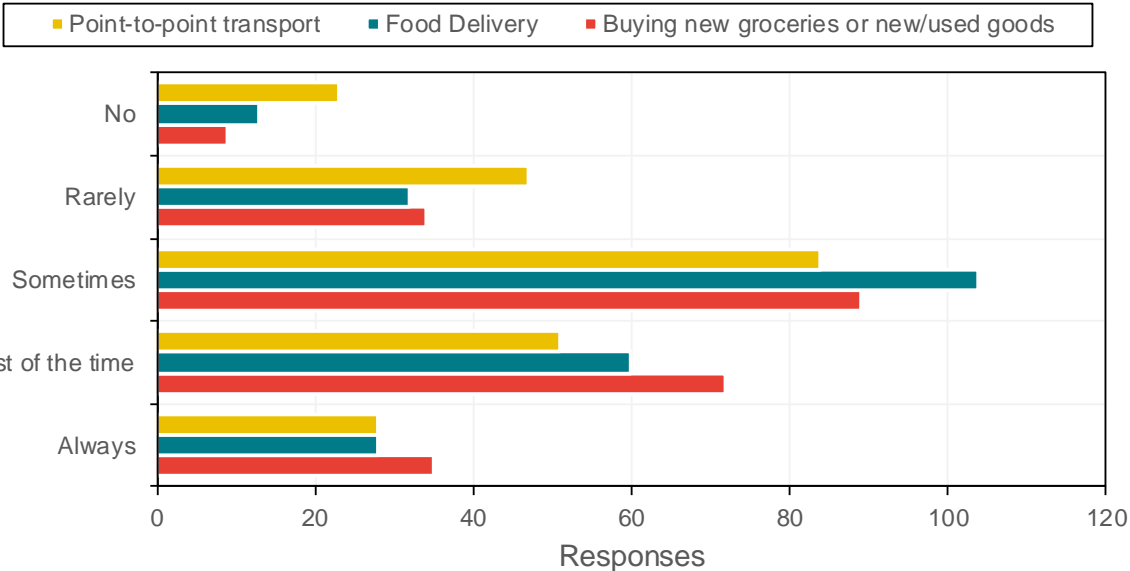
72. The responses suggest that for repeat customers, non-price factors are more significant than price, and e-commerce platforms often employ a range of non-price strategies to retain customers such as improving the ease of use of the platform, providing other value-added services, and rolling out reward schemes. As a result, once customers have chosen an e-commerce platform, they tend to show some degree of loyalty to that e-commerce platform.

73. Notwithstanding this, the user survey also indicates that a significant number of customers practise multi-homing⁴⁰ and actively check other e-commerce platforms for better prices. Notably, for the customers that end up making the switch to other e-commerce platforms, price is cited as the key reason for doing so. These survey results are reflected in Figures 3, 4 and 5 below.

⁴⁰ Multi-homing refers to the practice by suppliers or consumers of using more than one platform simultaneously to buy or sell.

74. This suggests that overall, whilst customers do display a certain degree of platform loyalty due to non-price factors and strategies employed by e-commerce platform operators, price continues to play an important role in attracting and retaining customers as a significant number of customers currently practise multi-homing. If these customers discover that better prices are available on another platform, they may not continue to display strong platform loyalty to their initial choice of platform and may end up switching to the other platform. This is consistent with the observations of one e-commerce platform operator that small differences in prices tended to lead to large decreases in orders or increases in order cancellations.

Figure 3: When using a platform, do you also check other platforms?



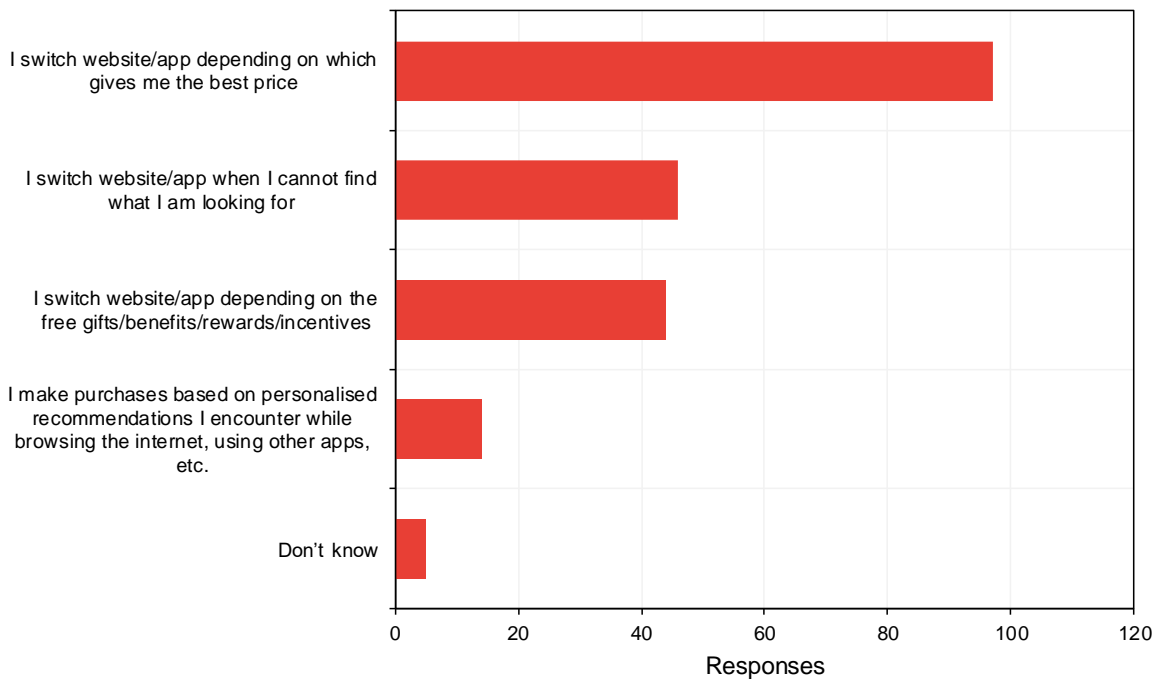
Source: Frontier Economics and Kadence, B9 - When using a website/app for (usage type), do you also check other websites/apps? Notes: N = point-to-point transport (233); food delivery (237); buying new groceries or new/used goods (239).

Figure 4: Reasons for checking other platforms



Source: Frontier Economics and Kadence, B10 - Why do you check other websites/apps for (usage type)? Notes: N = point-to-point transport (163); food delivery (192); buying new groceries or new/used goods (196), multiple responses allowed.

Figure 5: Reasons for using different platforms



Source: Frontier Economics and Kadence, B8 - Why do you use different websites/apps for (usage type)? Notes: N = point-to-point transport (29); food delivery (43); buying new groceries or new/used goods (54), multiple responses allowed.

E-payment services are unlikely to be a pre-requisite for an e-commerce platform’s success

75. There are many e-payment systems used in Singapore. Broadly, these are offered by:
 - a. e-commerce platforms⁴¹;

⁴¹ Some examples include GrabPay, Lazada Wallet; CarouPay, FavePay, and ShopeePay.

- b. banks⁴²;
- c. smartphone producers⁴³;
- d. mobile network providers⁴⁴; and
- e. other standalone providers⁴⁵.

76. The e-payment systems used in Singapore vary with respect to the following attributes:

- a. **E-wallet vs link to credit card.** Some e-payment systems (such as GrabPay) operate as an e-wallet and allow users to hold cash within the app, while others (such as FavePay) link directly to the users' credit card instead.
- b. **Online and offline use.** Some e-payment systems can only be used to buy goods and services that are available online via an app and/or website (such as CarouPay and ShopeePay, which can only be used to make purchases on their respective apps), while others can be used both online and in physical stores (such as GrabPay and FavePay).
- c. **Geographical coverage.** Some e-commerce platforms that operate in multiple countries offer e-payment services in other countries but have chosen not to do so in Singapore. Other e-commerce platforms have launched a common e-payment service that can be used across the countries in which the platform is active in (such as GrabPay).

77. While several e-commerce platforms have introduced e-payment services in Singapore, the findings from the market study indicate that the provision of such services in Singapore is unlikely to be a pre-requisite for an e-commerce platform's success at this point of time. This is as most consumers in Singapore use the e-payment systems provided by banks instead and credit cards are still the dominant means of transacting for goods and services, as demonstrated by the findings of the online user survey. Notably however, the findings of the online user survey indicate that the use of e-payment systems offered by e-commerce platforms tended to be higher for the point-to-point transport and food delivery market segments. This is illustrated in Figure 6 below.

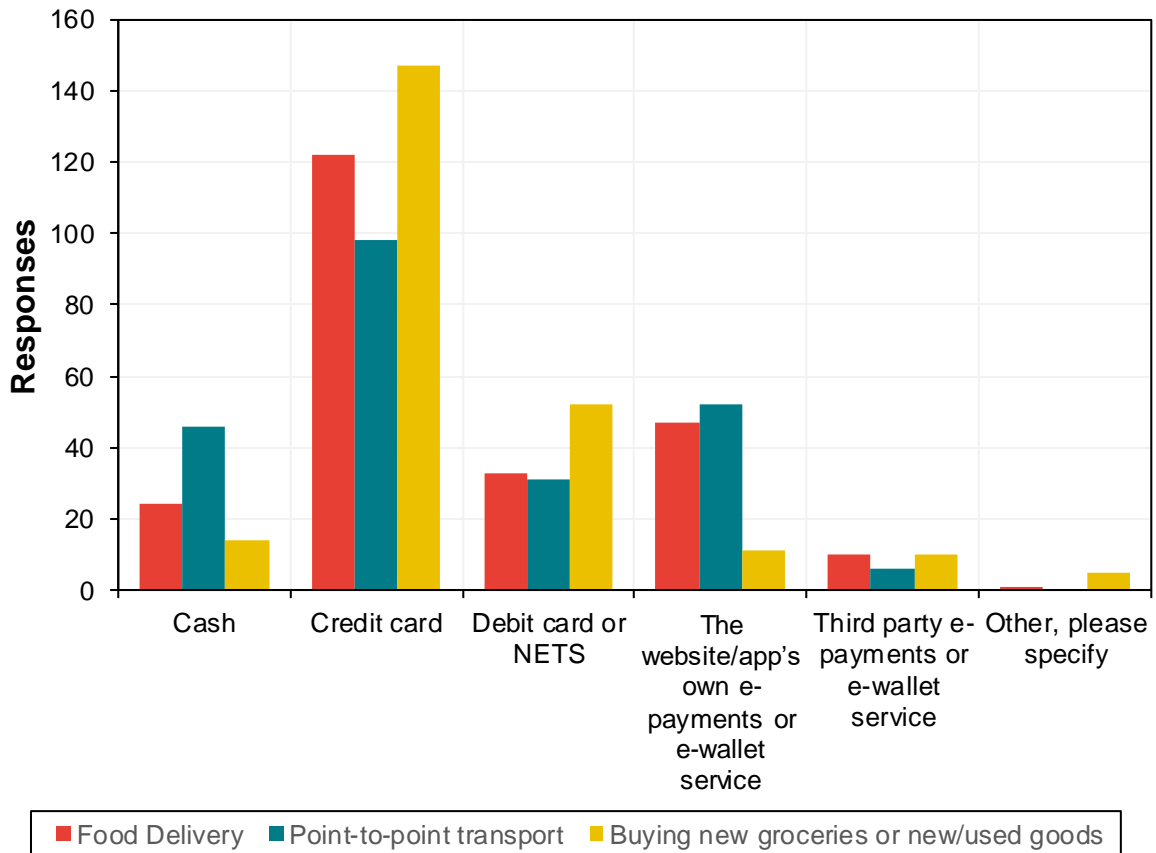
⁴² Some examples include DBS PayLah, UOB Mighty, and OCBC Pay Anyone.

⁴³ Some examples include Apple Pay, Google Pay, and Samsung Pay.

⁴⁴ An example includes Singtel Dash.

⁴⁵ Some examples include WeChat pay, and Paypal.

Figure 6: Consumers' common payment method for platforms



Source: Frontier Economics and Kadence. B11 - Thinking back to the last month, when you used a website/app for (usage type), how did you usually pay? Notes: N = point-to-point transport (233); food delivery (237); buying new groceries or new/used goods (239).

78. The findings of the market study indicated that in many cases, the decision of e-commerce platforms to launch e-payment services appear to be driven by factors that are extraneous to Singapore. The fact that many e-commerce platforms still introduce e-payment services in Singapore may instead be due to other factors such as:

- a. the relatively low incremental costs of introducing an e-payment services in Singapore once such a system has been rolled out by that e-commerce platform in another country;
- b. the e-commerce platform's preference to maintain a common payment structure across the various countries they operate in to account for inter-jurisdictional travel by customers;
- c. for e-payment systems which also operate as e-wallets, any money that customers hold in the wallet increases the working capital of the e-commerce platform, which may incentivise the e-commerce platform to introduce an e-payment system; and

- d. the desire by the e-commerce platform to engender greater brand trust in the platform through the introduction of e-payment systems.

Lack of data is not presently an insurmountable barrier to entry

79. Interviews with industry stakeholders indicated that while the data collected by e-commerce platforms is beneficial in allowing platform operators to improve the quality of the service offered to customers, the absence or lack of data is not currently regarded as an insurmountable barrier to entry or a severe limitation on the ability of e-commerce platform operators to compete effectively against other competitors.

80. This is because new e-commerce platforms may be able to offset the lack of collected data with other kinds of advantages or may have other means of accessing data. For instance, an e-commerce platform operator indicated that it attracted users by rolling out a mobile app solution ahead of the incumbent platform operators, to tap into the high mobile penetration rate in Singapore. It also attracted suppliers by streamlining its processes to reduce the time required for a supplier to list its products/services. Another e-commerce platform operator indicated that it was able to rely on publicly available industry data to inform its entry strategy into Singapore, despite the presence of an established incumbent in the market. The platform operator also observed that any deficiencies in public data may be overcome by leveraging in-house or third-party market research capabilities.

81. Similarly, another e-commerce platform operator did not regard data as a barrier to its entry in the Singapore market, despite the presence of several existing competitors at the time of its entry. The platform operator also indicated that e-commerce players are generally able to overcome any data deficiencies by collecting their own data through various user touchpoints on their platforms.

82. Notwithstanding the above, the digital economy is rapidly developing, and the importance of data for e-commerce platforms may increase over time as more data gets collected by e-commerce platforms coupled with the further use of AI and new algorithms. CCCS will continue to closely monitor further developments in this area and be responsive to potential competition and consumer protection concerns should they arise in future.

Data protection is not a key parameter of competition amongst e-commerce platforms currently

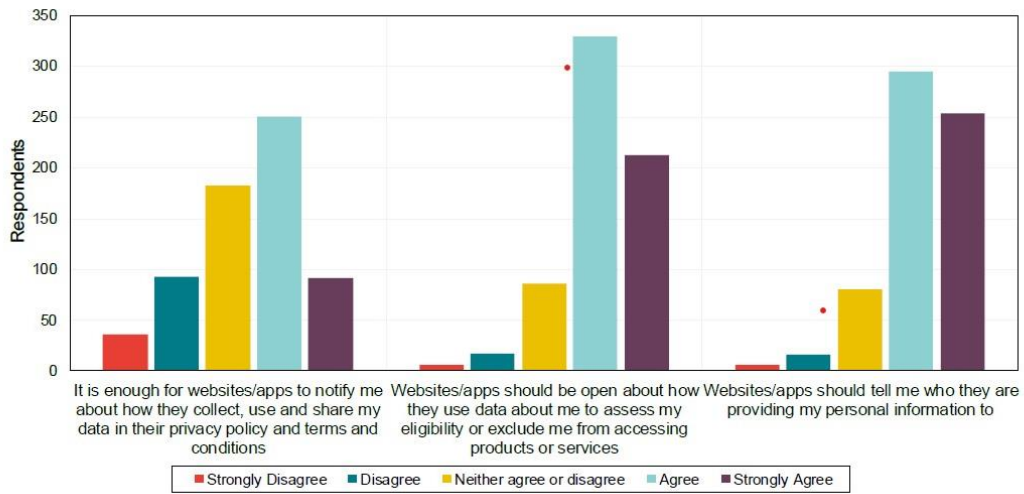
83. Interviews with industry stakeholders suggests that the e-commerce platform interviewees have all introduced measures to safeguard consumers' personal data, in order to comply with the Personal Data Protection Act 2012 ("PDPA"). All of the e-commerce

platforms interviewed have internally adopted data protection policies to guide the way personal data is handled and to inform the circumstances and conditions upon which these personal data can be shared with third parties. When interfacing with consumers, these e-commerce platforms indicated that they make clear to consumers their privacy policies, what data is collected, how it is collected and how this data will be used including under what circumstances personal data would be transferred to third parties. These are conveyed to consumers by displaying them on mobile apps and websites prior to the consumer signing up with the e-commerce platform.

84. Most e-commerce platform operators are of the view that whilst consumers do expect e-commerce platforms to have a minimum level of commitment and capability to safeguard personal data, other factors such as timely payments, a comprehensive refunds policy and efficient daily operations hold more sway over consumers and are stronger parameters of competition. Only one interviewee indicated that brand trust, extending to data protection matters, is a key competitive differentiator in view of the overall societal trend of placing more emphasis on brand trust. One e-commerce platform operator indicated that even if a platform fails to safeguard consumer data, consumers are likely to “overlook” this breach and return to the e-commerce platform after some time.

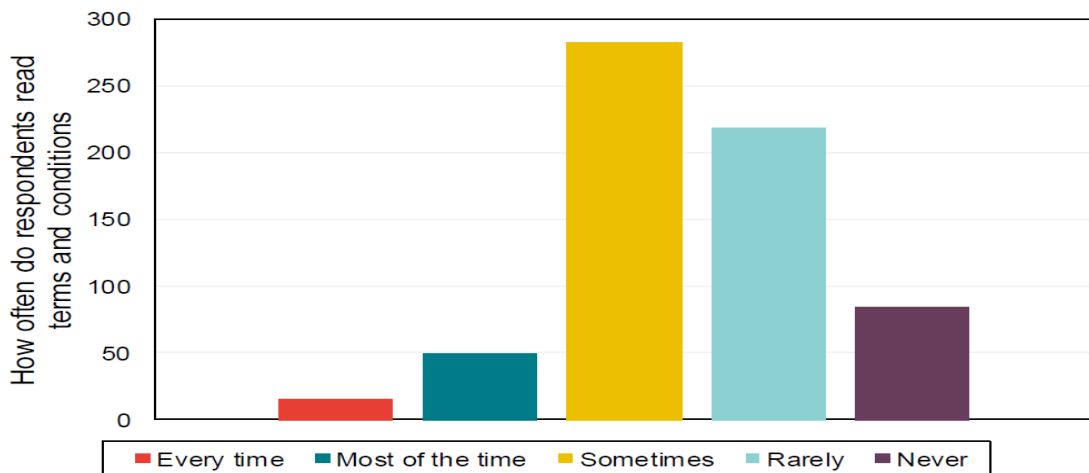
85. The feedback from e-commerce platform operators appears to be corroborated by the findings from the user survey, which indicates that consumers do not currently ascribe significant holding value to data protection. Although over 83% of the consumers surveyed had indicated that e-commerce platforms should be open about how data is used to assess consumers’ eligibility for certain products or services, and should inform consumers about who the e-commerce platforms are providing personal information to as illustrated in Figure 7 below, this is contradicted by a lack of habitual reading of privacy policies on the part of consumers. In this regard, as shown in Figure 8 below, more than 45% of the consumers surveyed either rarely or never read terms and conditions presented to them. Another 43% of consumers surveyed sometimes read the terms and conditions, with a majority of consumers citing privacy policies as being too long and complicated for consumers to want to read them as illustrated in Figure 9 below. Further, a sizeable 57% of consumers surveyed indicated that they would continue to use platforms even if personal data from text messages, personal information, browsing data, contacts and location information (assuming location services is turned on) is being collected when permission has not been explicitly given as shown in Figure 10 below.

Figure 7: Opinions on information provided on how apps use consumer data



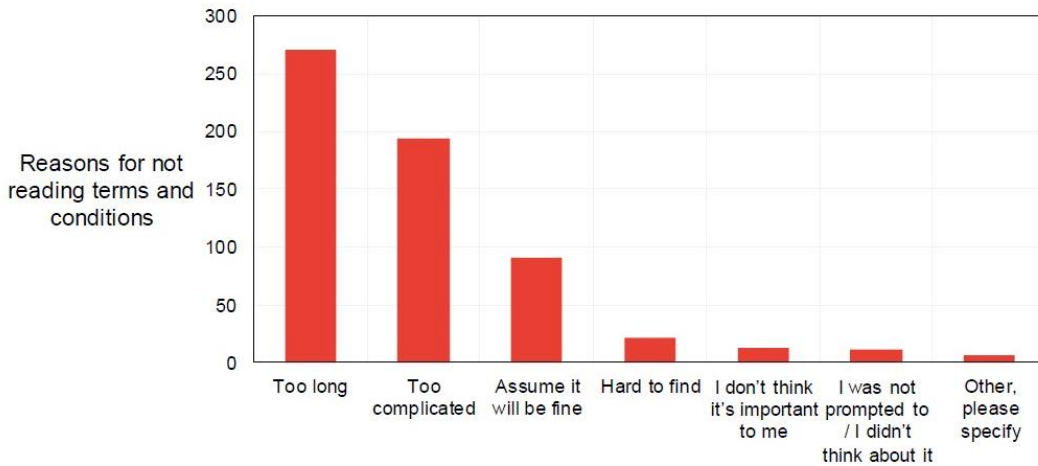
Source: Frontier Economics and Kadence, C5 – How strongly do you agree or disagree with the following regarding information websites/apps provide to you on how they use your data? Notes: N = 650

Figure 8: Whether terms and conditions for service use are read



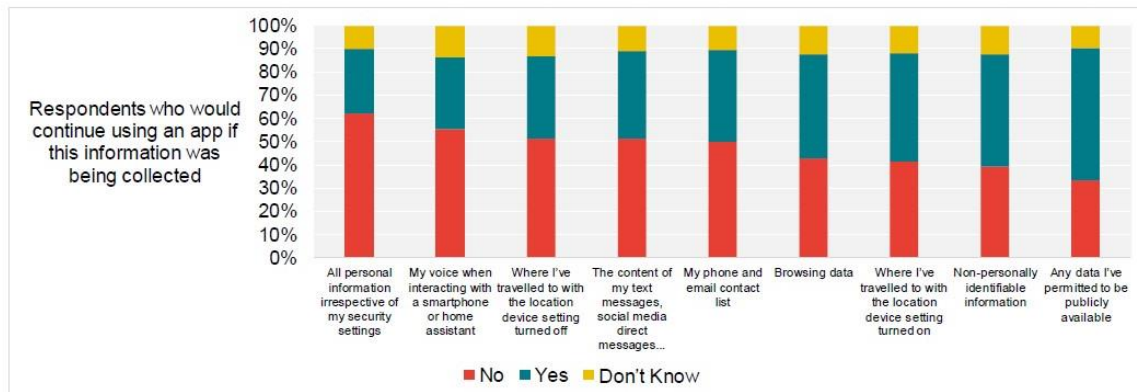
Source: Frontier Economics and Kadence, C7 – How often do you normally read all the data protection and/or privacy policy or terms and conditions for an internet site or app? Notes: N = 650

Figure 9: If rarely or never read terms and conditions, why not?



Source: Frontier Economics and Kadence, C8 – What are some reasons why you rarely or do not read all the data protection and/or privacy policy or terms and conditions for an internet site or app? Notes: N = 302, multiple responses allowed.

Figure 10: Responses to willingness to continue using app if information was being collected



Source: Frontier Economics and Kadence, C3 – Would you continue to visit and/or use a particular website/app if the following types of information are being collected by it? Notes: N = 650.

86. In view of the foregoing, while e-commerce platforms appear to perceive data protection as an important part of building trust with their users, consumers do not seem to view data protection as an important feature that affects their choice of e-commerce platforms. Consequently, data protection is not regarded as a key parameter for competition amongst e-commerce platforms at this point in time. Nonetheless, as consumers' perception of the importance of data protection may evolve over time, which may in turn impact the importance ascribed to data protection as a parameter of competition amongst e-commerce platforms, CCCS will continue its efforts to closely monitor further developments in this area.

Key areas where further clarity and guidance by CCCS could be beneficial

87. In view of the context in which e-commerce platforms operate and the competitive dynamics of their environment, the market study also sought to identify competition issues (if any) that may arise from the proliferation of e-commerce platforms. From the information gathered through the market study, no major competition concerns involving e-commerce platforms in Singapore were identified at this point of time. That said, certain key areas were identified where further clarity and guidance by CCCS could be beneficial to assist business in the application of the Competition Act in the digital space.

While the existing competition framework is currently sufficiently robust, CCCS could provide greater clarity in the suite of CCCS Guidelines

88. Having reviewed the findings from the market study, as well as the suite of CCCS guidelines, CCCS assessed that the existing competition framework is currently sufficiently robust to address the competition issues that may arise from the proliferation of e-commerce platforms that compete in multiple market segments offering distinct products and/or services in Singapore.

89. However, the market study also identified the following key areas, in which the suite of CCCS Guidelines could be updated to:

- a. Provide clarity in relation to the market definition exercise in cases involving multi-sided platforms;
- b. Provide guidance on how CCCS may assess market power in cases involving digital platforms, as the indicators for digital platforms may differ from standard indicators such as market shares;
- c. Provide guidance on CCCS's approach to cases involving digital platforms that compete in multiple market segments offering distinct products and/or services in Singapore, but that are not dominant in any of the segments in which it is active;
- d. Keeping up-to-date with theories of harm identified by overseas jurisdictions and assessing whether such theories would apply in a Singapore context, so as to provide greater clarity to business on how to avoid engaging in such anti-competitive conduct; and
- e. Provide further guidance on how CCCS will assess mergers and acquisitions involving digital platforms.

90. In this regard, CCCS notes that the increased prevalence of e-commerce platforms, including those that compete in multiple market segments offering distinct products and/or services in Singapore, may increase the likelihood of certain types of conduct that are harmful to competition. Certain factors that are more prevalent in cases involving e-commerce platforms in relation to market definition and market power analysis should be clarified further across the suite of CCCS Guidelines, so as to improve the clarity and relevance of the CCCS Guidelines to businesses. It should be highlighted that even though the market study focused on e-commerce platforms, these recommendations are equally applicable to digital platforms in general. Certain recommendations may be applicable to non-digital markets as well.

91. CCCS will elaborate on its approach in greater detail in the following chapters in respect of key issues with regard to digital platforms such as the application of the market definition exercise, the applicability of the concept of product ecosystems, the assessment of market power, mergers and acquisitions involving important innovators, access to data and collusion involving AI and algorithms.

VI. THE MARKET DEFINITION EXERCISE IN THE DIGITAL ERA

92. A market definition exercise is useful as a tool to provide a framework for competition analysis, in particular to identify and assess the competitive constraints that the seller of a focal product or service (i.e. the digital platform) faces.⁴⁶ This in turn facilitates further competition analysis, such as the assessment of market shares and barriers to entry.

93. Market definition is typically performed using the hypothetical monopolist test (“HMT”), which is a “price-elevation” test that seeks to identify all the products that may be regarded as reasonably substitutable for the focal product in question.⁴⁷ In essence, the HMT considers whether a hypothetical monopolist is able to profitably sustain “supra competitive” prices (i.e. prices that are at least a small but significant amount above competitive levels), by taking into account the extent of both demand-side and supply-side substitution in response to a small, significant but non-transitory increase in price (“SSNIP”) of the focal product by the hypothetical monopolist.⁴⁸

94. Notwithstanding the usefulness of a market definition exercise, the characteristics of digital platforms discussed in Chapter V raise several challenges when performing the market definition exercise to identify the competitive constraints that a digital platform faces.

Issues related to market definition for digital platforms

95. The fact that a digital platform usually serves different groups of users (i.e. is multi-sided) means that the digital platform not only has to choose a price level for its product(s), it also has to set a price structure (i.e. a ratio of price levels for each of the user groups), which attracts users on the different sides to “get on board” the platform.⁴⁹ This issue arises because of the existence of externalities⁵⁰ (e.g. indirect network effects or usage externalities) between the different groups of users on the platform⁵¹, such that the demand of users on one side of the platform is dependent on the demand of users on the other side(s) of the platform.⁵² As such, many platforms face a “chicken-and-egg” problem, where the platform

⁴⁶ *CCCS Guidelines on Market Definition*, paragraph 1.6.

⁴⁷ For more information on the conduct of the market definition exercise, please refer to *CCCS Guidelines on Market Definition*, section 2.

⁴⁸ *CCCS Guidelines on Market Definition*, paragraphs 2.4 and 2.6.

⁴⁹ Jean-Charles Rochet and Jean Tirole, *Two-Sided Markets: A Progress Report*, *The RAND Journal of Economics*, vol. 35, n. 3 (2006).

⁵⁰ Externalities can generally be understood as the benefits or costs that accrue to one party as a result of another party’s actions.

⁵¹ David S. Evans, *The Antitrust Economics of Multi-sided Platform Markets*, *Yale Journal on Regulation*, Vol. 20, Issue 2 (2003).

⁵² While such externalities are also sometimes present in traditional brick-and-mortar businesses (e.g. shopping malls), these externalities appear to be far more prevalent and a lot stronger on digital platforms. The United Kingdom Digital Competition Expert Panel’s review of competition in digital markets, and the accompanying report “[Unlocking Digital Competition](#)”, which was published on 13 March 2019, paragraph 1.80.

would have to attract sufficient users on one side of the platform in order to attract users on the other side(s) of the platform, and vice versa.

96. In this regard, it is common to see many digital platforms engaging in asymmetric pricing to “internalise” these externalities, with the platform setting prices in a manner to “cross-subsidise” across its various sides. The platform does so by charging a positive price on one side of the platform (usually the side generating weaker externalities) and treating it as a “profit centre”, while subsidising the prices (e.g. through discounts) paid by users on the other side(s) of the platform (usually the side generating stronger externalities). Depending on the strength of the externalities, the platform may in some cases go so far as to not charge a price to users on one side of the platform, or even to offer incentives on top of not charging a price (i.e. effectively charging a negative price for this group of users) in order to get these users on-board the platform.

97. Literature considers that there are various difficulties, both conceptual and practical, in performing the market definition exercise in relation to digital platforms.⁵³ These difficulties arise in particular from the multi-sided nature of such platforms. Broadly speaking, the features and challenges that the multi-sided nature of digital platforms raise for market definition can be distilled into the following:

- a. Firstly, there is the question of whether separate but interrelated single-sided markets should be defined for each side of the multi-sided platform, or whether a single multi-sided market comprising all sides of the platform should be defined.
- b. Secondly, there is a need to account for the presence of externalities, which are a common feature in multi-sided platforms. These externalities usually include indirect network effects and usage externalities.⁵⁴
- c. Thirdly, due to the interdependencies between the various sides of a platform, a multi-sided platform can determine both the price levels as well as the price

⁵³ OECD’s [“Rethinking Antitrust Tools for Multi-Sided Platforms”](#), which was published on 6 April 2018, Part 1, Section 2, pages 12-15. The European Commission’s report [“Competition Policy for the Digital Era”](#), which was published on 4 April 2019, pages 42-45. Commission of Experts on Competition Law 4.0 final report to the German Federal Ministry for Economic Affairs and Energy, [“A New Competition Framework for the Digital Economy”](#), which was published on 9 September 2019, Chapter IV, Part 1. Jens-Uwe Franck and Martin Peitz, [“Market Definition and Market Power in the Platform Economy”](#), for the Centre of Regulation in Europe, which was published on 8 May 2019, Chapter 3.

⁵⁴ Lapo Filistrucchi, [“Market Definition in Multi-Sided Markets”](#), in OECD’s [“Rethinking Antitrust Tools for Multi-Sided Platforms”](#) which was published in 2018, pages 38-39. See also Paul A. Johnson, [Indirect network effects, usage externalities and platform competition](#), *Journal of Competition Law and Economics*, Oxford University Press, Vol. 15, Issue 2-3 (2019), pages 283-297.

structure (i.e. ratio of prices between different groups of users) of its user groups in order to get these users on-board the platform.⁵⁵ This can affect the ability of the platform to profitably sustain prices above competitive levels, which may in turn affect the definition of the relevant market.

- d. Fourthly, it is often the case that a multi-sided platform may not charge a positive price for its service to users on one side of the platform while charging a positive price to users on other side(s) of the platform. This raises questions of whether the side of the platform that is not charged a positive price should be accounted for in the market definition, as well as whether one can practically apply the HMT to a side of the platform that is not charged a positive price.

98. In addition, as noted in paragraph 23 above, there is an increasing trend where platforms are offering products and/or services in multiple segments to capture synergies arising from complementarities in demand or supply. For instance, consumers may find that they enjoy certain consumption synergies (i.e. time savings or convenience) in purchasing multiple products through the same platform, or the platforms themselves may find that it is easier to roll out new products or services on its platform once there is an established user base on its platform. Literature has also observed this trend, where platforms increasingly compete to draw consumers into ecosystems.⁵⁶ Where consumers prefer to purchase multiple services from a single platform, markets may evolve such that competition between platforms take place on an ecosystem basis (comprising a range of distinct products) rather than on an individual product basis, which raises questions on how a market is to be defined in such cases.

99. Each of these challenges, including CCCS's views, will be discussed in further detail below.

Number of markets to define

100. The multi-sided nature of a digital platform means that the product/service that a platform provides to users on one side of the platform may be different from the product/service that the platform provides to users on another side of the platform, notwithstanding that there may be interdependencies in demand between the various groups of users. For example, an e-commerce platform like Lazada may be providing listing and marketing services to sellers on one side of its platform, while providing search services to

⁵⁵ Lapo Filistrucchi, "Market Definition in Multi-Sided Markets", in OECD's "[Rethinking Antitrust Tools for Multi-Sided Platforms](#)" which was published in 2018, page 39.

⁵⁶ The European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019, pages 47-48.

consumers on the other side of the platform. The platform may therefore face different competitive constraints on each of its different sides. Conversely, due to the interdependencies in demand between the various groups of users, it is also possible to consider that the platform provides a single product/service of matching users on the various sides of the platform together. In this case, the platform may face competition from other platforms providing a similar service matching and linking users on the various sides of the platform together.

101. As the market definition exercise is used to identify the competitive constraints that a platform faces, the question of how many markets to define in relation to a multi-sided digital platform is a conceptual question that cannot be answered within a market definition exercise. It is instead a question that requires an answer before performing the HMT and defining the scope of the relevant market(s).⁵⁷

102. There are generally two approaches to address the issue of the number of markets to be defined. The first approach seeks to define multiple interrelated single-sided markets on each side of the platform, taking into account the interdependencies between each side (“**single-sided markets**”). The second approach seeks to define one single multi-sided market that includes all sides of the platform (“**multi-sided market**”).

103. Some academics argue that a multi-sided market should be defined when the platform facilitates a transaction between the different groups of users (i.e. a transaction platform).⁵⁸ In particular, these academics argue that an important distinction between a transaction platform and a non-transaction platform is the pricing strategy available to the platform.⁵⁹ A transaction platform facilitates a transaction between the different groups of users that the platform can observe, such that the platform is able to set a two-part tariff⁶⁰, one for joining the platform and one for using the platform. In this case, as the platform is providing a joint service (i.e. the transaction) to the different groups of users, the platform is unable to sell the service to a group of users on one side without simultaneously selling the service to another group of users on the other side of the platform. On the other hand, even though there is an

⁵⁷ OECD’s “[Rethinking Antitrust Tools for Multi-Sided Platforms](#)”, which was published on 6 April 2018, Part 1, Section 2, page 13.

⁵⁸ Lapo Filistrucchi, Damien Geradin, Eric van Damme, and Pauline Affeldt, *Market Definition in Two-Sided Markets: Theory and Practice*, Journal of Competition Law and Economics, Oxford University Press, Vol. 10, Issue 2 (2014), pp. 293-339.

⁵⁹ Lapo Filistrucchi, “*Market Definition in Multi-Sided Markets*”, in OECD’s “[Rethinking Antitrust Tools for Multi-Sided Platforms](#)” which was published in 2018, pages 38-39. For further discussion on the distinction between two-sided transaction and non-transaction platforms, please see Lapo Filistrucchi, Damien Geradin, Eric van Damme, and Pauline Affeldt, *Market Definition in Two-Sided Markets: Theory and Practice*, Journal of Competition Law and Economics, Oxford University Press, Vol. 10, Issue 2 (2014), pp. 293-339.

⁶⁰ A two-part tariff consists of charging a lump sum price for the right to purchase the product (e.g. a platform charging a membership fee for joining the platform) and a per-unit fee for consuming the product (e.g. a platform charging a transaction fee for each transaction carried out on the platform).

interaction between the various groups of users on a non-transaction platform, the interaction is usually not observable by the platform, and hence the platform is unable to set a two-part tariff for its users. This approach of defining a single multi-sided market based on the consideration of whether the platform is a transaction platform has been adopted in various cases.⁶¹

104. Other reports suggest that a potential characteristic to consider in determining whether to define a single multi-sided market is whether the platform facilitates a match between users on the different sides of the platform, regardless of whether a transaction between the various groups of users can be observed by the platform.⁶² Yet other authors argue that the approach to define a single multi-sided market is typically unsuitable for competition assessment as it is only appropriate under very limited and strict conditions, such as when a platform's service necessarily involves all groups of users and the substitutability of the platform's service from the perspective of each user group does not differ substantially.⁶³ In this regard, these authors go on to argue that defining multiple single-sided markets, while considering the interdependencies between the markets would generally be a more suitable default approach as it reduces the risks of false positives⁶⁴.

105. In this regard, Frontier Economics noted that a multi-sided platform is not precluded from competing with firms that include other multi-sided platforms that supply the same service(s), other multi-sided platforms that only have one "coincident" side, and single-sided platforms. Hence, approaching market definition with a view to define a single multi-sided market comprising all sides of the platform based on whether the platform facilitates an observable transaction between the different groups of users may result in an overly narrow market where only other multi-sided platforms which supply the same service(s) to all groups of users are included in the relevant market.

106. Finally, there is literature that also suggests that both of the approaches (i.e. of defining multiple interrelated single-sided markets or defining a single multi-sided market) appear to be in line with the concept of demand-side substitution in a market definition exercise, and that neither approach is necessarily right or wrong as long as the interdependencies between the different sides of the platform and the competitive

⁶¹ See for example, the decision of the Supreme Court of the United States in [Ohio v Amex](#), decided on 25 June 2018, and Competition and Markets Authority, *Just Eat and Hungryhouse: A report on the anticipated acquisition by JUST EAT plc of Hungryhouse Holdings Limited*, 16 November 2017, paragraph 4.11.

⁶² The European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019, page 46

⁶³ Jens-Uwe Franck and Martin Peitz, "[Market Definition and Market Power in the Platform Economy](#)", for the Centre of Regulation in Europe, which was published on 8 May 2019, section 3.1.1.

⁶⁴ False positive in this context refers to the assessment that a firm has market power due to the lack of competitive constraints identified based on a market definition using the single multi-sided market approach, which may unduly narrow the relevant market defined.

constraints faced on each side of the platform are considered in the competition analysis.⁶⁵ In this regard, it appears that there is no settled position in literature on this issue currently.

107. It also appears that no clear position has been set out in the guidelines published by other competition authorities on this issue yet.⁶⁶

108. CCCS has past case experience in both defining a single multi-sided market comprising both sides of a platform⁶⁷ and separate but interrelated single-sided markets for each side of a platform⁶⁸. In this regard, CCCS notes that formulating a theory of harm precedes a market definition exercise in a competition case. The theory of harm informs an assessment of the potential concerns arising from the particular matter. For example, an agreement or a merger between a multi-sided platform and a single-sided competitor may reveal concerns only pertaining to one side of the platform. Hence, CCCS may not define a multi-sided market in such a case.

109. Therefore, the question of whether to define single-sided markets or a multi-sided market should be primarily guided by the competition concerns and theories of harm identified on a case-by-case basis. Regardless of whether single-sided markets or a multi-sided market are defined, the interdependencies in demand between the various sides of the platform should still be taken into account in the ensuing competition analysis.

Presence of externalities

110. There are generally two kinds of externalities present in relation to multi-sided platforms: indirect network effects and usage externalities. Indirect network effects are externalities that relate to *membership* on a platform, and reflect the fact that the value of a

⁶⁵ Sebastian Wismer and Arno Rasek, “Market Definition in Multi-Sided Markets”, in OECD’s “[Rethinking Antitrust Tools for Multi-Sided Platforms](#)” which was published in 2018, page 60.

⁶⁶ CCCS has reviewed the European Commission’s Notice on the relevant market for the purposes of Community competition law (the “**EC Market Definition Guidelines**”), the Competition and Markets Authority’s Market Definition Guidelines (the “**CMA Market Definition Guidelines**”), the Australian Competition and Consumer Commission’s Merger Guidelines (the “**ACCC Merger Guidelines**”), the United States Department of Justice and Federal Trade Commission’s Horizontal Merger Guidelines (the “**US Merger Guidelines**”), and the New Zealand Commerce Commission’s Mergers & Acquisitions Guidelines (the “**NZCC Merger Guidelines**”). At the time of publication of this report, CCCS understands that the EC Market Definition Guidelines is undergoing a round of public consultation. Save for the NZCC Merger Guidelines, the other guidelines are silent on this issue. The NZCC Merger Guidelines provide some guidance on the number of markets to define, stating that the NZCC will consider whether to define a market for each side of the platform or a market for the platform itself, and that the NZCC will consider the interdependencies in demand between different groups of users in its market definition exercise.

⁶⁷ CCCS 500/001/18, [Notice of Infringement Decision of the Sale of Uber’s Southeast Asian business to Grab in consideration of a 27.5% stake in Grab](#), decision of 24 September 2018.

⁶⁸ CCS 400/001/06, [In relation to a Notification for Decision by Visa Worldwide Pte. Ltd. of its MIF system as formalised in the Visa Rules](#), decision of 3 September 2013.

platform to users on one side of the platform is dependent on the number of users on the other side of the platform.⁶⁹ Usage externalities on the other hand are costs or benefits accrued to a user on one side of the platform as a consequence of another user using the platform on the other side(s) of the platform.⁷⁰ These externalities are relevant factors to consider when performing the market definition exercise, regardless of whether a multi-sided market or single-sided markets are defined.

111. The presence of indirect network effects in multi-sided digital platforms is not a new concept and has been discussed quite extensively in literature.⁷¹ Indirect network effects can be classified as positive or negative indirect network effects. Positive indirect network effects accrue to users on one side of the platform when the demand for the platform's product or service on that side increases with an increasing number of users on the other side of the platform. An example of this is when usage by buyers on an e-commerce platform increases with the increase in the number of sellers listed on the platform. Negative indirect network effects accrue to users on one side of the platform when the demand for the platform's product or service on that side decreases with an increasing number of users on the other side of the platform. An example of this is when viewership of a television channel decreases with an increase in the number of advertisements shown on that channel.

112. Depending on the direction of the indirect network effects that the various sides of the platform exert on one another, the net effect can be mutually reinforcing (e.g. when both sides of the platform exert a positive indirect network effect on each other), opposing (e.g. when users on one side of the platform exert a positive indirect network effect while users on the other side exert an equal but negative indirect network effect on the first side), or unidirectional indirect network effects (e.g. when one side exerts either a positive or negative indirect network effect while the other side does not exert any indirect network effects onto the first side).

113. Where there are indirect network effects, the demand of the platform's service from a user group on one side of the platform may be dependent on the number of users on other side(s) of the platform. In performing the market definition exercise, these indirect network effects may result in the number of buyers switching away to other substitutes (in response

⁶⁹ Michael L. Katz and Carl Shapiro, *Systems competition and network effects*, *Journal of Economic Perspectives* 8, no. 2 (1994), pp. 93-115. Paul A. Johnson, *Indirect network effects, usage externalities and platform competition*, *Journal of Competition Law and Economics*, Oxford University Press, Vol. 15, Issue 2-3 (2019), pp. 283-297.

⁷⁰ Paul A. Johnson, *Indirect network effects, usage externalities and platform competition*, *Journal of Competition Law and Economics*, Oxford University Press, Vol. 15, Issue 2-3 (2019), pp. 283-297.

⁷¹ The United Kingdom Digital Competition Expert Panel's review of competition in digital markets, and the accompanying report "[Unlocking Digital Competition](#)", which was published on 13 March 2019. Jens-Uwe Franck and Martin Peitz, "[Market Definition and Market Power in the Platform Economy](#)", for the Centre of Regulation in Europe, which was published on 8 May 2019.

to a price increase by the platform) to be greater or less than it otherwise would be in the absence of such effects, depending on the extent and direction of the indirect network effects.⁷² For example, an increase in the price charged to one side of the platform may cause users on that side of the platform to switch to other substitutes. If there are positive indirect network effects between this group of users facing the price increase and another group of users on another side of the platform, the fall in number of users on the side facing the price increase would result in a fall in number of users on the other side of the platform. These indirect network effects may also result in a feedback loop where the fall in number of users on the other side of the platform causes a further fall in the number of users on the side of the platform facing the price increase, resulting in a larger decrease in the number of users on the platform than in the absence of such effects.

114. Besides the number of users, the quality of users and intensity of usage can also affect the strength of the indirect network effects. For instance, high quality users (e.g. more trustworthy sellers, users with higher ratings) or users that have a high frequency and intensity of interacting with the platform (e.g. active time spent on platform) on one side of the platform can affect the strength of the indirect network effects, and hence the demand of the platform's service from users on the other side(s) of the platform. Where these indirect network effects are not taken into account in performing the HMT in the market definition exercise, the extent of substitution in response to a price increase may be inaccurately assessed, resulting in a relevant market that may be too narrowly (e.g. where there may be indirect network effects causing a greater number of users, than it otherwise would be in the absence of such effects, to switch away from the platform which may not be accounted for) or broadly (e.g. where there may be indirect network effects causing a smaller number of users, than it otherwise would be in the absence of such effects, to switch away from the platform which may not be accounted for) defined.

115. Besides indirect network effects, usage externalities can also be present on a multi-sided platform. For instance, a driver's decision to provide transportation services on a ride-hailing platform generates a positive externality (i.e. a benefit) for a rider seeking to purchase transportation service on the other side of the platform. Such usage externalities are usually the cause of asymmetric pricing commonly observed on multi-sided platforms, where the platform charges different prices to different groups of users to "internalize" the externality by cross-subsidising users on the side with a lower willingness to pay with the revenues

⁷² For further discussion, see Jens-Uwe Franck and Martin Peitz, "[Market Definition and Market Power in the Platform Economy](#)", for the Centre of Regulation in Europe, which was published on 8 May 2019, section 2.1.2. See also the European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019, Chapter 3, Section III, Part A, for a brief discussion on the implications and complexities of market definition arising from indirect network effects.

earned from users on the side with a higher willingness to pay. Such usage externalities can exist even when indirect network effects are absent.⁷³

116. The presence of usage externalities can affect whether and how a hypothetical monopolist can profitably impose a SSNIP. For instance, an increase in prices by the platform to one user group may drastically reduce the usage of the platform by those users, which may in turn reduce the externalities that accrue to users on the other side of the platform. Depending on how such externalities affect the usage by users of the platform, the platform may find that it is not profitable to impose the price increase in the first instance.

Price structure of the platform

117. Due to the fact that a multi-sided platform serves distinct groups of users on different sides of the platform which in turn generate network externalities, the platform not only needs to determine the prices for each group of users but also the price structure (i.e. the ratio of the prices between different groups of users) on the platform. As mentioned previously, the price structure matters in relation to how a digital platform can solve the “chicken-and-egg” problem of getting sufficient users on-board each side of the platform. For example, the market study found that it is common for e-commerce platforms to treat the sellers (or service providers) on the platform as the ‘profit-centres’, where these sellers are charged a fee⁷⁴ for using the platform. These platforms usually do not charge buyers a direct fee⁷⁵ for using the platform, which is reflective of its strategy to cross-subsidise the users on the side which produces stronger indirect network effects to get users on both sides on-board their platforms.

118. In the context of a market definition exercise, whether the hypothetical monopolist is able to profitably impose a SSNIP may be affected by the price structure. In this regard, there is literature that discusses the considerations with regard to the price structure in relation to market definition.⁷⁶ A multi-sided platform may implement an increase in the total price level (i.e. the sum of the prices charged to all sides of the multi-sided platform) in various ways. It can seek to impose the full increase from one side of the platform while keeping prices on the other side(s) unchanged, increase prices on all sides of the platform by the same or different

⁷³ Paul A. Johnson, *Indirect network effects, usage externalities and platform competition*, Journal of Competition Law and Economics, Oxford University Press, Vol. 15, Issue 2-3 (2019), pp. 283-297.

⁷⁴ The fees charged to the seller can be roughly split into two components: subscription fees and transaction, (or referral) fees.

⁷⁵ The term ‘direct’ fee is used to reflect that the sellers might pass through the fees that they pay to the platform to the buyers.

⁷⁶ Jens-Uwe Franck and Martin Peitz, “[Market Definition and Market Power in the Platform Economy](#)”, for the Centre of Regulation in Europe, which was published on 8 May 2019, section 3.6.1. The European Commission’s report “[Competition Policy for the Digital Era](#)”, which was published on 4 April 2019,, Chapter 3, Section III, Part A. Lapo Filistrucchi, “*Market Definition in Multi-Sided Markets*”, in OECD’s “[Rethinking Antitrust Tools for Multi-Sided Platforms](#)” which was published in 2018, pages 45–47.

amounts, or increase price on one side of the platform while decreasing prices on the other side(s) to a lesser extent.

119. Depending on how the hypothetical monopolist implements the price increase, the definition of the relevant market may be affected. For example, a hypothetical monopolist that increases the price on one side of the platform while keeping prices on the other side(s) constant may not only cause users on that side of the platform to switch to substitutes, but may also cause users on the other side(s) of the platform to switch to other substitutes due to positive indirect network effects. There may also be a feedback loop such that additional users on the side that initially faced the price increase will switch away to other substitutes. This may result in the assessment that a significant proportion of users (either on the side that faces the price increase or on all sides of the platform) will switch to substitutes in the face of a price increase by the hypothetical monopolist, which leads to the assessment that the platform is unable to profitably sustain prices above competitive levels, and the relevant market is widened to include other substitutes.

120. However, the platform may be able to reduce the number of users switching to other substitutes by concurrently reducing the price on the other side(s) of the platform. The decrease in prices on the other side(s) of the platform may reduce the number of users who switch away from the platform on these side(s) in the initial instance, which in turn may also reduce the number of users who switch away on the side facing the price increase (due to a feedback loop), such that the overall number of users switching away from the platform will not be significant enough to constrain the platform's actions.⁷⁷ The platform may thus be assessed to be able to profitably sustain prices above competitive levels, and the relevant market is hence defined.

121. Hence, in the case of defining a multi-sided market, as the price structure may affect the overall profitability of the platform, it may be appropriate to ask whether a hypothetical monopolist is able to sustain a supra-competitive pricing strategy, rather than just supra-competitive prices. This would allow the market definition exercise to take into account how the externalities between the various sides of the platform may affect whether the hypothetical monopolist is able to profitably increase prices on its platform, instead of focusing on whether the hypothetical monopolist is able to profitably increase prices on one side of the platform. In the case of single-sided markets, the price structure set by the platform may be considered in relation to how it affects competition in the separate but interrelated markets. For instance, an increase in price by the platform in one market may be

⁷⁷ This would also depend on factors such as the strength of the indirect network effects. For instance, if there are stronger positive network effects from the side that faces the price decrease to the side that faces the price increase, a decrease in the number of users switching to other substitutes on the side facing the price decrease would result in a smaller number of users switching to other substitutes on the side facing the price increase as compared to if there were no such indirect network effects.

used to subsidise the prices that the platform charges and to preserve the platform's market power in another market.

Platforms not charging a positive price

122. A common phenomenon of a multi-sided digital platform is that among different groups of users of the platform, users on one side of the platform are usually not charged a positive price for the platform's service. In this regard, the platform may either be offering the service for free (i.e. charging a price of zero) or charging a negative price (i.e. offering incentives on top of not charging a price) to this group of users. As previously explained, this can occur as the platform tries to internalise the externalities between the various groups of users on the platform by setting a price structure to cross-subsidise between the various sides of the platform.

123. Despite the platform not charging a positive price on one side of the platform, it is important for the competition assessment to include that particular side of the platform.⁷⁸ Failing to consider the side that is not charged the positive price in the market definition exercise may result in the omission of important competitive dynamics, such as the interdependencies in demand between the various sides of the platform, leading to an inaccurate definition of the relevant market.⁷⁹

124. However, practical complexities may arise when it comes to using the HMT to define a single-sided market on the side of the platform that is not charged the positive price, as applying a SSNIP of 10% increase in price would still not result in a positive price. Further, it may be virtually impossible to assess the extent of substitution away from the platform that would render this price increase unprofitable under the HMT.

125. Literature suggests applying a variant of the HMT to define markets where the platform may not charge positive prices on one or more of its sides. In essence, the variant of the test asks whether a significant number of buyers would switch to a substitute product if the focal product experiences a small but significant and non-transitory decrease in quality ("**SSNDQ**").⁸⁰ However, there are several criticisms in relation to operationalising the SSNDQ test, such as how one should measure a decrease in quality and what is the effect of a quality decrease on a platform's revenue.⁸¹

⁷⁸ Stigler Committee on Digital Platforms, [Final Report](#), which was published in 2019.

⁷⁹ Sebastian Wismer and Arno Rasek, "[Market Definition in Multi-Sided Markets](#)", in OECD's "[Rethinking Antitrust Tools for Multi-Sided Platforms](#)" which was published in 2018, page 57.

⁸⁰ Lapo Filistrucchi, "[Market Definition in Multi-Sided Markets](#)", in OECD's "[Rethinking Antitrust Tools for Multi-Sided Platforms](#)" which was published in 2018, pages 47-49.

⁸¹ The European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019,, Chapter 3, Section III, Part C, p.45.

126. An alternative approach that has been proposed is to define such markets according to the functionalities and characteristics of the product.⁸² Once again, there are several deficiencies involved in such an approach. First, seeking to define relevant markets based on the functionalities and characteristics of the focal products could result in arbitrary market definitions as this approach provides discretion to decide the relevant set of products and/or services that are “sufficiently close” substitutes. This arbitrariness was the reason for the introduction of the HMT by the Department of Justice in the US in 1984⁸³. Second, this approach may lead to overly narrow markets as there could be a tendency to overlook products and/or services that are not identical to the focal product.

127. Despite the practical challenges, it is clear that the sides of a digital platform that are not charged positive prices are relevant and should be included in the market definition exercise by considering, for example, how a price increase on other side(s) of the platform may affect the usage on the side of the platform that is not charged a positive price, and how this may in turn affect the extent of substitution away from the platform as well as whether a hypothetical monopolist could profitably sustain a supra-competitive strategy, considering the externalities present and the price structure set by the platform.

128. In the context of defining single-sided markets, it may also be relevant to consider how the platform is monetising the service sold, as well as how users that are not charged a positive price may respond to changes in other non-monetary aspects of the platform’s service. This will allow a more considered and robust assessment of the relevant market on one side of the platform by considering how the extent of substitution away from the platform may be affected by the prices charged to users on other sides of the platform, or non-monetary aspects of the platform.

Product ecosystems

129. The concept of product ecosystems and how it may apply to market definition for platforms that compete in multiple market segments, offering distinct products and/or services, has not been widely discussed in literature. Recent studies have observed the tendency for digital platforms to develop into ecosystems where the platforms enter into multiple lateral or adjacent markets and provide multiple services.⁸⁴ Literature suggests that

⁸² The European Commission’s report “[Competition Policy for the Digital Era](#)”, which was published on 4 April 2019,, Chapter 3, Section III, Part D, pp.45-46.

⁸³ US Department of Justice and the Federal Trade Commission, *Horizontal Merger Guidelines*, Washington DC, 1984. Revised: 1994, 1997.

⁸⁴ The European Commission’s report “[Competition Policy for the Digital Era](#)”, which was published on 4 April 2019. The United Kingdom Digital Competition Expert Panel’s review of competition in digital markets, and the accompanying report “[Unlocking Digital Competition](#)”, which was published on 13 March 2019. Marc Bourreau

one of the factors leading to the increasing prevalence of such ecosystems may be the presence of complementarities in demand. Such complementarities in demand may be likened to the concept of transaction complementarity⁸⁵ and the creation of consumption synergies⁸⁶, where consumers may find that they enjoy time savings or convenience in purchasing multiple distinct services from the same platform.

130. Another relevant factor may be the presence of economies of scope.⁸⁷ In this regard, platforms may find that they have the expertise and that it may be easier to supply further services on its platform when a prior service has already been established. This can be done by leveraging on the platform's existing user base to increase usage of the new service, or by redeploying technologies and expertise to create such new services.

131. In this regard, platforms that offer distinct products and/or services and compete in multiple market segments could conceivably build up a product ecosystem comprising the various distinct products and/or services, regardless of whether these services are provided on a single app or across multiple apps. Such a product ecosystem could raise barriers to entry and limit the ability of a rival platform that only operates in a single market segment to compete effectively, as the rival platform may have to supply the same range of products and/or services as the product ecosystem for consumers to start purchasing these services from the rival platform. The platform may also engage in tying or bundling to leverage on its position in a market segment or on its ecosystem to enter into new lateral service markets. Whether such conduct potentially forecloses competition and is therefore anticompetitive will need to be evaluated on a case-by-case basis.⁸⁸

132. It may therefore be appropriate to define a market for a product ecosystem (comprising a mix or range of distinct products) where such complementarities in demand or supply are sufficiently strong. This may be analogous to the existing concepts of a relevant product market which comprises 'bundles' of what may otherwise be distinct products⁸⁹, or the concept of cluster markets found in some jurisdictions⁹⁰.

and Alexandre de Stree, "[Digital Conglomerates and EU Competition Policy](#)", which was published in March 2019.

⁸⁵ Jonathon B Baker, "*The Antitrust Analysis Of Hospital Mergers And The Transformation Of The Hospital Industry*", Law and Contemporary Problems, vol 51, No. 2 at page 128.

⁸⁶ Marc Bourreau and Alexandre de Stree, "[Digital Conglomerates and EU Competition Policy](#)", which was published in March 2019, page 11.

⁸⁷ The European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019, Chapter 2, Section II, Part C, pages 32-34

⁸⁸ For further discussion on the issues in relation to product ecosystem and market power, see Section VII below.

⁸⁹ OFT, Market Definition (2004), at 5.11

⁹⁰ ACCC, Merger Guidelines, June 2008 at 4.44. See also Jonathon B Baker, *The Antitrust Analysis Of Hospital Mergers And The Transformation Of The Hospital Industry*, Law and Contemporary Problems, vol 51, No. 2(1988), for a discussion in relation to US hospital mergers.

133. In addition, it would appear that the demand-side synergies may have a greater role in driving the development of such ecosystems. These demand-side consumption synergies typically include efficiency benefits such as convenience, savings in transaction costs and time, which result in users deriving greater value from purchasing two or more distinct products together from the same supplier. It also appears that the factors that a platform would consider in relation to what services to introduce are driven primarily by users' behaviours and preferences⁹¹, notwithstanding that there may be economies of scope for the platform to create and provide multiple services on its platform. As such, a possible approach to market definition for platforms that operate in multiple segments may be to consider whether there are sufficiently strong consumption synergies that may point to the focal product being a product ecosystem comprising distinct services sold by the platform. The market definition exercise can then be carried out based on assessing what may be reasonably regarded as substitutes to this focal product ecosystem.

134. In addition, CCCS is of the view that the concept of a product ecosystem is not entirely new. The current *CCCS Guidelines on Market Definition* contains a discussion of an approach to market definition where 'bundles' of distinct products may be included in the relevant market due to sellers selling these products together, effectively taking into consideration complementarities on the supply-side.⁹² In this regard, the concept of product ecosystems appears to be an extension of the aforementioned concept to take into account synergies on the demand-side, in particular consumption synergies. In this sense, it appears that the concept of product ecosystems is applicable more generally to all kinds of products and services, and not limited to digital platforms.

CCCS's recommendations

135. CCCS's approach to market definition is set out in the *CCCS Guidelines on Market Definition*. Given the above discussions on the implications of the multi-sided nature of digital platforms and the applicability of the concept of product ecosystems, CCCS has considered that it may be opportune to update the *CCCS Guidelines on Market Definition* so as to improve its clarity and relevance to businesses operating in the digital era.

136. Amendments to the guidelines would provide greater clarity on the following issues:

- a. How the market definition exercise may be adapted to consider specific features of multi-sided platforms as discussed in the previous sections; and

⁹¹ For instance, e-commerce platform operators that participated in the market study indicated that consumers generally prefer not to have too many apps on their phones, and that the ability to know what consumers are searching for allows the platform to understand consumer preferences such that it can launch products that are more likely to be successful.

⁹² *CCCS Guidelines on Market Definition*, paragraph 5.11.

- b. How CCCS may consider consumption synergies as an additional factor when assessing whether the focal product may be a product ecosystem comprising distinct products sold by the same seller.

VII. ADDRESSING MARKET POWER IN THE DIGITAL ERA

137. As discussed in paragraph 23 above, driven by increasing internet usage and online purchases, there has been an increase in the prevalence of e-commerce platforms that compete in multiple market segments offering distinct products and/or services. This raises interesting questions as to whether such a strategy increases a platform's market power and increases the likelihood of certain kinds of abuse of dominance conduct. For example, such e-commerce platforms could leverage their market power from one market segment to another, by engaging in conduct such as tying, bundling, exclusivity arrangements, predatory pricing, refusal to supply and self-preferencing. That said, based on the findings from the market study, there appears to be little evidence to date of these forms of conduct by such e-commerce platforms in Singapore.

138. An undertaking will be considered to be dominant if it has substantial market power.⁹³ In assessing whether an undertaking is dominant, the extent to which there are constraints on an undertaking's ability to profitably sustain prices above competitive levels, or to restrict output or quality below competitive levels will be considered. Such constraints include the extent of competition from existing competitors, the possibility of new competitors entering the market (which is affected by the barriers to entry), the ability of buyers to counter the exercise of market power by the dominant player, government regulation, etc.⁹⁴

139. The characteristics of e-commerce platforms may raise challenges in assessing their market power, in particular for those platforms that compete in multiple market segments and offer distinct products and/or services. Some of these challenges include:

- a. Whether static indicators of market power are likely to be less informative in the assessment of market power;
- b. Whether there should be a greater emphasis on barriers to entry, switching behaviour and innovation in the assessment of market power; and
- c. Whether the network effects and data accumulation by e-commerce platforms that compete in multiple market segments mean they intrinsically have more market power.

140. Further, e-commerce platforms that expand into adjacent/complementary markets (including downstream markets such as logistics, fulfilment and delivery) may increase the incentive for them to engage in self-preferencing. Such conduct has been identified as

⁹³ *CCCS Guidelines on the Section 47 Prohibition*, paragraph 3.3.

⁹⁴ *CCCS Guidelines on the Section 47 Prohibition*, paragraph 3.4.

potentially anti-competitive in several cases conducted by overseas competition authorities (see paragraph 172 onwards).

Issues relating to assessment of market power for e-commerce platforms that compete in multiple market segments

Static market power indicators may be less informative

141. Traditional indicators of market power may be less informative in cases involving digital platforms including e-commerce platforms. As discussed in Chapter VI above, given the challenges involved in defining the relevant market in cases involving multi-sided platforms (e.g. a platform that does not charge a positive price to users of one (or both) side(s) of the platform), indicators which rely on market definition (such as market shares) may be a less reliable indicator of market power. Further, where the relevant market is defined with respect to a product ecosystem which includes a bundle of distinct products/services, it may not be possible to determine a single metric upon which market share figures can be calculated.

142. In cases where a market can be defined, the use of traditional sales-related indicators may not be as informative, given that one common phenomena of a multi-sided digital platform is that amongst different groups of users of the platform, users on one side of the platform are usually not charged a positive price for the platform's service (as discussed above at paragraph 122 onwards). Market share analysis may instead focus on the number of monthly active users (including buyers and sellers on each side of the platform), number of transactions and gross merchandise value.

143. More importantly, given the dynamic nature of the digital markets (including the rapid technological changes and changing business strategies), static tools of competition assessment such as market shares may not be reflective of the extent of competition in the market and therefore less relevant to the assessment of dominance. Further, digital platforms could be prone to market tipping due to the presence of network effects, in which case an incumbent's market share might be more sustainable than in other markets that have not tipped. These features make it difficult to assess, based on static market shares at a point of time only, the degree of sustainability of market power and accordingly, dominance.

144. The dynamic nature of digital markets can be illustrated by the rapidly developing e-commerce market in Singapore. For example, e-commerce platform Shopee was launched in 2015 after some of its e-commerce platform rivals. Notwithstanding its relatively late start, Shopee has competed viably with other e-commerce platforms. Indeed, as of the 2nd quarter

of 2020, Shopee is reported to have the largest number of monthly web visits and app downloads amongst e-commerce platforms in Singapore.⁹⁵

Focus assessment on market power on barriers to entry, switching behaviour and innovation

145. Instead of relying on internal market factors such as market shares and market concentration to shed light on the extent of market power held by an e-commerce platform, a dominance assessment focused more on barriers to entry, switching behaviour and innovation is likely to be more insightful and informative.

146. In assessing barriers to entry, network effects can explain why new entrants can find it very difficult to challenge incumbents even if the market does not tip. For platforms where the utility to users on one side of the platform depend on the number (and usage) of the users on the other side of the platform, users need to be assured that there will be a sufficient number of users on the other side of the platform. In order to acquire more users, new entrants may have to adopt strategies to overcome the advantages of incumbents (which includes for instance a large user base) – such as selling at very low prices (or at a loss) until the product is established and the network reaches a scale at which user value exceeds network costs. These activities involve sunk costs, which increases the barrier to entry. Sunk costs can also contribute to barriers to expansion for existing firms (where more sunk cost must be incurred to increase network size). This can be important where the notional costs of market entry (e.g. developing a platform) are otherwise low.

147. In the case of e-commerce platforms that compete in multiple market segments, it is expected that network effects could play an even bigger role as an evolution in consumer preferences appears to drive a shift towards “super apps”.⁹⁶ Consumption synergies refer to efficiencies derived from purchasing multiple distinct products or services together from the same supplier, or in the context of digital markets, from the same e-commerce platform. These efficiencies typically include benefits such as convenience, savings in transaction costs and time, which result in buyers deriving a greater value from purchasing the products or services from the same e-commerce platform instead of purchasing each product or service from different suppliers. These consumption synergies could mean that new entrants may find it more difficult to enter to compete with such e-commerce platforms. For instance, where there are strong consumption synergies for an incumbent’s products or services, buyers may find that the costs of switching to a potential entrant’s products or services may

⁹⁵ iPrice, [“The Map of E-Commerce in Singapore”](#), results for 2nd Quarter of 2020 published on 21 July 2020; The Straits Times, [“Shopee extends lead over Lazada to be region’s top online shopping platform: iPrice”](#), 6 August 2019; Today Online, [“How being ‘late’ to e-commerce gave Singapore’s Shopee an edge”](#), 30 December 2019.

⁹⁶ KPMG, [“Super app or super disruption?”](#), published June 2019.

be higher than the benefits derived from such a switch. The potential entrant may hence find it difficult to attract buyers and to compete effectively with the incumbent.

148. With regard to the Singapore market, the consumer survey conducted in the market study did not reveal a particularly strong consumer preference towards platforms that offer multiple product segments at this point. Across the three categories of products/services (point-to-point transport, food delivery, buying new groceries or new/used goods), a majority of the users would still “shop around” on other platforms. Additionally, the number of consumers who indicated that they “like having multiple services on the same app” and “like having apps that specialise in one service” when considering which e-commerce platform to use, is about the same.

149. Besides the number of users on the other side of the platform, the quality of users and intensity of usage can also affect the value of the platform to users on other side(s) of the platform. In certain circumstances, a platform may be able to harness such network effects to the extent that the market tips in its favour.

150. The stronger the network effects, the higher the barriers to entry may be. This is because a new entrant would need to overcome the collective switching costs of users, in order to simultaneously attract a significant number of users to switch over from the incumbent platform. Where network effects are strong, users of a platform will only be incentivised to switch over if a sufficient number of other users do so as well.⁹⁷ The literature reviewed highlighted that an added hurdle to new entrants is the fact that switching costs can be non-linear – convincing ten users to switch is more than ten times harder relative to convincing one user to switch.⁹⁸

151. In assessing the strength of network effects, CCCS may consider factors such as the prevalence of multi-homing, and switching costs. Network effects may be overcome where users have the freedom to either switch between services, or use multiple services simultaneously⁹⁹ (in other words, multi-home). Where users are able to multi-home, it may be easier for a new entrant to convince multi-homing users to switch to their platform as the user can conserve the benefits of using the incumbent platform. The existence of multi-homing by platform users may also mean that network effects might not be strong enough to result in a market tipping to one platform. Multi-homing by platform users (suppliers or consumers, in the context of e-commerce platforms) can also reduce barriers to entry for new platforms, because they do not require complete displacement of an incumbent for a minimum scale of network size to be achieved, to become a viable competitor to the

⁹⁷ Florence Thépot, [Market power in online search and social networking : A matter of two-sided markets](#), Centre for Law, Economics and Society Working Paper Series 4, 2012.

⁹⁸ Carl Shapiro and Hal R. Varian, *Information rules: a strategic guide to the network economy*, 1999.

⁹⁹ The United Kingdom Digital Competition Expert Panel’s review of competition in digital markets, and the accompanying report “[Unlocking Digital Competition](#)”, which was published on 13 March 2019, paragraph 1.82.

incumbent platform. The degree of multi-homing may be dependent on the costs to users. This could be affected by the pricing structure adopted by both the incumbent and the new entrant. For example, if a registration fee is collected from consumers, this tends to make multi-homing less attractive. In contrast, if prices are only levied on successful transactions, then consumers may tend to multi-home. E-commerce platforms may also roll out programmes to restrict switching behaviours such as requiring user exclusivity or offering loyalty programmes in order to reinforce their market power. As such, the dominance analysis should carefully consider the extent to which users can multi-home.

152. Beyond the extent to which users can multi-home, the extent to which users do actually multi-home in practice should also be considered in the dominance analysis. Even if users are able to multi-home, they may not be inclined to do so, due to a number of factors. This includes the inability to transfer transaction and search histories across multiple service providers, the inability to transfer endorsements such as customer feedback, ratings, or trusted scores for businesses, technical barriers and inertia. The degree of multi-homing may also depend on the level of differentiation between the products. In particular, when there is no product differentiation, users may not be motivated to multi-home due to the perceived lack of additional value in doing so. The consumer survey conducted in the market study revealed that once consumers have chosen a platform, a considerable portion tends to show considerable loyalty to that platform, often due to non-price factors such as ease of use and familiarity with the platform.

153. In assessing dominance, consideration should also be given to factors such as the ability of e-commerce platforms to add new services or otherwise change market positioning in order to compete effectively or even overtake another competitor.

154. The aforementioned factors have similarly been considered in other jurisdictions. CCCS notes that the German Federal Ministry for Economic Affairs and Energy¹⁰⁰ is seeking to revise the competition law in Germany to adopt a similar approach in assessing the market position of an undertaking in the case of multi-sided markets and networks, which includes direct and indirect network effects, the level of single- and multi-homing and the switching costs for users; access to data relevant for competition; and competitive pressure from innovation.¹⁰¹

¹⁰⁰ The German Federal Cartel Office [press release](#) dated 25 February 2020; and the German Federal Ministry for Economic Affairs and Energy's [draft and press release](#) dated 24 January 2020 (in German only).

¹⁰¹ See section 18(3a) of the "[Draft Bill for the Reform of the German Competition Act, January 2020 – Unofficial Translation](#)", published 21 February 2020.

Role of data in the context of e-commerce platforms that compete in multiple market segments

155. As indicated in paragraphs 62 and 63 above, data plays an important role in the decision-making process of e-commerce platform operators. The analysis of data collected by e-commerce platform operators assists in their understanding of the most effective strategies to engender customer loyalty, and the improvement of product/service quality. These findings are consistent with those of the studies conducted in overseas jurisdictions – a data-rich incumbent e-commerce platform operator could cement its position through user feedback loops.¹⁰² A user feedback loop occurs when a company collects data from users, which it then uses to improve the quality of its product/service, which then draws in more users, thereby creating a virtuous circle.¹⁰³

156. In view of the important role that data plays in digital markets, the studies in overseas jurisdictions have also noted the potential for data to be a barrier to entry.¹⁰⁴ This is especially so where access to data confers a competitive advantage upon an incumbent market player, and where new entrants are unable to either collect or obtain access to same volume or variety of data as the incumbent.¹⁰⁵

157. Interestingly, the interviews with industry stakeholders did not indicate that data presently poses an insurmountable barrier to entry. That said, it is clear from the information gathered in the course of the market study that data is important to e-commerce platform operators. Further, the rise of technology such as AI and algorithms could potentially increase the importance of data to digital platforms in the foreseeable future. Therefore, the control or ownership of data could represent a barrier to entry, and should be duly considered by CCCS in its assessment of dominance.

¹⁰² The United Kingdom Digital Competition Expert Panel's review of competition in digital markets, and the accompanying report "[Unlocking Digital Competition](#)", which was published on 13 March 2019, paragraph 1.73;

¹⁰³ The United Kingdom Digital Competition Expert Panel's review of competition in digital markets, and the accompanying report "[Unlocking Digital Competition](#)", which was published on 13 March 2019, paragraph 1.73

¹⁰⁴ The United Kingdom Digital Competition Expert Panel's review of competition in digital markets, and the accompanying report "[Unlocking Digital Competition](#)", which was published on 13 March 2019, paragraphs 1.73 and 1.79; The German Federal Cartel Office and the French Competition Authority's joint report "[Competition Law and Data](#)", which was published on 10 May 2016, pages 11 to 12 on "Data as a source of market power"; Marc Bourreau, Alexandre de Streel, and Inge Graef, "[Big Data and Competition Policy: Market power, personalised pricing and advertising](#)", which was published in 16 February 2017, section 3.2.

¹⁰⁵ The German Federal Cartel Office and the French Competition Authority's joint report "[Competition Law and Data](#)", which was published on 10 May 2016, pages 11 to 12 on "Data as a source of market power"; Marc Bourreau, Alexandre de Streel, and Inge Graef, "[Big Data and Competition Policy: Market power, personalised pricing and advertising](#)", which was published in 16 February 2017, section 3.2.

Theories of harm that may be more prevalent with the rise of e-commerce platforms that compete in multiple market segments

158. One issue that was considered in the market study is whether e-commerce platforms that compete in multiple market segments offering distinct products and/or services, are intrinsically more likely to have market power than e-commerce platforms that only operate in one market segment. As discussed at paragraph 131, the existence of a product ecosystem could limit the ability of a rival platform that only operates in a single market segment to compete effectively. In that scenario, an e-commerce platform operator with a product ecosystem could presumably attain market power more easily given the higher barriers to entry. In contrast, a rival platform operator may need to supply more than one service in order to be a viable competitor, and this could involve sunk costs or require economies of scale or scope to be achieved. Literature from overseas jurisdictions has also noted that the trend for large digital companies to enter new markets can increase barriers to entry as it requires an entrant to offer an entire ecosystem, rather than one product and/or service.¹⁰⁶

159. That said, there may be efficiency benefits from supplying more than one product (lower costs) or benefits to consumers from purchasing more than one product on a platform. The greater market power enjoyed by such platforms may be consistent with achievement of economic efficiencies where the best outcome could be for one platform to meet the entire demand of the market, i.e. a “winner-takes-all” market, or a “winner-takes most” market.

160. In any event, even if an e-commerce platform operator occupies a dominant position in a relevant market, it is not an infringement of the section 47 prohibition where the dominant position is achieved or maintained through conduct arising from efficiencies, such as through successful innovation or economies of scale or scope. It is therefore necessary to further consider whether certain strategies adopted by a dominant e-commerce platform operator that competes in multiple market segments offering distinct products/services may give rise to competition concerns.

Personalised pricing

161. An issue that has been raised in the literature is whether the practice of personalised pricing, requiring the performance of analytics based on data on consumers’ profiles and their online behaviour, could constitute an abuse of dominance.¹⁰⁷ Such conduct may be more relevant to e-commerce platform operators that set prices, as opposed to e-commerce platform operators that connect sellers to buyers and sellers setting their own prices on the

¹⁰⁶ The United Kingdom Digital Competition Expert Panel’s review of competition in digital markets, and the accompanying report “[Unlocking Digital Competition](#)”, which was published on 13 March 2019, paragraph 1.64.

¹⁰⁷ Botta and Weidemann, “[To discriminate or not to discriminate? Personalised pricing in online markets as exploitative abuse of dominance](#)”, *European Journal of Law and Economics*, December 2019.

platforms. In relation to the former, data collected by the platform operator could be used to personalise offers.

162. The offering of personalised prices is a form of price discrimination, which is the application of dissimilar conditions to equivalent transactions with other trading parties. Price discrimination is only possible where the seller is able to differentiate between different buyers or categories of buyers and there is no arbitrage between them. It is a usual business practice in a wide range of industries including those where competition is effective.¹⁰⁸ Such conduct may raise competition concerns if there is evidence that it is used to harm competition. For example, a dominant e-commerce platform operator may use personalised prices to set discounts which have the effect or likely effect of foreclosing all, or a substantial part, of a market.¹⁰⁹

Exclusive dealing

163. Typically, exclusive dealing takes place in the context of exclusive purchasing, in which a seller requires a buyer to purchase exclusively or to a large extent from the seller. For example, where a dominant manufacturer has an exclusive purchasing requirement with a retailer, this may amount to an abuse.¹¹⁰

164. In the context of e-commerce platforms, the e-commerce platform operator may require a seller to sell or deal exclusively (or to a large extent) on its platform. As discussed earlier at paragraph 150, an e-commerce platform may seek to strengthen the network effects by limiting switching behaviours by users through user exclusivity, in order to reinforce their market power. Such exclusive dealing serves to guarantee an e-commerce platform a certain number of users on one side, which contributes to the value of the service to users on the other side of the platform. Such exclusive dealing also limits a user's ability to multi-home or switch platforms. This could, in turn, contribute to the heightening of barriers to entry or expansion, as well as the likelihood of the exclusive dealing resulting in foreclosure or the weakening of competition.

165. E-commerce platforms may also limit multi-homing by their users through other means instead of an outright restriction.¹¹¹ These strategies could be deployed on both the suppliers' and the consumers' side of the e-commerce platform. For instance, as discussed at paragraph 60, multi-homing can be made less attractive to users through the use of financial incentives, including loyalty discounts and cashback schemes. Other strategies employed by

¹⁰⁸ CCCS Guidelines on the Section 47 Prohibition, paragraph 11.14.

¹⁰⁹ CCCS Guidelines on the section 47 Prohibition, paragraph 11.15.

¹¹⁰ CCCS Guidelines on the Section 47 Prohibition, paragraph 11.24.

¹¹¹ European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019, pages 57 to 58.

e-commerce platforms may also include ranking users on its platforms based on the users' transaction values, such that the user would have an incentive to use the platform exclusively.¹¹²

166. There have been cases involving exclusive dealing by digital platforms. For instance, in 2016, CCCS investigated an online food delivery provider in Singapore, following complaints of exclusivity agreements between the online food delivery provider and certain restaurants. CCCS noted the use of exclusive agreements by online food delivery providers as one method to attain market shares, and that, in the event that the online food delivery provider becomes dominant, the presence of such exclusive agreements risks infringing competition law as it would affect the competitive state of the market.¹¹³ More recently, in CCCS's infringement decision against Grab and Uber in relation to the sale of Uber's Southeast Asian business to Grab for a 27.5% stake in Grab¹¹⁴, CCCS's investigation found that strong network effects made it difficult for potential competitors to scale and expand in the market, particularly given that Grab imposed exclusivity obligations on taxi companies, car rental partners, and its drivers. CCCS found that such exclusivities hamper the ability of potential competitors to access drivers and vehicles that are necessary for expansion in the market.

167. Whilst it is possible that exclusive dealing strategies by e-commerce platform operators could improve efficiency and lead to positive consumer outcomes, it is also possible that the use of these strategies by a dominant e-commerce platform operator could affect entry or expansion of rivals. In such circumstances, CCCS will have to undertake an analysis of the likely effects on competition, based on the specific facts and circumstances of each case.

Tying and bundling

168. Tying occurs when buyers that purchase a product (the tying product) are required also to purchase another product from the dominant undertaking (the tied product).¹¹⁵ Tying can take place on a technical¹¹⁶ or contractual¹¹⁷ basis. Bundling refers to the way that

¹¹² European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019, page 57.

¹¹³ [CCS Investigation Finds Online Food Delivery Industry To Be Currently Competitive But Exclusive Agreements Could be Problematic In Future](#), media release dated 25 August 2016.

¹¹⁴ CCCS 500/001/18, [Notice of Infringement Decision of the Sale of Uber's Southeast Asian business to Grab in consideration of a 27.5% stake in Grab](#), decision of 24 September 2018.

¹¹⁵ The European Commission's [Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings](#), 2009/C 45/02, paragraph 48.

¹¹⁶ Technical tying occurs when the tying product is designed in such a way that it only works with the tied product and not with the alternatives offered by competitors. See the European Commission's [Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings](#), 2009/C 45/02, paragraph 48.

¹¹⁷ Contractual tying entails that the buyer, when purchasing the tying good, undertakes only to purchase the tied product and not the alternatives offered by competitors. See the European Commission's [Guidance on the](#)

products are offered and priced by the seller. In the case of mixed bundling, a seller offers a lower price (for instance, through a discount) if two products are purchased as a package. The two products may be available separately, but the sum of the prices when sold separately is higher than when sold in a package. In the case of pure bundling, the two products are only sold together in a fixed proportion and are not available for purchase on a standalone basis.¹¹⁸

169. Supplying products as part of a tied or bundled arrangement are common commercial arrangements which may be intended to provide buyers with products in more cost-effective ways.¹¹⁹ However, in certain circumstances, an undertaking that is dominant in one market may use a tie or bundle to leverage this market power into another market in order to foreclose its competitors, and this could raise competition concerns.

170. In the context of digital markets, an e-commerce platform operator competing in multiple market segments offering distinct products and/or services on a single app could be engaging in a form of tying as consumers may only want the app for a particular product or service. However, the competition concerns that would arise in such circumstances are not immediately clear. The extent to which tying contributes to the foreclosure or distortion of competition will depend on whether the integration of products and/or services inhibits a user's willingness to multi-home or switch to rival e-commerce platforms, as well as actual user behaviour. This would need to be evaluated on a case-by-case basis. The findings from the market study do not indicate that, at this point in time, users are forced into purchasing a tied product on an app, in order to gain access to the tying product.

171. An alternative form of potential leveraging may be through the use of bundled discounts or loyalty schemes. As noted in paragraph 61, an e-commerce platform may achieve customer loyalty through reward programmes and subscription-based benefits. For e-commerce platforms that operate in multiple market segments, such programmes and benefits may cut across all its products and/or services, acting as a form of bundling which allows the e-commerce platform operator to leverage market power from one market (e.g. where users are earning rewards) into another (e.g. where users can spend the rewards). Such strategies may make it more difficult for rival e-commerce platforms to offer a viable competing product and/or service. Once again, whether such conduct amounts to an abuse of a dominant position will require a case-by-case assessment.

[Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings](#), 2009/C 45/02, paragraph 48.

¹¹⁸ This may be contrasted with tying, where the tied product may be purchased on a standalone basis but not the tying product.

¹¹⁹ The European Commission's [Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings](#), 2009/C 45/02, paragraph 49; Australian Competition and Consumer Commission, [Guidelines on misuse of market power](#), published on 31 August 2018.

Self-preferencing

172. Self-preferencing occurs when a company gives preferential treatment to its own products and/or services when they are competing with other products and/or services provided by a competitor using the platform.

173. The findings from the market study suggests that self-preferencing typically relies on a company being vertically integrated, i.e. e-commerce platforms that are active in upstream and downstream markets (i.e. acting both as a platform and as a seller). Self-preferencing could be considered anti-competitive where it is likely to result in a leveraging of market power from one market into another. Even though CCCS is considering this theory of harm in the context of digital markets, such conduct may be equally applicable to players in non-digital markets.

174. Self-preferencing as a potential abuse of dominance by a digital platform has been identified as a theory of harm in several cases conducted by overseas competition authorities.¹²⁰ For instance, in the *Google Shopping* decision¹²¹, the European Commission concluded that Google's more favourable positioning and display, in its general search results pages, of its own comparison shopping service compared to competing comparison shopping services constituted an abuse, as there were no other effective routes through which competing comparison shopping service providers could offer their services.

175. Overseas competition authorities are also paying more attention to self-preferencing as a potential competition concern, and have noted that such conduct may become more prevalent in the digital platforms space. For instance, the Australian Competition and

¹²⁰ Two other ongoing cases include (i) the European Commission's investigation into Amazon and (ii) the European Commission's investigation into Apple. On 17 July 2019, the European Commission announced the commencement of a formal investigation into possible anti-competitive conduct of Amazon. Amazon has a dual role as a platform, i.e. as a retailer, and platform operator. The investigation will assess whether Amazon's use of sensitive data from independent retailers who sell on its marketplace infringes the European Union's competition rules. As part of the in-depth investigation, the European Commission will look into, *inter alia*, whether and how the use of accumulated marketplace seller data by Amazon as a retailer affects competition. The European Commission will consider whether Amazon's behaviour is in breach of either Article 101 and/or 102. (Refer to European Commission Case AT.40462, [Amazon Marketplace](#); and [press release](#) dated 17 July 2019). The European Commission also launched a preliminary investigation against Apple (following an official complaint filed by Spotify on 19 March 2019) in relation to alleged abuse of dominance conduct by Apple in the app market. Spotify's complaint relates to Apple allegedly implementing harmful App Store policies and giving its own music service, Apple Music, an unfair advantage. Information in relation to Spotify's official complaint is found in a European Parliament [parliamentary question](#) dated 26 September 2019. On 16 June 2020, the European Commission announced the commencement of a formal investigation to assess whether Apple's rules for app developers on the distribution of apps via the App Store violate the European Union's competition rules. The investigations concern the application of these rules to all apps, which compete with Apple's own apps and services. (Refer to European Commission Cases AT.40437 and AT.40652, *Apple App Store Practices*; and [press release](#) dated 16 June 2020).

¹²¹ European Commission Case AT.38740, [Google Search Shopping](#), decision of 27 June 2017.

Consumer Commission, in its Digital Platforms Inquiry, concluded that digital platforms with market power have the ability and incentive to favour their own related businesses, through self-preferencing, at the expense of other business users of the platform.¹²² The German Federal Ministry for Economic Affairs and Energy's Commission of Experts on Competition Law 4.0 had similarly recommended introducing regulations to establish clear rules of conduct for dominant digital platforms, and that these rules should include a prohibition on self-preferencing.¹²³

176. Self-preferencing can be a type of abusive conduct by a dominant undertaking, not just in the context of digital platforms, but also more generally. In this regard, the *CCCS Guidelines on the Section 47 Prohibition* does not identify self-preferencing as a type of abusive conduct by a dominant undertaking. By including self-preferencing as a potential abusive conduct, this will also bring the *CCCS Guidelines on the Section 47 Prohibition* in alignment with developments in overseas jurisdictions. Setting out CCCS's views on this area assists to bring greater clarity to businesses, as well as provides guidance to businesses on how to avoid engaging in such anti-competitive conduct.

CCCS's recommendations

177. CCCS's approach to the assessment of market power and abusive conduct by a dominant undertaking is set out in the *CCCS Guidelines on the Section 47 Prohibition*. Taking into account the findings of the market study and the discussions in literature reviewed, CCCS has considered that it may be opportune to update the *CCCS Guidelines on the Section 47 Prohibition*, including providing greater clarity on the following issues:

- a. How CCCS may broaden the considerations in the assessment of dominance for cases involving digital platforms beyond market share indicators to take into account additional factors such as barriers to entry, network effects and the control or ownership of data; and
- b. How CCCS may assess dominant digital platforms that engage in self-preferencing.

¹²² The digital platforms inquiry conducted by ACCC, and the accompanying "[Digital Platforms Inquiry Report](#)" which was published on 26 July 2019, paragraph 3.3.1.

¹²³ Commission of Experts on Competition Law 4.0 final report to the German Federal Ministry for Economic Affairs and Energy, "[A New Competition Framework for the Digital Economy](#)", [summary](#) in English, published on 9 September 2019.

VIII. MERGERS AND ACQUISITIONS BY DIGITAL PLATFORMS

178. Digital platforms, including e-commerce platforms that compete in multiple market segments and offer distinct products and/or services, may engage in mergers and acquisitions as part of their growth strategy. A recent example is Carousell’s merger with Telenor Group’s subsidiary 701Search which owns online marketplaces Mudah in Malaysia, Cho Tot in Vietnam, and OneKyat in Myanmar, which occurred in November 2019.¹²⁴ Carousell referred to the merger as allowing it to drive “rapid consolidation in the region”, “further this mission on an even greater scale” and “fortify” Carousell’s “leadership in Southeast Asia”.¹²⁵ The feedback from industry stakeholders indicates that e-commerce platforms in Singapore may view mergers and acquisitions as a strategy for growth and to expand their internal capabilities.

179. CCCS recognises that not all mergers give rise to competition issues, regardless of whether they involve digital platforms. Mergers can often have pro-competitive effects by positively enhancing the level of rivalry in a market, such that the merged firms have greater ability to reduce price, improve quality, enhance efficiency or innovate to introduce new and better products. Some mergers could be also be competitively neutral. Only mergers that substantially lessen competition and have no net economic efficiencies will infringe the Competition Act.

No clear impetus to revamp the merger regime in Singapore

180. Singapore has a voluntary merger notification regime. This means that there is no mandatory requirement, for merger parties to notify their merger situations to CCCS, either before or after the implementation of the merger. It is the responsibility of the merger parties to self-assess and ensure that their merger does not infringe the section 54 prohibition. Merger parties have the option of notifying their merger situation to CCCS under sections 57 or 58 of the Competition Act, and to apply for a decision as to whether the merger situation infringes, or will infringe, the section 54 prohibition. In this regard, parties are encouraged to perform a self-assessment to determine whether or not notification may be appropriate.¹²⁶

181. In the event that parties elect not to notify CCCS about a merger situation that may raise competition concerns, parties bear the risk that CCCS could investigate the merger situation on its initiative. CCCS monitors mergers through market intelligence and complaints

¹²⁴ CNBC, “[Singapore-based startup Carousell valued at more than \\$850 million following merger](#)”, 21 November 2019; Straits Times, “[Carousell to merge with 701Search, valuing Singapore start-up at over \\$1 billion](#)”, 21 November 2019.

¹²⁵ Straits Times, “[Carousell to merge with 701Search, valuing Singapore start-up at over \\$1 billion](#)”, 21 November 2019.

¹²⁶ CCCS *Guidelines on Merger Procedures*, paragraph 2.3 and 3.2.

it receives, and may conduct an investigation into an un-notified merger situation if there are reasonable grounds for suspecting that the merger situation infringes the section 54 prohibition.¹²⁷

182. There is on-going debate overseas on whether their existing merger control regime is equipped to pick up “killer acquisitions” by digital platforms,¹²⁸ in which an incumbent platform acquires a smaller innovative company with a quickly growing user base to eliminate competition. There are concerns in some jurisdictions that such acquisitions may escape scrutiny by competition authorities, as the merging parties’ turnovers may fall below the jurisdictional turnover thresholds required for mergers to be notified due to the potentially small turnover(s) of the target firm.¹²⁹ Thus, there have been discussions on whether and how to update the jurisdictional threshold, for example, by going beyond turnover thresholds to include value-based notification thresholds to take into account the difference between the purchase price of the acquired party and the acquired party’s present turnover.

183. CCCS has reviewed its current merger regime in light of these concerns, and on balance, takes the view that the regime in Singapore is sufficiently robust and flexible to deal with the challenges of “killer acquisitions”. CCCS can investigate a merger situation where there are reasonable grounds for suspecting that the section 54 prohibition will be or has been infringed, including potential “killer acquisitions”, regardless of the merger parties’ respective turnovers.¹³⁰ CCCS’s current framework can also take into account whether the acquisition will or may affect the presence of a strong fringe of smaller competitors (e.g. a maverick firm¹³¹).¹³² Furthermore, merger parties who have serious concerns as to whether their merger will or may lead to a substantial lessening of competition, may notify their merger to CCCS for guidance or decision (regardless of the merger parties’ turnover). It is noteworthy that whilst certain jurisdictions (e.g. Austria and Germany) have introduced transaction value-based notification thresholds¹³³, a recent EC report suggested that the

¹²⁷ CCCS Guidelines on Merger Procedures, paragraph 2.4 and 3.3.

¹²⁸ European Commission’s report “[Competition Policy for the Digital Era](#)”, which was published on 4 April 2019, page 117, and the United Kingdom Digital Competition Expert Panel’s review of competition in digital markets, and the accompanying report “[Unlocking Digital Competition](#)”, which was published on 13 March 2019, page 92.

¹²⁹ European Commission’s report “[Competition Policy for the Digital Era](#)”, which was published on 4 April 2019, pages 113 to 116.

¹³⁰ Section 62 of the Competition Act.

¹³¹ A maverick firm may include a firm with a history of preventing or disrupting coordination, for example, by failing to follow price increases by its competitors, or has characteristics that gives it an incentive to favour different strategic choices than its competitors would prefer.

¹³² CCCS Guidelines on the Substantive Assessment of Mergers, paragraph 5.44.

¹³³ The German Federal Cartel Office and the Austrian Federal Competition Authority introduced provisions on transaction value notification thresholds, such that mergers where companies or assets, which (as yet) generate little or no turnover, but are purchased at a high price, can be examined under the competition law of these jurisdictions. A joint [Guidance on Transaction Value Thresholds for Mandatory Pre-merger Notification \(Section 35\(1a\) GWB and Section 9 \(4\) KartG\)](#) was published by both competition authorities on 9 July 2018.

performance of such transaction value-based thresholds should be closely monitored¹³⁴. Overall, there is currently no strong impetus to revamp the voluntary merger notification regime in Singapore to address the concerns identified in paragraph 182 above.

184. That said, companies should be fully mindful of the seriousness and consequences of anti-competitive mergers and acquisitions. To this end, CCCS will continue to be vigilant in assessing the competition effects on Singapore in cases involving: (i) markets where innovation is an important feature of competition and where one or more of the merger parties is an important innovator regardless of the markets in which they operate); and (ii) mergers between digital platforms that are active in different market segments. CCCS will also monitor the emergence of new theories of harm that may be more applicable in mergers or acquisitions involving digital platforms, including merger situations that may involve access to data. A further discussion of these issues is found below.

Mergers involving firms that are important innovators

185. In markets where innovation is an important competitive force, a merger may increase the undertakings' ability and incentive to bring new innovations to the market and, thereby, enhance the competitive pressure on rivals to innovate in that market. On the other hand, effective competition may be significantly impeded by a merger between two important innovators, for instance between two undertakings with 'pipeline' products related to a specific product market. Similarly, a merger party with a relatively small market share may nevertheless be an important competitive force if it has promising pipeline products.

186. The *EC Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings* ("**EC Horizontal Merger Guidelines**") identified transactions in which one or more merging parties are important innovators in ways not reflected in market shares as a factor that may influence whether significant non-coordinated effects are likely to result from the transaction.¹³⁵ The EC Horizontal Merger Guidelines state that certain undertakings have more of an influence on the competitive process than their market shares (or any other similar measure) would suggest. In such circumstances, a transaction involving such merger parties may change the competitive dynamics in a significant way.¹³⁶

¹³⁴ European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019, page 124.

¹³⁵ The European Commission's [Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings](#), 2004/C 31/03, paragraphs 37 to 38.

¹³⁶ The European Commission's [Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings](#), 2004/C 31/03, paragraphs 37 to 38.

187. In this regard, CCCS can provide greater clarity to undertakings on how CCCS may assess cases involving markets where innovation is an important feature of competition, and where one or more of the merger parties is an important innovator.

Mergers and acquisitions resulting in the expansion of an e-commerce platforms into another market segment

188. As noted in paragraph 24, digital platforms such as e-commerce platforms have the incentive to diversify their activities and enter new markets, including by way of acquiring other businesses that operate in adjacent or related markets. Such mergers may be considered conglomerate mergers¹³⁷, and allow the acquiring platform to integrate their services and build a more extensive platform or ecosystem.¹³⁸

189. Typically, conglomerate mergers are considered to give rise to pro-competitive effects. Consumers may be able to enjoy a greater variety of complementary services from the convenience of a single platform after integration. Similarly, the merged platform may enjoy economies of scope in providing related and complementary services for a wider pool of customers.

190. However, conglomerate mergers could also entrench the acquiring platform's market power in its core market segment, for example due to the presence of economies of scope, and in turn serve as the merged platform's barricade for competition in its core market segment.¹³⁹ Such mergers could also reinforce the merged platform's position in the market, bringing the market closer to the tipping point, in favour of the incumbent, as a result of the acquisition. Competition concerns may also arise if the conglomerate merger occurs between parties in closely related markets¹⁴⁰ and enables the development of a more extensive platform or a product ecosystem. The combination of products in related markets may confer upon the merged digital platform the ability and incentive to leverage a strong market

¹³⁷ Conglomerate mergers involve firms that operate in different product markets. They may be product extension mergers (i.e. between firms that produce different but related products) or pure conglomerate mergers (i.e. between firms operating in entirely different markets). Conglomerate mergers are neither horizontal nor vertical i.e. there is no vertical relationship and no overlap in the products or services supplied by the merging parties

¹³⁸ European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019, page 121.

¹³⁹ European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019, page 121.

¹⁴⁰ For example, mergers which involve sellers of complementary products, or sellers of (distinct or related) products that belong to a range of products that is generally purchased or likely to be purchased together by the same set of buyers for the same end use.

position from one market to another by means of tying, bundling or other forms of exclusionary conduct.¹⁴¹

191. In view of the potential competition concerns that may arise, CCCS's position on conglomerate mergers should be updated. This will also serve to better align it with respect to the treatment of conglomerate mergers by overseas competition authorities, such as the United Kingdom's Competition and Markets Authority¹⁴² and the European Commission¹⁴³.

Mergers and acquisitions involving data

192. Feedback from industry stakeholders indicated that while data does not constitute an insurmountable barrier to entry, data remains a valuable asset to e-commerce platforms and have the potential to confer a competitive advantage.

193. In view of the importance of data, digital platforms (including e-commerce platforms that operate in multiple market segments and offer distinct products and/or services) may pursue acquisition strategies in order to obtain access to more and higher quality data. Such a merger or an acquisition can have pro-competitive effects if, post-acquisition, the merged platform has access to richer datasets that allow it to better understand their consumers' needs and preferences, and introduce more relevant and valuable services to their consumers.¹⁴⁴

194. However, the merger or acquisition could also lead to concentration of control over data of competitive significance that cannot be easily replicated by competitors. In these cases, the transaction could further strengthen a digital platform's market position by entrenching its comparative data advantage and raise barriers to entry and/or expansion.

¹⁴¹ The European Commission's [Guidelines on the Assessment of Non-Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings](#), 2008/C 265/07, paragraph 93.

¹⁴² The United Kingdom's Competition and Markets Authority takes the view that "most [non-horizontal mergers] are benign and do not raise competition concerns. Nevertheless, some can weaken competition and may result in an SLC." *Merger Assessment Guidelines* (September 2010) – A joint publication of the Competition Commission and the Office of Fair Trading, paragraph 5.6.1.

¹⁴³ The European Commission notes that "[w]hereas it is acknowledged that conglomerate mergers in the majority of the circumstances will not lead to any competition problems, in certain specific cases there may be harm to competition." The European Commission's [Guidelines on the Assessment of Non-Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings](#), 2008/C 265/07, paragraph 92.

¹⁴⁴ European Commission's report "[Competition Policy for the Digital Era](#)", which was published on 4 April 2019, page 110.

195. CCCS has previously used the existing analytical framework in its assessment of past mergers involving combination of data sets that were held by merging parties.¹⁴⁵ In this regard, CCCS's existing merger assessment framework has been sufficiently flexible and robust to assess whether the concentration of data following a merger situation would lead to a substantial lessening of competition.

196. With the growing prominence of data, it is timely for CCCS to recognise that, data protection concerns can be taken into account in CCCS's competition assessment of mergers, to the extent that consumers see it as a significant factor of quality and the merging parties compete on this basis.¹⁴⁶ This approach is also consistent with the EC's approach for merger assessment involving data privacy considerations (e.g. Facebook's acquisition of WhatsApp¹⁴⁷ and Microsoft's acquisition of LinkedIn¹⁴⁸).

CCCS's recommendations

197. Notwithstanding the potential competition concerns highlighted above, CCCS is of the view that Singapore's current merger regime is sufficiently robust and flexible for CCCS to assess mergers and acquisitions that involve digital platforms. As elaborated above, CCCS does not see a strong impetus to revamp the voluntary merger notification regime in Singapore, or to introduce transaction value-based thresholds for merger notification.

198. CCCS recognises that there is scope to provide further clarity in the *CCCS Guidelines on the Substantive Assessment of Mergers* in relation to how CCCS may apply the existing merger assessment framework to mergers involving digital platforms, in particular:

- a. How CCCS may assess mergers involving markets where innovation is an important feature of competition, and one or more of the merger parties is an important innovator, regardless of the markets in which they operate;
- b. That data protection is an aspect of competition on quality in cases where it is a relevant parameter of competition; and

¹⁴⁵ CCCS 500/001/18, [Notice of Infringement Decision of the Sale of Uber's Southeast Asian business to Grab in consideration of a 27.5% stake in Grab](#), decision of 24 September 2018; CCS 400/004/14, [Notification for Decision of the proposed acquisition of SEEK Asia Investments Pte. Ltd. of the JobStreet Business in Singapore pursuant to section 57 of the Competition Act](#), decision of 13 November 2014; CCS 400/007/07, [Notification for Decision: Merger between the Thomson Corporation and Reuters Group PLC](#), decision of 23 May 2008. See also discussion in CCCS's Occasional Paper ["Data: Engine for Growth – Implications for Competition Law, Personal Data Protection and Intellectual Property Rights"](#), published on 16 August 2017, paragraphs 202 to 212.

¹⁴⁶ CCCS's Occasional Paper ["Data: Engine for Growth – Implications for Competition Law, Personal Data Protection and Intellectual Property Rights"](#), published on 16 August 2017, paragraphs 213 to 216.

¹⁴⁷ European Commission Case No. COMP/M.7217. [Facebook/Whatsapp](#), decision of 3 October 2014, paragraph 164

¹⁴⁸ European Commission Case M.8124. [Microsoft/LinkedIn](#), decision of 6 December 2016.

- c. How conglomerate mergers may be assessed by considering the ability and incentive of the merged entity to foreclose competitors through tying, bundling or other forms of exclusionary conduct.

IX. ACCESS TO DATA

199. Access to data can confer a competitive advantage to e-commerce platforms, especially where the e-commerce platform operator has exclusive access to a large amount of individual-level data. Such large caches of data could be used by machine-learning algorithms deployed by e-commerce platforms to gain better customer insights and improve their services, which in turn attract more users, who could then contribute more data on an ongoing basis.¹⁴⁹ Indeed, e-commerce platform operators that participated in the market study confirmed the importance of data in their decision-making processes. The importance of data as an input is the likely impetus for certain jurisdictions to encourage data mobility or improve access to data in order to achieve more pro-competitive outcomes.¹⁵⁰

200. The following sections further discuss the role of data as an input and the competition concerns that may arise from limited access to data. Given the development and deployment of AI and algorithms by e-commerce platforms to utilise the data they collect, the competition implications of the use of AI and algorithms is also discussed here.

Data as an input

201. Based on feedback from industry stakeholders, e-commerce platforms collect a large amount of data from platform users. Generally, this includes:

- a. **personal data** – this is data required to confirm the identity of buyers and sellers on the platform (such as the user’s name, phone number, address, etc) and is typically collected during the sign-up process. E-commerce platforms typically aim to strike a balance between collecting more data from users and improving the user experience with a quick sign-up process.
- b. **operational data** – this is data which the e-commerce platform requires to provide its matching and connecting service. In the case of online marketplaces, this includes data on product listings such as picture, price, and a description of the products/services. For ride-sharing, this includes origin and destination data, journey start and end times, etc. It will also cover financial information required to facilitate the transaction, such as credit cards and e-payment details.

¹⁴⁹ European Commission’s report “[Competition Policy for the Digital Era](#)”, which was published on 4 April 2019, page 31.

¹⁵⁰ European Commission’s report “[Competition Policy for the Digital Era](#)”, which was published on 4 April 2019, pages 98 to 100; United Kingdom Digital Competition Expert Panel’s review of competition in digital markets, and the accompanying report “[Unlocking Digital Competition](#)”, which was published on 13 March 2019, Recommended actions 2 and 3.

- c. **search data** – this concerns what products and services customers are searching for on the platform.
- d. **transactional data** – this is data about what products and services customers have purchased on the platform, when they were purchased, and how much was paid by the customers. E-commerce platforms often package and supply sales data to merchants on their platform to help inform their business strategies. Most e-commerce platform operators provide some level of transactional data free of charge to sellers using the platform.

202. Further, e-commerce platforms will also use the abovementioned data to derive other datasets such as how often searches turn into actual purchases.

203. Data collected by e-commerce platforms provide insights on the level, structure, and trends of demand and supply for products and services. This helps e-commerce platforms to do the following:

- a. **improve the quality of its service** – data collected is used to improve matching algorithms deployed by the platforms, thereby better ensuring that platforms supply the products and/or services that consumers want. An improved quality of service could help build customer loyalty to the platform.
- b. **reduce customer acquisition costs** – data collected helps e-commerce platforms better understand customer preferences, thereby helping them to acquire and retain new customers. This is a function of both ensuring that the e-commerce platform, or suppliers on the platform, are providing the products and services that are in demand by customers, and ensuring that the marketing efforts are maximised.
- c. **offer additional value-added services** – e-commerce platforms can provide insights to suppliers operating on the platforms, including the suppliers' own sales performance. This might also help suppliers launch products that are more likely to be successful.
- d. **expand into other markets segments** – e-commerce platforms that operate/intend to operate in multiple market segments may use data from one market segment to identify other products and/or services that they could provide.

- e. **benchmark performance over time** – e-commerce platforms may analyse indicators related to sales volumes and revenues, customer numbers and churn rates in order to benchmark their performance against competitors.

204. Industry stakeholders indicated that the importance of data is likely to increase over time, as more data is collected and as data becomes increasingly integrated with the development of algorithms. Whilst access to data has not been identified in the market study as an insurmountable barrier to entry at this juncture, data could increasingly become a key input, in view of the increasing prominence that data has in informing an e-commerce platform's business strategy. Further, whilst the role that data plays as a key input may be more pertinent in cases involving digital platforms (including e-commerce platforms), it has wider application for companies across different industries.

205. Currently, the *CCCS Guidelines on the Section 47 Prohibition* indicates that limited access to key inputs could contribute to barriers to entry.¹⁵¹ Entry barriers may arise where inputs, including data, are scarce, and where an undertaking has an advantage over a potential entrant due to privileged access to those inputs.

Refusal by a dominant undertaking to allow access to data

206. Competition concerns may arise where a dominant undertaking refuses to supply or provide access to key inputs, such as data. In this regard, existing case precedents from the European Court of Justice ("**ECJ**") indicate that it may be possible for such a theory of harm to arise in appropriate circumstances.

207. For instance, in *Magill*¹⁵², the ECJ found that the appellants' refusal to provide basic information by relying on national copyright provisions prevented the appearance of a new product, which the appellants did not supply and for which there was potential consumer demand. Such refusal constitutes an abuse of dominance, and the ECJ also clarified that the exercise of an exclusive right by a proprietor may, in exceptional circumstances, involve abusive conduct. However, it was not clear from the decision what constitutes exceptional circumstances.

¹⁵¹ *CCCS Guidelines on the Section 47 Prohibition*, paragraph 10.12.

¹⁵² Joined Cases C-241/91P and C-242/91P, *Radio Telefis Eireann v. Commission*, 1995 O.J. (C137) 3 (6 April 1995). In this case, three broadcasters in Ireland, which owned the copyright in their programme listings, obtained injunctions against *Magill TV Guide Ltd.* ("**Magill**"), which was attempting to publish comprehensive weekly television guide. *Magill* lodged a complaint with the EC, alleging abuse of dominance by the broadcasters' refusals to grant licences for the publications of their listings.

208. Further clarity on this issue was subsequently provided by the ECJ in *IMS Health*¹⁵³. The ECJ set out the conditions under which a refusal to license by a dominant firm that owns an indispensable product would constitute an abuse:

- a. the undertaking requesting for the licence must intend to offer new products or services, on the market for the supply of data in question, for which there is potential consumer demand which the dominant player is not offering;
- b. there was no objective justification for the refusal; and
- c. the refusal was such that it will reserve the market for the dominant player by eliminating all competition on that market.

209. The principles in the abovementioned cases indicate that it is possible that the refusal to supply or provide access to data by a dominant undertaking constitutes abusive conduct, and thereby infringes the section 47 prohibition. Whether such conduct amounts to an abuse of a dominant position will require a case-by-case assessment.

AI and algorithms, and potential anti-competitive conduct in relation to them

210. Section 34 of the Competition Act prohibits any agreements between undertakings, decisions by associations of undertaking or concerted practices which have as their object or effect the prevention, restriction or distortion of competition within Singapore. Section 34(2) of the Competition Act provides an illustrative, but not exhaustive, list of conduct that may infringe the section 34 prohibition. This includes agreements to fix prices or any other trading conditions; to limit or control production, markets, technical development or investment; to share markets or sources of supply; to apply dissimilar conditions to equivalent transactions with other trading parties; or to make the conclusion of contracts subject to acceptance by

¹⁵³ Case C-481/01, *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG*, 2004 O.J. (C3) 16 (29 April 2004). IMS Health was a supplier to pharmaceutical companies of German regional sales data in the form of a brick structure which corresponded to a designated geographical area. IMS obtained preliminary injunctions against its competitors on the basis that its competitor had infringed its copyright in the brick structure. One of its competitors, NDC, counterclaimed by alleging an abuse of dominance through IMS's refusal to supply, and also argued that it had not been able to develop alternate brick structures. The ECJ found that it must be established that the creation of the alternatives is not economically viable for the production on a scale comparable to that of the incumbent. The ECJ highlighted the fact that a high degree of participation by the pharmaceutical laboratories in the improvement of the brick structure may have created a technical dependency by users on that structure, consequently, very significant technical and financial efforts would have had to be put in by these laboratories to use data presented in a different structure. Accordingly, it would not be economically viable for other suppliers to offer an alternative structure for the data on a scale comparable to IMS. The ECJ confirmed the position that switching costs should be taken into consideration when determining whether access is indispensable.

the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

211. The market study indicates that price-fixing between e-commerce platforms seems unlikely at this point in time, given the different pricing structures and models used by each platform, which makes it difficult for industry players to fix focal prices. That said, undertakings should note that where algorithms or AI is used to support or facilitate any pre-existing or intended anti-competitive agreement or concerted practice, such activities are clearly subject to the existing enforcement framework.¹⁵⁴ In this regard, existing case precedents¹⁵⁵ illustrate that as long as algorithms are used to assist in the implementation of an anti-competitive agreement, liability for infringing the section 34 prohibition can be established based on evidence of the underlying anti-competitive agreement or concerted practice.

212. Further to the above, the increased use of algorithms or AI to make pricing decisions could increase the likelihood of other forms of potential collusion between sellers, including e-commerce platforms.¹⁵⁶ For example, there may be scenarios in which a third party, such as a software company, deploys the same algorithm or a coordinated algorithm amongst competitors, with no communication between the competitors.

213. Existing European Union (“EU”) jurisprudence suggests that undertakings may be liable if they are aware of the anti-competitive acts of a system administrator of a common computerised booking system and did not take steps to publicly distance themselves. In *Eturas*¹⁵⁷, which concerned travel agencies coordinating discount rates through the system administrator of a common computerised booking system, the ECJ stated in no uncertain terms that such a scenario would constitute a concerted practice under Article 101 of the Treaty on the Functioning of the EU (i.e. the EU equivalent of the section 34 prohibition), if competitors were aware of the system administrator’s message to impose a cap on discount

¹⁵⁴ This position is consistent with the position taken by CCCS in its paper “*Data: Engine for Growth – Implications for Competition Law, Personal Data Protection and Intellectual Property Rights*”, published on 16 August 2017.

¹⁵⁵ For instance, in the *Topkins* case (No. CR 15-00201 WHO, [United States of America v David Topkins](#), United States District Court of the Northern District of California in San Francisco (30 April 2015)), Topkins and his co-conspirators adopted a pricing algorithm that collected competitors’ pricing information and wrote a computer code to instruct their software to set the posters’ prices in conformity with their price-fixing agreement. Similarly, in the United Kingdom Competition and Markets Authority’s infringement decision against price-fixing between two competing online sellers of posters and frames, *Trod Limited and GB eye Limited* (Case 50223, [Online sales of posters and frames](#), Decision of the Competition and Markets Authority (12 August 2016)), the price-fixing agreement was implemented using automated re-pricing software (a pricing algorithm) which monitored and adjusted prices to ensure that neither party was undercutting the other in certain specified circumstances (see para 3.45-3.46, 3.62-3.93).

¹⁵⁶ The German Federal Cartel Office and the French Competition Authority’s joint report “[Algorithms and Competition](#)”, which was published on 6 November 2019.

¹⁵⁷ Case C-74/14, [Eturas and Others](#), Judgment of the European Court of Justice (21 January 2016).

rates, and if they did not publicly distance themselves from that practice. In other words, the alignment of prices of competing undertakings through a common third-party pricing algorithm may infringe the section 34 prohibition, even if there was no direct communication between the competitors.

214. Another possible scenario is where each undertaking uses a distinct algorithm with no prior or ongoing communication, but where this results in the alignment of market behaviour. There is literature discussing the increased likelihood of tacit collusion through the growing use of systems that use pricing algorithms in combination with extensive market data to make pricing recommendations or even delegate pricing decisions.¹⁵⁸ However, it does not appear that there is a clear position, as yet, on how the use of distinct algorithms or AI could lead to outcomes akin to explicit collusion.¹⁵⁹ Given this lack of clarity, the assessment of whether the collusive outcomes can be attributed to either the undertakings that developed or deployed the algorithms or AI should be performed on a case-by-case basis.

215. In view of the above, it would be prudent for undertakings to be alert to such competition law risks, and ensure competition law compliance when designing or deploying algorithms or AI. As a start, undertakings can take reference, and comply with, existing frameworks that address key ethical and governance issues when developing and deploying AI solutions. For example, undertakings should have regard to the Model AI Governance Framework (“**Model Framework**”), which was first published by the Personal Data Protection Commission (“**PDPC**”) on 23 January 2019.¹⁶⁰ The second edition of the Model Framework was released on 21 January 2020.¹⁶¹ The Model Framework aims to enable undertakings that develop and deploy AI solutions at scale to do so in a responsible manner. Relevant undertakings in the financial sector should also have regard to the Principles to Promote Fairness, Ethics, Accountability and Transparency (“**FEAT**”) in the Use of Artificial Intelligence and Data Analytics in Singapore’s Financial Sector, which were published by the Monetary Authority of Singapore on 12 November 2018, and updated on 7 February 2019.¹⁶² The FEAT Principles provides undertakings offering financial products and services with a set of foundational principles on the responsible use of AI and data analytics, and helps undertakings strengthen internal governance around data management and use.

¹⁵⁸ Mehra, S. K. *Antitrust and the Robo-Seller: Competition in the Time of Algorithms*, Minnesota Law Review, 2015; Ezrachi, A. and Stucke, M. E. *Virtual Competition: The Promise and Perils of the Algorithm Driven Economy*. Harvard University Press, 2016.

¹⁵⁹ The German Federal Cartel Office and the French Competition Authority’s joint report “[Algorithms and Competition](#)”, which was published on 6 November 2019, pages 43 to 44.

¹⁶⁰ [Information about the Model AI Governance Framework](#).

¹⁶¹ [Model AI Governance Framework, Second Edition](#), published by PDPC on 21 January 2020; [Primer to the Model AI Governance Framework](#), published by PDPC on 21 January 2020.

¹⁶² [Principles to Promote Fairness, Ethics, Accountability and Transparency \(“FEAT”\) in the Use of Artificial Intelligence and Data Analytics in Singapore’s Financial Sector](#), published by MAS, on 7 February 2019.

CCCS's recommendations

216. In view of the increased importance of data as an input, and the potential for the refusal to supply or provide access to data by a dominant undertaking to constitute abusive conduct, CCCS has considered that it may be opportune to update the *CCCS Guidelines on the Section 47 Prohibition* to provide greater clarity in relation to the role of data as an input, and the competition concerns that may arise from limited access to data. The amendments would serve to balance the flexibility for CCCS to intervene in appropriate circumstances, without being unduly restrictive of innovative data collection or use by undertakings.

217. Undertakings should note that where AI or algorithms are used to support or facilitate any pre-existing or intended anti-competitive agreement or concerted practice, such activities are clearly subject to the section 34 prohibition. As for the scenarios in which each undertaking uses a distinct algorithm with no prior or ongoing communication, but which results in the alignment of market behaviour, CCCS notes that there is no clear consensus on how collusive outcomes may be achieved. CCCS will continue to closely monitor further developments in this area.

X. KEY CONSUMER PROTECTION FINDINGS ARISING FROM THE MARKET STUDY

218. Successful e-commerce platforms rely on providing a good customer experience and fostering trust to sustain business from consumers. This has encouraged e-commerce platforms to institute a range of measures to not only earn and keep consumer trust, but to also protect consumers from unfair practices. As the intermediary between sellers and consumers and sometimes as a direct seller to consumers, e-commerce platforms play an important role in safeguarding consumers' interests, for example, by facilitating information transparency on sellers' products and pricing, and by offering various guarantee and pre-payment protection measures.

219. However, despite the various measures by e-commerce platforms, some consumers indicated, in the online survey conducted by Frontier Economics, that they have encountered some form of unfair practices on e-commerce platforms. The most common unfair practices reported by consumers are false claims of limited-time discounts, misrepresentations regarding limited quantities and false claims of discounts or benefits.

220. As the survey findings reflect the general sentiments of consumers based on their expectations and experience when using various e-commerce platforms, CCCS considers it important that e-commerce platforms help raise sellers' awareness of the CPFTA and advocate the adoption of good practices by sellers. Raising consumers' awareness of unfair practices will also help them make informed purchasing decisions when transacting on e-commerce platforms.

Some e-commerce platforms have a range of consumer protection measures to foster a conducive e-commerce environment in Singapore

221. E-commerce platforms recognise that consumer trust is important, and some have invested in automated solutions and implemented policies and processes to foster a conducive e-commerce environment that safeguards consumers' interests. These are further elaborated upon below.

222. Generally, e-commerce platforms have contractual agreements with sellers, which require them to provide information that is accurate, complete and compliant with the applicable laws in Singapore. E-commerce platforms also educate sellers, by regularly sharing information through their respective sellers' portal, and encouraging consumers to leave reviews and rate sellers.

223. Beyond contractual agreements and general education, some e-commerce platforms have certain targeted measures to protect consumers against unfair practices relating to false claims of prices (including discounts), and false claims about the nature of goods offered. For

example, to ensure that discounts offered to consumers have a genuine price benefit, an e-commerce platform validates the reference or list price provided by sellers using the regular retail price index, or historical prices on their platform. This e-commerce platform automatically monitors sellers' history of cancelling orders – which can indicate attempts to increase the price or failure to maintain appropriate stock levels – and sellers with excessive cancellation rates may be suspended or blocked from selling on their platform. Another e-commerce platform has incorporated rules (i.e. algorithms) within its system to prevent sellers from making certain false price mark-downs. With respect to false claims on the nature and price of goods, an e-commerce platform has automatic rules to prevent sellers from making certain descriptions that are not allowed, for example, claims that health or cosmetic products can “prevent” COVID-19.

224. E-commerce platforms may also have measures to encourage sellers to clearly disclose important facts to customers in product listings and discourage sellers from engaging in misleading claims of price or nature of goods. E-commerce platforms regularly review customers' feedback and take action against inappropriate and misleading product listings. Some e-commerce platforms may have a seller non-compliance points system. Misleading product listings or pricing may result in the issuance to sellers of non-compliance points by the e-commerce platform, with consequences such as suspension or termination of the seller's account. E-commerce platforms may remove a product listing from shopping results when a listing risks impairing the customer's shopping experience for reasons such as missing or incorrect information. More generally, e-commerce platforms seek to present a range of information on the products and/or services, such as detailed product description, photos, seller profile and customer reviews, to enable customers to make an informed decision.

225. Further, some e-commerce platforms have various guarantee and pre-payment protection measures to protect consumers against defective goods or non-delivery of goods. For example, some e-commerce platforms have a guarantee feature where it acts as an escrow agent for transactions on its platform. Payment to the seller is only released upon successful fulfilment of the product or service. Consumers may also have the opportunity within a certain period to request to return the product(s) if it is damaged, incorrect, has missing parts, or is not consistent with the product listing. In the event a consumer has an issue even after the payment has been released, the platform's customer service team will still respond to the consumer. E-commerce platforms may also provide refunds in response to any complaints on defective items.

226. Some e-commerce platforms have measures that apply to both local and overseas sellers. They have also taken extra steps to safeguard consumers as well as to engage and educate overseas sellers. For example, e-commerce platforms may notify the consumer via the product listing that the seller is based overseas, which may result in the product differing from local versions and that manufacturers' warranties may not apply. An e-commerce

platform ensures that information on its seller policies is easily accessible to all sellers, and its overseas sellers have dedicated key account managers to act as a point of contact and assist to educate sellers on Singapore’s laws and regulations.

227. Overall, e-commerce platforms operating in Singapore have put in place certain systems, processes and policies to ensure that sellers comply with the CPFTA. However, there are also inherent challenges. One e-commerce platform characterised the challenge as a “cat-and-mouse” game. For example, despite the e-commerce platform’s best efforts to eradicate errant sellers, sellers constantly find new ways to evade detection of unfair practices (e.g. misleading price information) by e-commerce platforms.

Unfair practices experienced on some e-commerce platforms

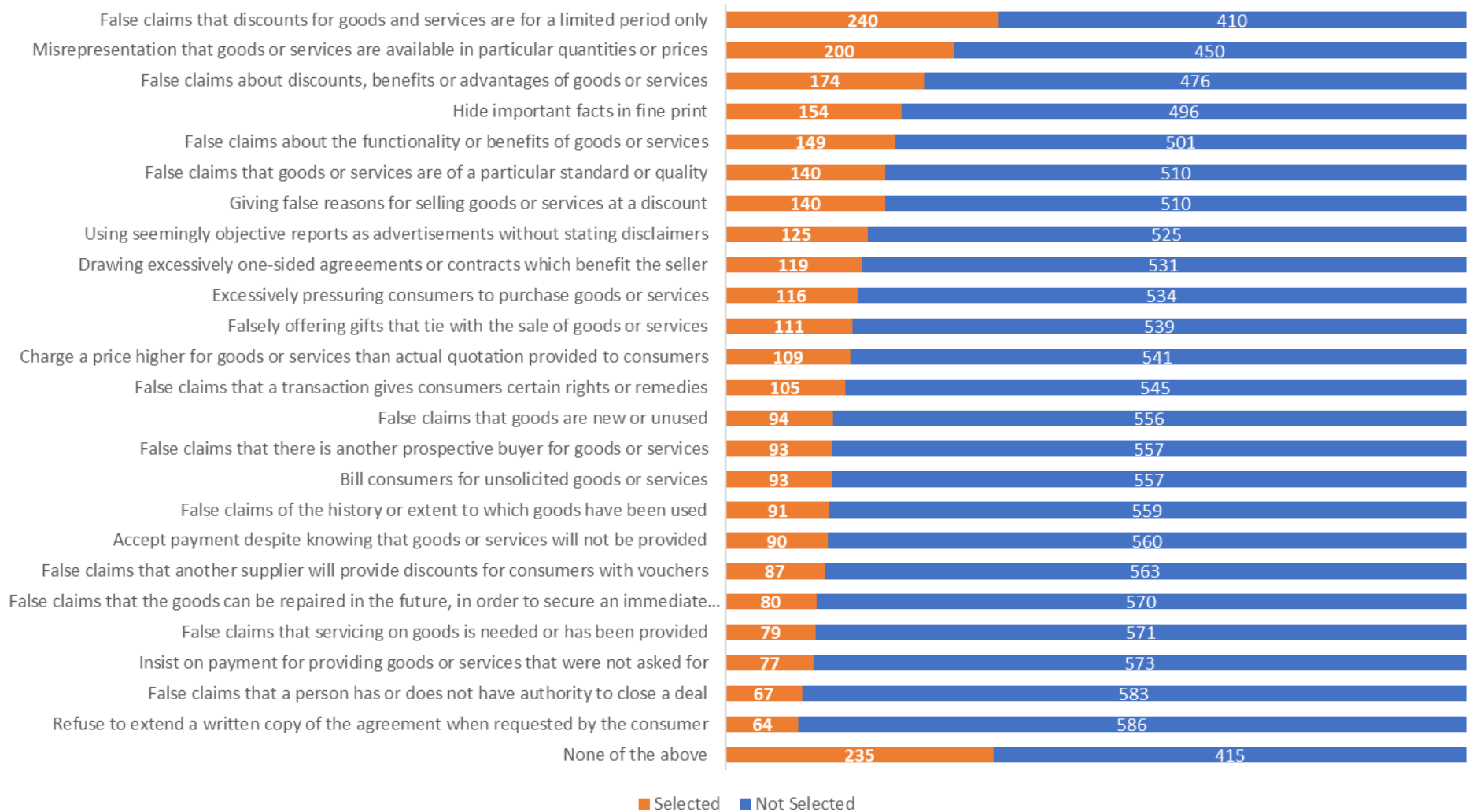
228. Based on the online survey, while one-third of the respondents indicated that they did not encounter any unfair practices, the other respondents considered that they had encountered certain unfair practices on some e-commerce platforms. With reference to Figure 11, the top three unfair practices reported by the respondents in the online survey are:

- a. False claims of limited-time discounts;
- b. Misrepresentations regarding limited quantities; and
- c. False claims of discounts or benefits.

229. CCCS further notes that the top three most common unfair practices perceived by consumers relate to the display and advertisement of prices, which CCCS has addressed in the *CCCS Guidelines on Price Transparency*¹⁶³.

¹⁶³ The *CCCS Guidelines on Price Transparency* were published on 7 September 2020, and are available [here](#).

Figure 11: Unfair practices encountered by consumers when using websites/apps in the last three months



Source: Frontier Economics and Kadence, C9 - Which of the following have you encountered when using websites/apps in the last three months? Notes: N = 650, multiple responses allowed

230. CCCS recognises that as there are wide-ranging types of digital platforms where e-commerce transactions can take place, there can be varying degrees of consumer protection measures put in place by different e-commerce platforms. While the survey findings do reflect the general sentiment of consumers with respect to unfair practices on e-commerce platforms, the prevalence of such unfair practices may differ between different platforms.

CCCS's recommendations

231. Overall, the general sentiment from consumers suggests that more can be done to foster a fair trading environment on e-commerce platforms in Singapore. By further enhancing good practices on their platforms, e-commerce platforms would be well-placed to gain consumer trust and leverage on this as their competitive advantage as they operate in the region.

232. Generally, CCCS considers e-commerce platforms and sellers listed on e-commerce platforms to be within the meaning of "suppliers" under the CPFTA. E-commerce platforms receive fees from sellers, by providing a platform for sellers to list and sell their products or services to consumers. At times, e-commerce platforms sell products or services directly to consumers. E-commerce companies which provide a free platform for sellers to list their products are also suppliers, as they promote the use or purchase of products or services. Individuals and entities who sell products or services on e-commerce platforms would be acting in the ordinary course of business and are suppliers. In this regard, e-commerce platforms should consider raising sellers' awareness and understanding of the CPFTA as well as encouraging sellers to adopt good practices.

233. CCCS believes that the fostering of trust in e-commerce platforms is the shared responsibility of all relevant stakeholders, including consumers. Creating greater awareness on the unfair practices that consumers may experience when transacting on e-commerce platforms will allow consumers to better protect themselves. Educating consumers to be vigilant of unfair practices and to raise any such issues appropriately and promptly would help to further foster a conducive e-commerce environment. Raising consumer awareness of the different dispute resolution and payment protection schemes would also help consumers make more informed purchasing decisions when transacting on e-commerce platforms.

XI. CONCLUSION

234. The rise of e-commerce platforms brings benefits to sellers and consumers. E-commerce platforms represent an opportunity for sellers to reach a wider market, including the possibility of transcending geographical barriers. Consumers also benefit from the availability of a suite of distinct products and/or services offered by e-commerce platform operators, through time savings or greater convenience. However, these benefits may not be fully realised if businesses engage in anti-competitive conduct, such as conduct that forecloses competition from new entrants or mergers which substantially lessen competition, which will lead to higher costs, less choices and less innovation for consumers in the longer term. Competition law serves to ensure that businesses and consumers are protected from harmful anti-competitive conduct. It is thus important that the competition law framework in Singapore is kept up-to-date, in order to tackle the unique challenges identified with the increasing prominence of e-commerce platforms, including those that compete in multiple market segments offering distinct products and/or services.

235. In this regard, CCCS has reviewed the suite of CCCS Guidelines, and identified areas businesses may benefit from greater clarity through updates of the respective guidelines:

- a. *CCCS Guidelines on Market Definition*: to provide greater clarity on (a) how market definition exercise may be adapted to consider specific features of multi-sided platforms; and (b) how CCCS may consider consumption synergies as an additional factor when assessing whether the focal product may be a product ecosystem comprising distinct products sold by the same seller.
- b. *CCCS Guidelines on the Section 47 Prohibition*: to provide greater clarity on (a) how CCCS may place less emphasis on market shares in the assessment of dominance for cases involving digital platforms; (b) how CCCS may take into account additional factors such as barriers to entry, network effects and the control or ownership of data in the assessment of dominance for cases involving digital platforms; (c) clarifying the role of data as an input; and (d) updating relevant theories of harm, including conduct such as self-preferencing, tying and bundling, and refusal to provide access to data.
- c. *CCCS Guidelines on the Substantive Assessment of Mergers*: to provide greater clarity (a) on how CCCS may assess mergers involving markets where innovation is an important feature of competition, and one or more of the merger parties is an important innovator; (b) that data protection can be an aspect of competition on quality that CCCS may consider in its assessment; and (c) on how conglomerate mergers may be assessed.

236. Furthermore, as e-commerce gains more prominence in the lives of consumers, it is important to foster consumer trust in online sellers as well as in e-commerce platforms themselves. Measures to improve consumer trust in e-commerce sellers and e-commerce platforms could also foster more competitive outcomes for the industry. After all, errant businesses that engage in unfair trading practices gain an unfair advantage over compliant competitors. Unfair trading practices could also generate negative externalities, by reducing consumer trust in e-commerce market players as a whole. To address these issues, CCCS will continue to work closely with relevant partners and stakeholders to promote the adoption of fair trading practices by sellers, and to help raise awareness on unfair practices to help consumers make more informed purchasing decisions when transacting on e-commerce platforms.

237. Whilst the findings of the market study may reflect the business strategies, competition dynamics, and consumer behaviour at this point in time, the e-commerce market is fast evolving and more changes can be expected in the future. It is impossible to predict with complete certainty how the business strategies of e-commerce platforms, and the competition dynamics in which they operate will continue to evolve. After all, digital markets are characterised by rapid technological change, and changing consumer behaviour. CCCS will continue to actively monitor market developments in Singapore in order to ensure that its framework and toolkit remains future-ready and appropriately contextualised to address any potential issues.