Hub-and-spoke arrangements – Note by Singapore

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1. Introduction

1. Direct communication between cartel members is often the most effective means to deliver a supracompetitive outcome. However, such traditional cartels are not the only manner in which colluding firms share their intentions and observations. Firms are constantly seeking novel methods of collusion and they may instead communicate through a third party, which has a vertical relationship with them.

2. Referred to as a hub-and-spoke cartel, the spokes are the colluding competitors and the hub is an upstream supplier or downstream customer that facilitates collusion between the spokes. The horizontal agreement among the spokes is referred to as the rim, as it connects the spokes. Coordination occurs by each spoke communicating with the hub, and the hub sharing commercially sensitive information it has learnt from one spoke with the other spokes for the purpose of restricting competition. While this indirect communication may be supplemented with some direct communication between the spokes, the primary avenue for communication remains through the hub.

2. Competition Law in Singapore

3. The section 34 prohibition of the Competition Act (Chapter 50B) (“the Act”) enforced by the Competition and Consumer Commission of Singapore (“CCCS”) prohibits agreements between firms that have the object or effect of preventing, restricting or distorting competition within Singapore.

4. The Act provides for certain exclusions from the section 34 prohibition of the Act. In particular, an agreement with net economic benefits is excluded from the section 34 prohibition of the Act. In addition, vertical agreements entered into between two or more undertakings each of which operates, for the purposes of the agreement, at a different level of the production or distribution chain, are also excluded from the section 34 prohibition of the Act as CCCS recognises that most vertical agreements have pro-competitive effects, which outweigh the potential anti-competitive effects.

5. However, the fact that firms are in a vertical relationship and/or have a vertical agreement, does not preclude the finding of a horizontal concerted practice amongst them which has its object or effect the prevention, restriction or distortion of competition within

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1 Paragraph 2.1 of the CCCS Guidelines on the Section 34 Prohibition 2016.

2 An agreement that falls within the scope of section 34 prohibition of the Act may, on balance, have a net economic benefit if it contributes to improving production or distribution or promoting technical or economic progress and it does not impose on the undertakings concerned restrictions which are not indispensable to the attainment of those objectives or afford the undertakings concerned the possibility of eliminating competition in respect of a substantial part of the goods or services in question.


For instance, confidential and commercially sensitive information (e.g. information on future prices, quantities and information of customers) could be exchanged between competitors through a common agency or third party operating at a different level of the supply chain. Such information exchanges can constitute concerted practices if they are found to reduce strategic uncertainty in the market and thereby facilitate coordination of anti-competitive behaviour. Consequently, a horizontal concerted practice can be found in agreements of a hub-and-spoke nature.

6. In the e-commerce context, where price parity clauses are used in “hub-and-spoke” scenarios, such situations could also be caught by the section 34 prohibition of the Act. Such a scenario could arise, for example, in an agreement between a platform that resells the products of a product manufacturer, and restricts the prices at which that the product manufacturer sells directly to consumers and through other sales channels. This might create a “hub-and-spoke” scenario where the product manufacturer is, intentionally or not, used as a “hub” to coordinate the prices of the reseller and product manufacturer itself.

3. Formation of Singapore Poultry Hub Pte. Ltd.

7. While CCCS has yet to investigate a hub-and-spoke type of collusion, CCCS had the opportunity to consider a hub-and-spoke collusive theory of harm in assessing the proposed set-up of a joint venture poultry slaughtering hub that was notified to CCCS for a decision.6

8. On 12 September 2017, CCCS received a notification for decision from a group of five companies involved in the business of trading in or distributing fresh chicken products in Singapore, on the intention to establish a joint venture company, Singapore Poultry Hub Pte. Ltd. (“SPH”), by means of entering into a shareholders’ agreement. Prior to the joint venture, each company (together with its respective affiliates) operated its business independently. The joint venture company was set up to provide poultry slaughtering services for and on behalf of each of the companies.7 The parties who entered into the joint venture continued to be competitors in the poultry industry in Singapore, particularly in the marketing and sale of fresh chilled chickens (whole and parts), frozen chickens (whole and parts) and/or frozen processed chickens-related food products to the wholesale market in Singapore.

9. CCCS considered that SPH could potentially function as a “hub”, having vertical relations with its downstream competing suppliers of poultry, which are the “spokes”. This could create a “hub-and-spoke” scenario where coordination of commercial activities may be facilitated by competing suppliers using the same hub. Such facilitated coordination amongst the “spokes”, through the interaction at the hub, includes the sharing of confidential and commercially sensitive information (for example, the volume of different types of chickens processed a day, the prices of slaughtering services) pertaining to the “spokes”. This could be facilitated through their related positions as shareholders at the hub.

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5 Paragraph 2.13 of the CCCS Guidelines on the Section 34 Prohibition 2016.

6 CCCS (2018), Paragraph 1, Grounds of Decision on the formation of a joint venture company, Singapore Poultry Hub Pte. Ltd.

7 CCCS (2018), Paragraph 2, Grounds of Decision on the formation of a joint venture company, Singapore Poultry Hub Pte. Ltd.
and may serve to dampen competition between them and/or enable them to engage in price-fixing or output restriction in the downstream market, which the “spokes” competed in.

10. CCCS considered there was merit to the claimed benefits resulting from the hub created through the joint venture. In particular, CCCS assessed if the claimed efficiencies were objective in nature and have direct causal link with the agreement, as well as whether the efficiencies were of a significant value that is enough to outweigh the anti-competitive effects of the agreement.\(^8\) Notably, the claimed benefits arising from the joint venture included achieving greater economies of scale, with respect to the slaughtering of poultry for the eventual sale of fresh poultry to consumers in Singapore or frozen poultry products to consumers outside of Singapore. Other claimed benefits included the alleviation of land scarcity in Singapore, increasing worker productivity, increasing energy efficiency, as well as maintaining and enhancing food security in Singapore.\(^9\)

11. While CCCS recognised the benefits arising from the joint venture, CCCS also considered the potential competitive harm to the market. In particular, CCCS assessed if the hub may facilitate the coordination of behaviour of the “spokes”, and whether the formation of the hub would lead to collusive outcomes in one or more markets within the poultry industry in which the “spokes” participate. In particular, the competing poultry suppliers continued to be competitors in every aspect of their poultry production and distribution chain, save for the slaughtering services that will be conducted by the hub. That is, the “spokes” will separately continue with their commercial activities in the upstream procurement of live poultry and further processing services for chicken products, and in the downstream marketing and distribution of its poultry products to wholesale markets and other customers in Singapore.

12. To address the competition concerns identified by CCCS, the competing poultry suppliers committed to certain practices for the lifetime of the joint venture to ensure that confidential and commercially sensitive information relating to the business of each “spoke” would not be shared with the other “spokes” through the hub. These practices included that none of the “spokes” are allowed to exchange any form of confidential information relating to all other activities besides the slaughtering services provided by the hub, formed by the joint venture, which is not necessary for the day-to-day operations of the hub. In addition, a ‘clean team’ comprising the employees from the hub, who are independent from the “spokes” and their affiliates, was established to manage the commercially sensitive information of the hub. It was also mandatory for the each of the “spokes” and the hub to sign non-disclosure agreements to prevent the exchange of highly confidential information. Further, CCCS required each of the hub and its “spokes” to establish an effective competition compliance programme which includes training or briefing sessions, compliance manuals, a whistle-blower programme and annual declarations of compliance by staff. In relation to all the above commitments, the hub was also required to appoint a monitoring trustee to monitor and audit compliance. Upon evaluating market feedback, CCCS was of the view that the joint venture with the commitments satisfied the requirements of the Net Economic Benefit Exclusion.

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\(^8\) Paragraph 10.4 of the CCCS guidelines on the Section 34 Prohibitions 2016.

\(^9\) CCCS (2018), Paragraphs 97 to 106, Grounds of Decision on the formation of a joint venture company, Singapore Poultry Hub Pte. Ltd.
13. On 29 June 2018, CCCS granted conditional approval for the formation of the hub through the joint venture, upon accepting the commitments set out above from the joint venture parties.

4. The E-Commerce Context

14. The digital economy has given rise to new business models, of which many have their parallels in traditional businesses. The persistent and incremental technology-driven competition has led to the rapid development of new business models.

15. A potential concern in e-commerce markets is the possibility of horizontal collusion taking place through parallel vertical restraints: the “hub-and-spoke” cartel.\(^\text{10}\) To give effect to a hub-and-spoke cartel, the e-commerce platform (the ‘hub’) coordinates the commercial behaviour of its various suppliers or retailers (the ‘spokes’) which provide products to their customers through the platform. The arrangement is essentially the same as in the offline world, except that the increased price transparency in digital markets and use of digital tools allow firms to automatically monitor its competitors’ prices. This in turn makes it easier for firms to engage in collusive behaviour. Notably, hub-and-spoke arrangements are changing the competitive landscape by offering opportunities for firms to achieve collusive outcomes in novel ways. Indeed, the use of the same third-party platform to determine prices and react to market changes is a fertile ground for hub-and-spoke collusion.

16. The rise of e-commerce has led to the use of direct sales by product manufacturers, even as they continue to rely on retailers and e-commerce platforms for their sales. While price comparison websites are typically marketing channels for product manufacturers, certain e-commerce platforms may be resellers rather than agents, depending on their business models. In such cases, restrictions on the prices between the product manufacturer and the reseller in relation to their respective sales to consumers may be a form of horizontal price-fixing agreement.

4.1. Online provision of booking for flight tickets and hotel accommodation

17. The travel sector is a clear example of how e-commerce radically affects business models and markets. Between 2015 and 2018, the online travel booking grew at 15% driven by growth in online airline and hotel bookings, to a size of US$29.7 billion in 2018. Singapore was estimated to be the third largest in Southeast Asia in terms of online booking market value in 2018, with the highest per-capita online travel booking expenditure in the region. By 2025, the online travel booking market in Southeast Asia is estimated to reach US$78 billion.\(^\text{11}\) Consumers in Singapore are increasingly turning to online channels in making their travel bookings, including searching for, comparing, and purchasing travel-related products such as air tickets and hotel accommodation, whether directly from the websites of service providers (e.g. airlines and hotels), online travel agents, or web


\(^{11}\) CCCS (2019), Paragraph 2, Online Travel Booking Sector in Singapore.
aggregators, also known as metasearch engines (collectively, “online travel booking providers”).  

18. Against this backdrop, CCCS commenced a market study in 2018 to look into the online provision of bookings for flight tickets and hotel accommodation to Singapore customers, and examined the commercial arrangements and practices adopted by industry players where competition and consumer issues may arise in relation to these practices. The market study report was published on 30 September 2019. This was CCCS’s first market study since its mission was expanded to encompass consumer protection in April 2018, and thus the scope of this market study covered both competition and consumer protection issues that may arise from commercial arrangements and practices adopted by online travel booking platforms, including the extent to which they affect competition in Singapore. In this regard, a potential competition concern that CCCS had set out to examine included price parity clauses that restrict the prices offered for the same product through different distribution channels.

19. The price parity clauses can be further categorised into wide and narrow parity clauses. Wide parity clauses oblige hotels using an online travel booking provider to give the online travel booking provider the lowest prices and best availability and conditions (for example, the provision of free breakfast) relative to all other sales channels. On the other hand, narrow price parity clauses prevent the hotel from publishing lower prices on its own website than it offers through the online travel booking provider that is imposing the restriction. These types of clauses may have the effect of increasing price uniformity in the market, consequently reducing scope for competition amongst online intermediaries.

20. Such agreements may take the form of agreements between a platform (for example, a price comparison website) and sellers that restrict the sellers’ ability to offer lower prices through other sales channels (for example, on other price comparison websites or their own website). These agreements are between undertakings, which operate at a different level of the production or distribution chain. As highlighted above, price parity clauses that fall within the definition of ‘vertical agreements’ are excluded from section 34 prohibition.

21. However, price parity clauses may still be caught under the section 34 prohibition where they are part of a network of agreements to facilitate horizontal collusion. Where collusion is facilitated by the platform, even though it is operating on a different level of the distribution or production chain, and if competing firms are aware of and/or agree to the same terms, achieving collusive outcomes, they may be presumed to have participated in the horizontal agreement.

22. While price comparison websites are typically marketing channels for product manufacturers, certain e-commerce platforms such as online travel agents may be resellers rather than agents, depending on their business models. In such cases, price parity restrictions by the reseller on the product manufacturer’s prices sold directly to consumers or through other sales channels may be a form of horizontal price-fixing agreement between the reseller and the product manufacturer in relation to their sales to consumers. Such a reseller may create a network of agreements or a hub-and-spoke cartel with the product manufacturer as the ‘hub’ coordinating the prices of the reseller and the product manufacturer itself. Where similar agreements are made between the same product manufacturer and other resellers, the hub-and-spoke cartel may be extended to more

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12 CCCS (2019), Paragraph 7, Online Travel Booking Sector in Singapore.
resellers. A similar horizontal price-fixing agreement may arise between the product manufacturer and the reseller in relation to their sales to consumers, if the product manufacturer imposes a resale price maintenance on the reseller.

23. In the e-commerce context, the use of same third-party platform to determine prices and react to market changes is a fertile ground for hub-and-spoke collusion. At present, there is insufficient evidence to suggest an infringement of section 34 of the Act in relation to price parity clauses in the online travel booking industry. Nonetheless, CCCS will continue to actively monitor the market developments in relation to price parity clauses in the online travel booking industry in Singapore.

5. Conclusion

24. Hub-and-spoke cartels are atypical cartels with vertical elements, and competition law in this area remains a developing one. As more case law on hub-and-spoke conspiracies surface in the future, it is hopeful that competition authorities continue to refine and harmonise the approaches to address such conspiracies. Market dynamics that offer opportunities not only for information exchanges between competitors, but also for the formation of relationships with third parties who are both positioned and incentivised to serve as conduits for indirect information exchanges, should be examined. At the same time, it should be taken into account that information exchange between suppliers and retailers may constitute innocuous business negotiations. As such, competition authorities should be careful in pursuing hub-and-spoke cartels, so as not to deter firms from undertaking their normal business activities and reaping any pro-competitive benefits arising from vertical relationships between suppliers and retailers.