

# Hub and Spoke Cartels Among Various Industries

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## Abstract

Competition policy plays a crucial role on regulating, supervising, and monitoring the market. However, companies in hub and spoke cartel engage in collusive activities to control the market and its competitors. Effective cartel collusion requires a strict coordination between parties on the scheme, monitoring for compliance of the scheme, with added incentives to comply, while punishment for breaching compliance. Under US law, parallel price setting is illegal and along with other evidence like meetings with competitors, exchange of information, control of market and any other collusion with respect towards harming the consumer is considered a violation, while European commission competition law is based on “Article 101 of the Treaty, which prohibits an agreement among two or more operators towards restriction of competition”.

**Keywords:** Hub-and-spoke, cartel, collusion, competition policy, US, EU.

## 1. Introduction

Hub and spoke cartels have drawn significant attention since the 1930's, long before it gained its name. In competition law, hub and spoke is a cartel where a company (hub)

organizes collusion (the rim) between upstream and downstream companies (spokes) through vertical restraints. Such practices may be illegal under competition law, where horizontal agreements between spokes are arranged on fixing prices or sharing customer territories or markets among spokes. There are three factors that influence companies to establish and maintain cartels: 1) selection and coordination of collusive strategies; 2) monitoring members and deter defections and 3) preventing new entry of companies or expansion of non-member companies (Orbach, 2016). While, a typical direct communication procedure is preferable among cartel members, and it would appear to be the most suitable and effective to achieve acquired results, it is not the only version where colluding companies exchange information and intentions (Harrington, 2006).

A classic example operation of hub and spoke cartel is an exchange of strategic information between partners, typically (A, B and C exchange) related to pricing, among two or more horizontal competitors that operate at the same production or distribution chain (A and C) through the same contracting partner that operates at a different level of production or distribution chain (B). Another cartel structure functions through the engagement of third party, who is not a contractual partner in the same production chain (B), however, has a business interest in the establishment of cartel between competitor (A) and competitor (C), therefore, acts as a facilitator or mediator (Prewitt and Fails, 2015). Effective cartel collusion requires a strict coordination between parties on the scheme, monitoring for compliance of the scheme, with added incentives to comply, while punishment for breaching compliance. The engagement in a cartel of an upstream supplier or downstream buyer to act as a mediator for exchange of information between companies could affect all three functions. Firstly, communication received through mediator may be less effective because it comes from the third party. Secondly, communication could be less effective, therefore, collusive scheme may not become enforceable because the third party is not impartial. As the hub's relations with its spokes are vertical, it might get affected by collusion between spokes, therefore, result on hub's conduct (Centorrino et al, 2015). These collusive functions require that competitors should achieve common understanding that they will restrain competition and how they shall plan to restrain competition in the future (i.e., scheme). This common understanding between parties in a hub and spoke cartel could be achieved by exchange of information through the hub. However, when compared to direct communication, indirect

communication has fewer effective results for two key points. Firstly, exchange of information among spokes could lose valuable information during the process of delivery by the hub. Collusion obliges each company to build a high level of trust among other cartel members so that it is confident that cartel members will comply with the collusive outcome. When parties are faced to each other in direct communication, it is not just the expression of words that may influence the parties, but also other attributes like facial expression, eye contact, body language etc. Evidence has shown that direct communication between parties, builds cooperation and establishes strong bond in business opportunities (Sparks et al, 2016). Therefore, indirect communication through a mediator may convey a different message to the receiver or mistakenly insert a message that a spoke has not implied. In other words, exchange of information through a hub are ought to be less informative rather than direct communicating, thus such issues could lead companies to difficult coordination on reaching a collusive agreement. Secondly, the hub on purpose could divert communication messages or even control the exchange of information between spokes because it is not a neutral third party. The hub shall be impacted from the collusion, therefore, has a different objective comparing to spokes as an upstream supplier, hence the desired form of collusion it may differ from one another (Asker, 2010).

## **2. Modes of information exchanged.**

Exchange of information is scrutinized in hub and spoke cartels to generate higher income, therefore, data conveyed by retailers to suppliers and then from suppliers to competing retailers regarding the prices was another collusion that DIY- a varnish and paint chains store planned to establish in the future. This futuristic collusion would be arranged by:

- Information price associated by the joint production of material for advertisement. Evidence shows that body content material appearing on advertisements is frequently used on joint marketing campaigns, otherwise organized by the supplier and its retailers. As a rule, those campaigns which consisted of press and billboards would rather refer to DIY chain and to a specific paint that could be purchased afterwards.
- This campaign would be commissioned by DIY and the manufacturer by participating in the bearing costs. Consequently, after the sample

model was introduced the supplier had the right as a co-financier to make sure that the sample was properly described and portrayed, that picture quality was perfect and its trademark was used rightfully. Nevertheless, when the sample model was sent to the supplier for approval, retailers usually would indicate intended retail price on the sample. If the price was lower than the price recommended by the supplier, the latter would influence the DIY to increase the price by threatening to withdraw from campaign co-finance.

- Finally, supplier would transmit information received to other retailers and control the collusion scheme that just established (Bolecki, 2011)

Second case regarding ways of exchange of information refers to hub and spoke cartel prices raised by drugstore, perfumery, and hygiene (DPH) in Belgium supermarkets. In this collusion seven retailers collaborated: *Carrefour, Cora, Colruyt, Delhaize, Intermarche, Makro* and *Mestdagh*, including 11 suppliers such as: *Henkel, Loreal, Procter & Gamble, Colgate, Bolton, Unilever* and so on. The objective of the cartel was to increase and stabilize prices of DPH nationally produced products to customers at similar prices in retail markets. Each upstream supplier, like *Unilever* ran its own hub and spoke cartel with its downstream suppliers. This collusion was built on four functions or arrangements – initial phase, negotiations and consulting, implementation, and control.

The initial phase would be acted upon desire and will either from the supplier (hub) or the retailer (spoke) to increase the price of certain goods. Upon establishing initial phase, the hub then spreads this information to other spokes to coordinate on price increase. During the negotiations and consultations phase, the supplier would discuss with retailers the level of price increase, when to implement it and which retailers are willing to participate. Information received from retailers would be shared with other retailers, and when an agreement has been reached, the supplier would convey information to retailer regarding the products, prices, implementation date and retail members that participate (Harrington and Harker, 2018). (See also appendix 1 list of cartels).

## **2.1. Competition policy and cartels**

Competition policy objective is to regulate the conduct of companies in their designated market operation. Therefore, government authorities are

entitled to monitor and evaluate their performance according to competition law, and check whether such companies may participate in a cartel, establish mergers or vertical restraints (Bhattacharya, 2016). Although, companies and countries differ from one another, inclusion of culture and society are key factors to have a decent competition market. In principle the main objective of competition policy is to create a better operating market for the benefits of consumers to acquire variety of goods and services at an affordable price (Graham and Richardson, 1997). For more than a hundred years, competition policy was a central part of economy's legal framework. Competition policy initially it began in United States as a political agenda, with the sole purpose of limiting the market and political power of monopolies and oligopolies. However, economists before that had recognized that competition was a necessity for the market economy to achieve efficient output, whereas companies on the other hand would strive to limit competition. For companies, market power is essential to monopolize, and the result comes at the hands of consumers. By increasing their prices, their revenues also increase, whereas wellbeing of consumers and employees decreases. This increase of market power is linked with increase of inequality (Stiglitz, 2016). Furthermore, consumers as the last beneficiaries are directly affected by competition, therefore companies that strive to limit competition and engage in some type of collusion can be seen as a cartel case, or intention to become one (Motta, 2004). Although Anti-trust policy and legislation imposed later after Sherman Anti-trust Act in the 1890 in United States, with the purpose of ensuring fair competition in the market, inevitably these legislations were based on the belief that concentration of economic power would lead into political power. In the last decades, anti-trust policy was not based on the fine academic economic analysis, rather it was taken over by corporate lawyers and economists. They redefined, re-shaped and narrowed the scope of competition policy to harm the consumer, with strong assumption that market is naturally competitive, imposing the burden of proof on those who confronted otherwise. Now with the increase of market power and high concentration of companies in industry after industry, has led into increase of prices of goods and services, whereas employee wages remained the same and standard of living declined. This increase of power is directly linked with the slowdown of productivity growth, economic recession, and high inequality (Stiglitz, 2017).

## 2.2 Competition law in US and EU

This section discusses how cartel policies are treated by law and authorities in competent countries. According to Stigler (1964) companies engage in cartel with the primary objective of limiting competition and setting prices. While performing this collusion, they manage to restrict final output, while increasing prices of goods, creating a monopolistic market, hence generate high marginal revenues, thus controlled cartel. Prohibition of price setting agreement among competitors since the Sherman Act is strict principle, yet still valid and it has been linked with the antitrust law in US that saw effects on different sectors like agriculture, insurance, fisheries, and so on (Inman and Rubinfeld, 1997). Furthermore, cartel cases in United States continued to operate and collude effectively by increasing costs towards government authorities and its competition laws, thus requiring an urgent need for each country to set proper laws and enforcement mechanisms (Anderson and Holmes, 2002). Under US law, parallel price setting is illegal and along with other evidence like meetings with competitors, exchange of information, control of market and any other collusion with respect towards harming the consumer is considered a violation (Levenstein et al, 2003 – see also appendix.1 with cartels).

Since the beginning of new century European Commission has implemented two revisions on leniency program, introduced a settlement procedure, established coordinated task force between competition authorities in the fight against cartels and promoted anti-cartel laws and enforcement mechanisms (Hellwig and Huschelrath, 2016). Companies that engage in cartel activities under European Commission law are subject to heavy fines and penalties (EC, 2012). European commission competition law is based on “Article 101 of the Treaty, which prohibits an agreement among two or more operators towards restriction of competition” (1958). Areas of legislation include rules on antitrust, mergers, cartels, and state aid. To stop spreading cartel activities, EU Commission has offered “no-fine” incentive to the first cartel members that provide information to Commission (EU, 2018). It is worth mentioning that towards implementation of anti-cartel laws, European Union was in close collaboration with US and was supported from Anti-Cartel Enforcement Division, therefore, US and EU competition laws are in harmony with one another, thus enabling them to further increase their fight against criminal cartel activities (Pate, 2003).

### **3. Conclusion**

Evidence shows that hub and spoke cartels have different ways of exchanging information between its parties in order to control the market and competition. We have seen that there are three factors that influence companies to establish and maintain cartels: 1) selection and coordination of collusive strategies; 2) monitoring members and deter defections and 3) preventing new entry of companies or expansion of non-member companies. While, a typical direct communication procedure is preferable among cartel members, and it would appear to be the most suitable and effective to achieve acquired results, it is not the only version where colluding companies exchange information and intentions. Third party involvement as a facilitator or mediator parties can engage to fulfill their agenda of market control and competition. Competition policy objective is to regulate the conduct of companies in their designated market operation. Therefore, government authorities are entitled to monitor and evaluate their performance according to competition law, and check whether such companies may participate in a cartel collusion.

## Appendix 1

### International Cartels investigated by US and EU

Industry	Start	End	Country of Origin of Indicted	States to be affected
<b>Aluminum Phosphide</b>	Jan 1990	Nov 1990	Brazil, Germany, India, US	US
<b>Beer</b>	1993 <sup>[L<sub>SEP</sub>]</sup>	1998	Belgium, France <sup>[L<sub>SEP</sub>]</sup>	Belgium <sup>[L<sub>SEP</sub>]</sup>
<b>Bromine Products</b>	Jul 1995	Apr 1998	Israel, US <sup>[L<sub>SEP</sub>]</sup>	US <sup>[L<sub>SEP</sub>]</sup>
<b>Cable-Stayed Bridges</b>	Sep 1996	Dec 1997	France, US	US <sup>[L<sub>SEP</sub>]</sup>
<b>Carbon Cathode Block</b>	Feb 1996	Dec 1997	Germany, Japan, US <sup>[L<sub>SEP</sub>]</sup>	US
<b>Carbonless Paper</b>	1992	1995	France, Germany, Spain, South Africa, UK <sup>[L<sub>SEP</sub>]</sup>	Europe
<b>Carton board</b>	1986	1991	Austria, Canada, Finland, France, Germany, Italy, Netherlands, Norway, Spain, Sweden, UK, US (via European subsidiaries) <sup>[L<sub>SEP</sub>]</sup>	Europe
<b>Cement</b>	1983	Aug 1994	33 European firms, 8 national cement trade associations, and the European Cement Association <sup>[L<sub>SEP</sub>]</sup>	Europe
<b>Citric Acid</b>	1991	1995	Austria, France, Germany, Netherlands, Switzerland, US	International
<b>Explosives<sup>[L<sub>SEP</sub>]</sup></b>	1988 <sup>[L<sub>SEP</sub>]</sup>	1992	Norway, UK, US <sup>[L<sub>SEP</sub>]</sup>	US
<b>Ferrosilicon<sup>[L<sub>SEP</sub>]</sup></b>	Oct 1989	Oct 1989	Germany, Norway, US	International
<b>Ferry Operators (Adriatic Sea)<sup>[L<sub>SEP</sub>]</sup></b>	1987	1994	Greece, Italy	Greece, Italy
<b>Ferry Operators (Cross- Channel Freight)</b>	Oct 1992	Dec 1992	France, Netherlands, Sweden, UK	Europe



<b>Fine Arts</b>	Apr 1993	Dec 1999	UK, US	Australia, Japan, United States, Europe
<b>Graphite Electrodes</b>	Jul 1992	Jun 1997	Germany, Japan, US	Inter- national
<b>Isostatic Graphite</b>	Jul 1993	Feb 1998	Japan, US <sup>[LSEP]</sup>	Canada, US
<b>Laminated Plastic Tubes</b>	1987	1996 <sup>[LSEP]</sup>	Switzerland, US <sup>[LSEP]</sup>	US
<b>Lysine</b>	Jun 1992	Jun 1995	Germany, Japan, South Korea, US	Inter- national
<b>Maltol<sup>[LSEP]</sup></b>	Dec 1989	Dec 1995	US + unnamed firms	US and elsewhere
<b>Marine Construction Services (Heavy- Lift)</b>	1993	1997	Netherlands, US	The US and elsewhere
<b>Marine Transportation Services (Heavy- Lift)</b>	1990 <sup>[LSEP]</sup>	1995	Belgium, US <sup>[LSEP]</sup>	The US and elsewhere
<b>Monochloroacetic Acid</b>	Sep 1995	Aug 1999	France, Germany, Netherlands	NA
<b>Nucleotides<sup>[LSEP]</sup></b>	Jul 1992	Aug 1996	Japan, South Korea <sup>[LSEP]</sup>	NA
<b>Organic Peroxides</b>	1997 <sup>[LSEP]</sup>	1998	France + unnamed firms	NA
<b>Plastic Dinnerware</b>	1991	1992	Canada, US <sup>[LSEP]</sup>	US
<b>Shipping (Central West African)</b>	1972	1992	Zaire, Angola, Northern part of continental Europe, excluding the UK <sup>[LSEP]</sup>	NA
<b>Shipping (Far East)</b>	1991	1994	30 countries (including Malaysia, South Korea)	Inter- national

(Levenstein et al, 2003)

**List of References**

- Asker, John (2010) A Study of the Internal Organization of a Bidding Cartel. *American Economic Review* 100. pp. 724-762.
- Bhattacharya, Shilpi (2016) *Competition Law and the Bounded Rationality of Firms*. Erasmus University Rotterdam, Netherlands.
- Bolecki, Antony (2011) Polish Antitrust Experience with Hub-and-Spoke Conspiracies. Centre for Antitrust and Regulatory Studies, University of Warsaw, Poland. Vol.4. Issue 5, pp.1-22.
- Centorrino, Samuele., Djemai, Elodie., Hophensitz, Astrid., Milinski, Manfred., and Seabright Paul (2015) Honest Signaling in Trust Interactions: Smiles Rated as Genuine Induce Trust and Signal Higher Learning Opportunities. *Evolution and Human Behavior*: 36, pp. 8-15.
- EC - European Commission (2012) Competition. Available online at: [http://ec.europa.eu/competition/consumers/what\\_en.html](http://ec.europa.eu/competition/consumers/what_en.html)
- EU - European Union (2018) Competition Policy. Economics Online. Available at: [http://www.economicsonline.co.uk/Business\\_economics/European\\_competition\\_policy.html](http://www.economicsonline.co.uk/Business_economics/European_competition_policy.html)
- Harrington, E. Joseph Jr (2006) How do Cartels Operate? *Foundations and Trends in Microeconomics*, 2, pp. 1- 108.
- Harrington, E. Joseph Jr., and Harker, T. Patrick (2018) How do Hub-and-Spoke Cartels Operate? Lessons from Nine Case Studies. Department of Business Economics & Public Policy. The Wharton School, University of Pennsylvania, pp.1-64.
- Hellwig, Michael., and Huschelrath (2016) Cartel Cases and the Cartel Enforcement Process in the European Union 2001- 2015: A Quantitative Assessment. Discussion Paper No.16-063
- Inman, P. Robert., and Rubinfeld, L. Daniel (1997) Rethinking Federalism. *Journal of Economic Perspectives*, Vol.11, Issue 4, pp.43-64.
- Graham, M. Edward., and Richardson, J. David (1997) Global Competition Policy. Institute for International Economics. Available at: [https://piie.com/publications/chapters\\_preview/56/17ie1664.pdf](https://piie.com/publications/chapters_preview/56/17ie1664.pdf)
- Levenstein, Margaret., Suslow, Y. Valerie., and Oswald, J. Linda (2003) Contemporary International Cartels and Developing Countries: Economic Effects and Implications for Competition Policy. Working Papers 14590, IATRC.

- Orbach, Barak (2016) Hub-and-Spoke Conspiracies. The Antitrust Source. Available at:  
[https://www.americanbar.org/content/dam/aba/publishing/antitrust\\_source/apr16\\_orbach\\_4\\_11f.authcheckdam.pdf](https://www.americanbar.org/content/dam/aba/publishing/antitrust_source/apr16_orbach_4_11f.authcheckdam.pdf)
- Pate, R. Hewitte (2003) The Department of Justice. International Antitrust Program, New York, USA.
- Prewitt, Elizabeth., and Fails, Greta (2015) Indirect Information Exchanges to Hub-and-Spoke Cartels: Enforcement and Litigation Trends in the United States and Europe. *Competition Law & Policy Debate*, Vo.1, Issue 2, pp.63-72.
- Sparks, Adam., Burleigh, Tyler., and Barclay Pat (2016) We Can See Inside: Accurate Pre-diction of Prisoner's Dlima Decisions in Announced Games Following a Face - to - Face Interaction. *Evolution and Human Behavior*: 37, pp. 210 - 216.
- Stiglitz, E. Joseph (2016) Towards a Broader of Competition Policy. Columbia University. Taken online from:  
<https://www8.gsb.columbia.edu/faculty/jstiglitz/sites/jstiglitz/files/Towards%20a%20Broader%20View%20of%20Competition%20Policy.pdf>
- Stiglitz, E. Joseph (2017) Inequality, Stagnation and Market Power: The Need for a New Progressive Era. *Roosevelt Institute Working Paper*.



