

**DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS  
COMPETITION COMMITTEE**

**Global Forum on Competition**

**THE IMPACT OF DISRUPTIVE INNOVATIONS ON COMPETITION LAW ENFORCEMENT**

-- Summary of Discussion --

**29-30 October 2015**

*The attached document is a summary of the discussion held during Session III of the 14th meeting of the Global Forum on Competition on 29-30 October 2015.*

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## SUMMARY OF DISCUSSION

*By the Secretariat*

### 1. Introduction by the Chairman

The **Chairman** of the OECD Competition Committee, **Professor Frédéric Jenny**, introduced the last session of the day on the impact of disruptive innovation on competition law enforcement,<sup>1</sup> which was divided into three main topics: (1) the business strategy and interaction between incumbents and potential disruptors; (2) how competition authorities address specific cases of merger control and anti-competitive behaviour; and (3) the possible evolution of competition law enforcement to take into account markets that are prone to disruptive innovation.

Professor Frédéric Jenny thanked the European Commission, the United Kingdom, Australia, Brazil, Indonesia, United States, Japan, Canada and BIAC for their contributions. He then introduced the two keynote speakers that would share their expertise knowledge on disruptive innovation: Professor Alexandre de Streel, director of the Research Centre on Information, Law and Society, and professor at University of Namur; and Toh Han Li, Chief Executive of the Competition Commission of Singapore.

The Chairman proposed starting with a discussion on business strategies pursued by disruptive innovators and strategic responses by incumbents to block entry, giving the floor to Professor de Streel.

### 2. Introduction Remark by Professor Alexandre de Streel

**Professor Alexandre de Streel** presented a paper jointly written with Pierre Larouche, discussing in his introduction the definition of disruptive innovation, the business strategies employed by market players and the role of competition policy.

Disruptive innovation, in the sense originally presented by Christensen, corresponds to forms of innovation created outside the value network, as opposed to sustaining innovations that are created within the value network. This is different from the distinction between breakthrough and incremental innovation, which refers to the degree of technological progress. As an example, DVD is not only a sustaining innovation following VCR, but it is also a breakthrough innovation due to the new technology introduced. On the other hand, streaming is a disruptive innovation as it was introduced outside the value network.

Disruptive innovation usually takes place in two phases. Initially, the new product performs worse and targets low-end consumers, leading to the creation of a new market; in a second phase, the innovation progresses very quickly and reaches mainstream consumers. Disruptive innovation is becoming more frequent, rapid and global, as a result of the internet as well as network effects.

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<sup>1</sup> Refer to the Hearings in June 2015 for the impact of disruptive innovation on regulation and advocacy issues.

Professor de Streeck then described four types of business strategies: (1) a small firm (sometimes a large one) may carry the innovation on its own and increasingly grow, as has been the case with start-ups in the Silicon Valley; (2) a large firm may acquire the disruptor and use its financial means to speed up the innovation deployment; (3) the mainstream firm may engage in anti-competitive conduct to block the innovation, either by foreclosing the access to the low-end customer or by limiting the interface between the old value network and the new value network; and, finally, (4) a mainstream firm may acquire the disruptor to alleviate the innovation (a pre-emptive merger). The first two strategies are welfare-enhancing, while the last two reduce consumer welfare.

With respect to the role of antitrust authorities, there is no consensus in the literature about the relation between competition and innovation<sup>2</sup>, but it can be easily accepted that competition policy should protect the process of disruptive innovation. For that, the methodology of the competition authority should focus less on static efficiency and price competition; and more on dynamic efficiency, innovation and investment. The focus on static market definition should also be changed towards a solid theory of harm whenever the following three criteria are satisfied: the mainstream firm has market power; the target is a disruptor; and the anti-competitive conduct or merger under analysis hampers the deployment of disruptive innovation.

In the particular case of merger control, Professor de Streeck proposes the modification of the notification threshold, which should be based not only on turnover, but also on the value of transactions, in order to capture the acquisition of small disruptors for which incumbents pay a high premium. He also suggests the use of a more narrow definition of disruptor, instead of the broad definition of ‘maverick’ contained in the US merger guidelines.

### 3. Intervention from the European Commission

The Chairman turned to the **European Commission**, whose written contribution stated that the EU merger framework deals with mergers that may dampen innovation. However, the Chairman commented that most examples submitted by the EC referred to breakthrough or marginal innovation, asking then if the EU merger framework would be equally well suited to deal with disruptive innovation.

The **EC** replied that its merger control is designed to deal with innovation effects in general, firstly because it is not easy to assess the type of innovation under analysis, and secondly because they consider all forms of innovation worthy of protection. In fact, the EU legal framework considers the negative impact on innovation as important as traditional impacts on prices or output, it accounts for the innovation potential of firms that are not present in the market, but which may become competitors (dynamic elements), and it is completely adaptable to deal with any type of innovation.

The EC then described their particular concerns when addressing two different types of mergers. On the one hand, in horizontal mergers, there is the risk of a loss of innovation if the merged entity were to discontinue pipeline products that may be at early or late trial stages. As an example of pharmaceutical and medical devices mergers, they mention the Novartis and GSK case, which involved some pipeline products at the early clinical stages whose development was protected through structural remedies. On the other hand, in vertical and conglomerate mergers, there is the risk that the merged entities reduce the ability of other competitors to innovate. In the Intel and McAfee merger, the EC enforced a behavioural remedy to prevent Intel from foreclosing the market to other potential innovative companies of anti-virus software. Finally, the EC also accounts for potential innovation efficiencies as well, as in the case of TomTom and TeleAtlas.

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<sup>2</sup> Refer to the schools of Schumpeter, Arrow and Aghion.

Following the intervention of the EC, Professor de Streef commented that, although the EU framework is generally flexible enough to deal with innovation, the mergers discussed in the paper were not actually disruptive, perhaps because there are not many cases of disruptive innovations under the radar of the EC. Again, this could be changed by modifying the notification threshold.

#### **4. Intervention from the United Kingdom**

One of the biggest challenges for the **Competition and Markets Authority (CMA)** of the United Kingdom is the problem of defining the market when disruptive innovations are involved. Although their analysis is static and focuses on market definition, they also pay attention to dynamic competition. Further, in addition to the usual turnover threshold, they also have a share of supply threshold that is broader and allows them to assess some “below the radar” cases.

As an example, the CMA to the merger between Google and Waze, the last of which is a provider of a mobile maps application (“app”) that uses real time driving data collected from users of the app. The problem of defining the product market of turn-by-turn navigation applications for mobile devices is particularly complex, as the potential consumer preferences are different and the product offered by a disruptor like Waze operates very differently from Google’s.

In another case they had to consider the impact of disruptive innovation on a merger between two mainstream firms, both taxi companies of the city of Sheffield. The two companies argued that Uber would start operating in Sheffield and they needed to merge to be able to respond to the new competitor. However, the CMA was concerned that Uber would operate in a different market, as it had a different mode of operation and it was not inclusive to all consumers (for instance, it was not prepared to accommodate wheelchairs or to serve clients that do not use a smartphone).

Finally, the CMA commented that jurisdictions should have some discrete power or other tests allowing them to capture mergers that, in spite of low turnover, may have extreme ramifications into the future (as with the acquisition of Instagram by Facebook).

#### **5. Intervention from Australia**

The Chairman turned to **Australia** and asked whether the Australian Competition and Consumer Commission (ACCC), during the analysis of a joint venture case, was confronted by the same challenges faced by the other jurisdictions with respect to merger analysis. The ACCC argued that the assessment of a joint venture could be more or less challenging than the assessment of a merger, but that would depend on the actual substance of the case, not the format.

In one case, the ACCC was confronted with a request for authorization by incumbent taxi companies and Cabcharge, who dominates taxi specific payment instruments and taxi payment processing, to conduct a joint venture that would aggregate all competing taxi networks into a single booking app, the Ihail. This app would allocate each fare to the first available driver of the combined network. Payment would be done exclusively through Cabcharge and the app would allow for an extra payment for priority dispatch. During the assessment, the ACCC took into consideration that the taxi industry is very concentrated in Australia, as most cities have only two taxi networks, and Cabcharge already had a dominant position in payment processing. While there were some third-party booking apps and taxi network specific apps, the legal status of Uber in Australia is unclear, apart from the Australian Capital Territory (ACT).

Even though the joint venture could bring some public benefits, such as providing consumers with access to a large pool of taxis and with an app that would work in multiple cities, the ACCC proposed to deny authorization for the following reasons: (1) Ihail would achieve a dominant position by bringing together over half of the taxis in Australia, and the allocation system would not give an incentive for taxi

companies to compete on price and services; (2) Cabcharge would reinforce its dominant position in payment processing, potentially foreclosing fledgling competitors from a significant portion of the market; and (3) the priority dispatch system would go against existing pricing regulations. The ACCC's decision was criticized by some commentators for preventing the ability of taxi's companies to innovate in response to competition from Uber. However, the ACCC considered that the joint venture could be a tipping point for network effects and replace competition with a dominant app, while at the same time it could potentially foreclose emerging competition in taxi payments.

## 6. Intervention from Mr. Toh Han Li (Singapore)

The Chairman asked **Mr. Toh Han Li** to discuss a merger in the recruitment service market, where the Competition Commission of Singapore (CCS) ended the case with a commitment decision. The Chairman also asked Mr. Toh Han Li to comment on the fact that, according to Professor de Streel, commitment decisions do not create law in new areas where there is a need for legal certainty, in spite of their flexibility.

Mr. Toh Han Li started by clarifying that the need for legal certainty is more relevant in cases of abuse of dominance, while almost all merger cases are either cleared unconditionally or conditionally with commitments. Still, one way to reduce a lack of transparency in the latter is to perform market tests and publish the reasons why the merger was cleared with commitments.

Regarding the online recruitment case, CCS faced a problem of market definition in the review of a merger between two online recruitment advertisers. The merging parties claimed that the market included all online and offline platforms used by employers to look for job seekers (naturally, the merging parties wanted to consider a wide market definition so that the concentration level would come out as a smaller figure). CCS conducted market inquiries and found that respondents did not seem to consider offline platforms capable of providing effective constraints on online platforms. Although print media is competing for the same advertising budget, they fulfil more of a branding objective and targets mostly low-skill workers. On the other hand, online platforms generate large quantities of applicants, reach target audiences more effectively and give more current real time information at a lower cost. The survey also found that print advertising is significantly more expensive when compared to online. CCS concluded that the online and offline platforms do not belong to the same market. Some overseas decisions (Google / DoubleClick) actually suggest that online and offline platforms are complementary to each other.

Inside the online market, there are four types of platforms: generalist job portals that advertise all sorts of jobs (the two merger parties belong to this category); specialist job portals which target specific professionals; social media platforms like LinkedIn; and aggregator sites that aggregate the smaller portals together. CCS concluded that all online platforms served as a competitive constraint to each other and thus defined the relevant market as the provision of online advertising services by all online platforms in Singapore.

During the merger assessment, the CCS calculated that the market share post-merger would be more than 40% and the CR3 would be between 65% and 70%. The merging parties were each other's closest competitors and barriers to entry were imposed by high investment costs and indirect network effects. However, the concentration effect of the merger could be alleviated by the possibility of multi-homing by job seekers and the existence of aggregators that help smaller job portals. CCS's theory of harm involved the merging parties demanding exclusive locking contracts to prevent multi-homing, bundle or tie products across two brands and increase prices.

The two parties proposed several behavioural commitments, such as not entering into exclusive agreements with recruiters, maintaining prices at a current rate and monitoring compliance, and a structural commitment to disinvest all assets in one of the aggregators. CCS assessed that the commitments addressed its concerns based on a theory of harm and took into account the dynamism of the market.

## 7. Contribution from Brazil

The Chairman asked Brazil to describe its own challenges in defining existing and new markets.

The **delegate from Brazil** noted that defining a market affected by innovation is not only a difficult challenge, but also that defining such a market can be inadequate and lead to incorrect decisions. Sometimes, markets are in fact defined by existing regulations, which may hamper innovation.

As an example of regulation that defines the market in Brazil, the Urban Mobility Law has a provision that establishes two kinds of individual transportation: public individual transport (taxis) and private individual transports. When Uber came to the country, the taxi driver association tried to avoid the entry of Uber by underscoring that the taxi industry is a public monopoly and that any other public individual transports are illegal. On the other hand, Uber counter-argued that they are a private individual transport because they cannot use bus lanes, taxicab stands or operate as street-hails. However, if the definitions imposed by the existing regulations are to be strictly followed, Uber must be either prohibited (and it actually was considered illegal in Brazil) or must be subject to the taxi regulations.

One of the main challenges to the Authority has been to advocate for the deregulation of the taxi sector in order to allow traditional taxis to compete with Uber. Their advocacy role is particularly difficult given the boycott of Uber called for by taxi drivers and the protests of students associations against taxi drivers.

## 8. Intervention from Professor Alexandre de Streel

The Chairman moved the discussion to other forms of anti-competitive practices, giving the floor back to Professor de Streel.

**Professor de Streel** started by commenting on some interventions that he found particularly relevant in the context of disruptive innovation. With respect to the intervention of the CMA on the merger between taxi companies in Sheffield, he commented that disruptive innovations are implemented through two phases, the first where the firm goes outside the value network and the second where the firm changes the value network altogether and captures the mainstream consumers. The problem faced by the competition authority arose when the innovator was still in the first phase, making it necessary to assess whether the merged entities would prevent the second stage from ever happening and whether the mainstream costumers would still need protection. Regarding the intervention from Australia, Professor de Streel commented that they provided a good example of how competition authorities should intervene in innovation markets to at least protect firms from blocking innovations of other competitors.

Moving then to other forms of anti-competitive practices, Professor de Streel suggested that the focus of antitrust authorities when dealing with cases of abuse of dominance should be on guaranteeing that markets are contestable through new innovations. For that, competition authorities should, foremost, protect disruptive innovations in their first phase and prevent any attempt by incumbents to foreclose their access to lower-end costumers. He mentions the Microsoft Explorer case, when Microsoft was bundling the operating system and the internet browser to block any potential disruptor, as a good example of antitrust actions to guarantee consumer access. In addition, it is important that disruptors are able to connect the value networks during the second phase, which can be hard when there are excessive intellectual property rights like long-lasting patents. Competition authorities should thus be able to correct the duration of some existing patents, at least when they make the interface between value networks more complicated.

In terms of enforcement procedures, Professor de Streel recommended interventions to be as fast as possible, because any damage to disruptive innovations can be very quick and irreparable. One possibility in many jurisdictions is to adopt interim measures before any formal infringement decision. Although interim measures have specific requirements, such as showing urgency due to the risk of serious and irreparable damage on competition, this is easier to prove in disruptive innovation markets. A more common procedure is to adopt commitments, which despite being very fast, are not tested in court and the bargaining between the antitrust agency and the company is not very transparent. The last possibility is to create guidelines which may have deterrent effects. Nevertheless, good guidelines should be based on tried and tested cases, and that is why some interim decisions would be useful to establish the case law first.

## 9. Contribution from Indonesia

The **delegate from Indonesia** discussed an example of disruptive innovation in Indonesia, GO-JEK, focusing on some of its implications on culture, regulation and anti-competitive practices.

GO-JEK is a company that provides motorcycle taxis, as a practical and convenient service in the congested city of Jakarta. It has introduced many innovations in the taxi industry, including transparent pricing, systems to track and evaluate drivers, orders through smartphones, cashless payment and free shower cap, masks and rain coats. It also introduced a great variety of services, including “instant courier” (mail delivery), food delivery and cleaning services, among others.

The appearance of GO-JEK generated new cultural behaviours, making motorcycle drivers compete on prices through a mobile app (instead of just waiting for orders at a fixed tariff), and allowing consumers to take control over suppliers. Unfortunately, this led traditional drivers to physically assault GO-JEK drivers in order to protect their source of income.

The type of business conducted by GO-JEK is similar to other legalized services in Indonesia that require the regulation of certification and safety standards. Nevertheless, the particular method of transportation used is not considered in the 2009 Traffic and Land Transportation Law, and amending laws is a difficult process in Indonesia.

The social issues surrounding GO-JEK led the company to attempt to coordinate prices with a close competitor. While this is against Indonesian law, it is not clear whether unregulated markets are subject to competition law and small companies still have little information about competition rules.

## 10. Contribution from the United States

The Chairman turned to the **United States** and asked them to comment on the statement of Professor de Streel concerning the need to adapt competition law enforcement in the assessment of market power and market definition when disruptive innovations are at stake. The Chairman also asked the United States about any attempts by incumbents to fight off disruptors in their jurisdiction.

According to the delegate of the United States, the Federal Trade Commission (FTC) and the Department of Justice (DOJ) believe that the antitrust laws and tools at their disposal are adaptable, flexible and actually account for disruptive innovation in the form of new technologies, new business models and new methods of competition. The flexibility of their enforcement procedures is, in part, the result of the Congress having originally designed the antitrust laws in general terms, in order to accommodate any future changes in the market environment and new developments in economic thinking. This common law approach has allowed anti-trust laws in the US to survive over time.

As a response to recent changes in US markets, the antitrust agencies have looked at dynamic elements like potential competition in the marketplace, as has been the case in a number of recent merger reviews. Indeed, when they examine the competitive effects of current conduct or transactions, they do not solely consider impacts on prices or output - if there is evidence that innovation has an important dimension in the relevant market, they take it into account as part of the competition analysis. At the same time, the agencies do not neglect any structural evidence, evaluating past changes in market shares as well as past instances of market entry and exit.

Turning to the other question, the delegate from the United States discussed how the FTC applied their enforcement tools in the Realcomp case, which provides a textbook story of how the agencies look at markets involving a disruptive business. In this case, an association of real estate brokers in the State of Michigan had exhibited collusive and exclusionary conduct on preventing “limited service brokers” from getting full access to the association’s Multiple Listing Services (MLS), an internet database of homes for sale that includes consumer friendly features as virtual tours and reviews. Following an administrative trial, the FTC deemed the association’s policy an illegal refusal to deal.

During the assessment of the case, the FTC concluded that, while in the traditional brokerage model, home-sellers paid approximately 6% of the sales price for a bundled set of services, the new business model of the “limited service brokers” was available online and allowed sellers to obtain a smaller set of services for a much reduced flat fee. The FTC also took into consideration a 2003 analysis by the National Association of Realtors, according to which the market shares of the “limited services brokers” understated their competitive significance, because they played a larger role in selected markets and served a particular consumer segment better than previous dominant players.

The Realcomp case illustrates two relevant points: first, an antitrust enforcement is sometimes necessary to allow disruptive business models to succeed against strong opposition from incumbents, and secondly, qualitative evidence is often critical in understanding how these markets actually operate in reality.

The United States then discussed other tools apart from enforcement that can be effective to deal with disruptive innovations. Hosting workshops and conducting studies can improve the agency’s understanding of emerging issues for competition policy. A few years ago the FTC hosted a workshop on e-commerce and in June 2015 they held a workshop on the sharing economy, both of which allowed them to learn valuable lessons. Advocacy can also play a very important role, particularly when the agency does not have a formal role in legislation or regulation at state or local level. In this respect, the FCT has recently sent several letters to Chicago and Washington regarding the regulation of disruptive transportation network providers, such as ride sharing platforms, in which the FTC recommended regulators to carefully consider the potential direct and indirect competitive impact of proposed transportation regulations. After an intervention by the Chairman inquiring about the response to the letters sent to Chicago and Washington, the delegate stated that many recommendations were taken on board and they were now trying to have further impact in other jurisdictions in the US.

#### **11. Intervention from Mr. Toh Han Li (Singapore)**

Turning again to Singapore, the Chairman asked **Mr. Toh Han Li** to discuss a case concerning a loyalty discount and to comment why it was not considered to be a violation.

Mr. Toh Han Li explained that the taxi sector in Singapore the introduction of a third party booking app disrupted previous business models based on street hail and call centres, where associated high costs tended to favour dominant operators. The appearance of third party booking apps in 2013 was disruptive, in the sense that it overtook call centres as the main choice for booking a taxi and allowed small operators to compete.

CCS subsequently received feedback suggesting that one of the third party apps was offering loyalty discounts to the most active taxi drivers, on the condition that they would not use other taxi apps. CCS's concern with such loyalty discounts was whether such discounts would foreclose a significant proportion of taxi drivers from competing third party apps, which in turn could push out these competitors due to network effects, leaving a single app that could harm the interest of both consumers and the taxi industry.

CCS concluded that it was premature to intervene for the following reasons. Firstly, the potential competition concerns of the alleged conduct would likely arise for drivers with smaller taxi companies that account for about 40% of the taxi market. Secondly, the market shares of the third party apps were dynamic during the previous two years, and responded to promotion and pricing. Thirdly, the number of drivers under the loyalty schemes was small and the number of bookings captured by the schemes made up a small proportion of the total number of booking jobs taken up by active taxi drivers per month. As such, CCS considered that the impact of the loyalty discount schemes was unlikely to harm competition and will closely monitor market developments to safeguard the healthy growth of this market.

As a final remark, Mr. Toh Han Li pointed out the distinction between a booking app as a product and the drivers that are linked to the app. Referring to the example from Uber, the policy considerations are very different regarding the regulation of Uber app and Uber drivers, because while the former relates to the dominance of the incumbent operators, the latter involves additional considerations, such as insurance and consumer safety.

## 12. Contribution from Japan

Next, **Japan** was invited to discuss a foreclosure case in the social games industry. Social games consist in a specific type of game provided through a mobile Social Networking Service (SNS), equipped with a communication function. Since the social game service had started, it became very popular in a short period and affected existing traditional games.

According to the delegate of Japan, there are two major suppliers of SNS, GREE and DeNA, which originally only supplied social games in-house. However, in 2010 DeNA opened its platform to other third party game developers and, becoming very popular among consumers and developers, it took first place in terms of revenue of social games in Japan.

Then, GREE also opened the platform to other developers. In an attempt to protect its revenues, DeNA demanded developers not to provide the social games through GREE by threatening them to disconnect their links. The Japan Fair Trade Commission (JFTC) judged this conduct to constitute a violation of Article 19 of the Antimonopoly Act (falling within paragraph 14 on "interference with a competitor's transactions") of the Designations of Unfair Trade Practices. Accordingly, the JFTC issued a cease and desist order against DeNA.

## 13. Contribution from Canada

The last country contribution in the session was from **Canada**. The Chairman inquired how the Toronto Real Estate Board (TREB), a trade association of real estate agents and brokers in Toronto, has prevented the emergence of disruptive business models.

The delegate of Canada explained that TREB operates a multiple listing service (MLS), which allows members to advertise properties to each other and to access a comprehensive database of information, including sale prices, historical prices and the amount of time properties have been on the market. The Competition Bureau considered that access to the MLS is, in fact, essential for real estate agencies to compete in the Toronto market, as its information is used for almost all transactions.

Although agencies can provide MLS listing information to costumers by hand or email, TREB has prevented agencies from providing the same information online. As a result, in 2011 the Bureau filed an application under the abuse of dominance provision, challenging the restriction that TREB had imposed on its members. The Bureau sought an order prohibiting TREB from applying rules that prevent the entry of disruptive internet-based business models which could serve customers more efficiently. The evidence on effects focused on non-price dimensions of competition as natural experiments and the view of market participants. For instance, similar restrictions did not exist in the Canadian province of Nova Scotia or much of the US. Further, the Competition Tribunal has heard from brokers in the Toronto area who wish to offer services that are prohibited by TREB's restrictions. While the Tribunal initially dismissed the application on technical grounds, the Bureau successfully appealed and the Tribunal was ordered to reconsider the Bureau's case, which is currently being heard again.

#### **14. Contribution from BIAC**

The Chairman asked **BIAC** to present the business perspective on competition authorities' performance in dealing with disruptive innovation, taking into consideration the cases previously discussed.

BIAC stated that both competition policy and the entire regulatory environment should be squarely attuned to encourage innovation and to accommodate new business models. While this should not imply a complete reformulation of the analytical framework, competition authorities should seek new approaches, reassess the traditional price-effect analysis and explicitly evaluate transaction effects on innovation. At the same time, this must be done in way that does not lessen their commitment to the rigour of evidence-based enforcement.

The delegate of BIAC then invited Munesh Mahtani, a Senior Competition Counsel at Google, to share personal reflections based on his experience.

Firstly, Mr. Mahtani remarked that the relation between disruptor and disrupted is not always negative, with one trying to push in and other trying to push out. It may be the case that the same company is a disruptor in some sectors and disrupted in other sectors. Taking the example from the media sector, traditional broadcasters are disrupting television. Second, disruptive innovation is not a one-shot occurrence but an ongoing process. Over the course of just a few years, cassettes have been disrupted by CDs, CDs have been disrupted by downloads and downloads are now being disrupted by streaming. Thirdly, disruptive innovation is not only challenging and uncertain to competition enforcers, but to businesses as well, since they must to invest considerable time and capital without any guarantee of success. Fourthly, disruptive innovation is driven by a desire to serve an existing need or to serve an entirely new need.

In terms of competition law enforcement, Mr. Mahtani suggested that authorities should introduce dynamics in their analytical tools, consider the business rationale behind the merger or unilateral conduct (for instance, in the technological sector, being acquired by a larger company is often a rational exit strategy by start-ups), account for impact of enforcement activities on incentives to invest as well as innovate, and maintain analytical rigor in dealing with all the parties.

**15. Final intervention from Professor de Streel**

The Chairman thanked all the participants for their interventions and for bringing very interesting cases to the discussion. Before giving the word to Professor de Streel, the Chairman commented that the challenges imposed by merger cases appear to be of greater dimension than those imposed by anti-competitive practices. Indeed, merger analysis involves several complex dimensions, such as predicting consumer reaction and incentives for innovation. Taking into consideration the difficulties expressed by Brazil, Indonesia or the UK, it seems probable that most analytical work should be directed to mergers in the future.

Professor de Streel agreed that a lot of work must still be done in merger analysis. In particular, he underlined the importance of conducting post-merger studies and promoting discussion in conferences in order to improve our understanding and come up with the right tools to deal with disruptive innovation. Professor de Streel also recommended a strong dialogue between authorities and the disruptors.

**16. Final intervention from Mr. Toh Han Li (Singapore)**

To finish, the Chairman gave the floor to Mr. Toh Han Li, asking him to give a few words about a special project on disruptive innovations and government advocacy, which will be presented at the 2016 ICN Annual Conference.

Mr. Toh Han Li briefly described the special project, which focuses on the challenges that disruptive innovation poses for competition authorities, as well as on the tensions between competition policy and regulation. In particular, the special project involves a survey where the key question is how the ICN members have advocated competition considerations to government and legislative entities in their respective jurisdictions in relation to disruptive innovations. The results of the survey will be presented at the 2016 ICN Annual Conference in Singapore.

**17. Chairman**

The **Chairman** closed the session and thanked all delegates, as well as Professor de Streel for offering a very interesting approach to several issues involving enforcement of competition law in the markets with disruptive innovation.