WITH ANTÓNIO GOMES[1] OF THE OECD

Thank you, Mr. Gomes, for granting this interview to CPI.

1. Does a "meeting of the minds," where co-conspirators agree to collude with one another, really exist in an algorithm driven economy? Under these new circumstances, what actually constitutes collusion?

In the past years, the exponential growth of data-business models based on complex automated systems is inducing many changes in the digital economy. In particular, by improving market transparency and enabling high-frequency trading, there is a risk that a generalized use of algorithms by competitors could make markets more prone to collusion even when they do not have the structural characteristics usually associated with the risk of collusion. The use of algorithms is challenging traditional concepts and the question is whether these concepts can be stretched to cover entirely new situations.

When pricing algorithms and other automated systems are combined with "explicit" agreements between competitors (therefore, involving direct communication), this does not differ from explicit collusion and are clearly covered by competition law. However, a particular concern arise when algorithms facilitate "tacit" coordination by providing companies with automated mechanisms to signal, to implement a parallel/common policy, as well as to monitor and punish deviators. Here the concern is that algorithms can help firms achieve tacitly collusive arrangements in a context where collusion could not be possible before, significantly increasing the scope for harm to consumer welfare.

Whether a "meeting of minds" exists and whether it can be scrutinized under competition law is not clear, and the combined development of artificial intelligence and algorithms makes this determination even more difficult. Unfortunately, this is still a very new area of antitrust and there are only a few competition cases providing evidence of coordination between algorithms, possibly due to the difficulties of detecting such sophisticated conduct. Nonetheless, the risk for increased collusive outcomes because of algorithms is very real and competition law enforcers should remain alert.

2. To what degree should antitrust agencies reconsider traditional antitrust concepts of agreement and collusion?

This question goes to the heart of the problem. I do not think there is a need to reconsider the notion of collusion, which is an economic concept. Competition laws, however, do not prohibit collusion as such; they prohibit anticompetitive agreements. Collusion can be the result of such an anticompetitive agreement, but it can also be the result of lawful firms' interdependence, especially in oligopolistic contexts. This is the "oligopoly problem," where the same economic outcome (collusion) is prohibited if it is the result of some form of explicit coordination, but it is not if it is the result of conscious parallelism.

To address this policy problem, courts have expanded, not without difficulties, the reach of competition laws to address facilitating practices and, in order to cover as many situations as possible of competitors' interaction, traditional concepts such as "agreement" have been interpreted widely to include any "meeting of the minds" between competing companies. Recognizing the inherent limits of the concept of agreement, some jurisdictions have added the notion of "concerted practices" to be able to grasp a wider set of potentially anticompetitive practices.

Algorithms are further blurring the notion of agreement, and it is not yet clear whether it is necessary to revise it in order to include interaction between competitors via algorithms.

1 OECD, Head of the Competition Division, Directorate for Financial and Enterprise Affairs. The views expressed in these remarks are my own.

3. What are possible solutions, without undermining overall competition and in light of the possible efficiencies generated by the use of algorithms?

This is a rather complicated issue, as many of the effects driven by algorithms are new and over enforcement could easily chill procompetitive conduct and result in consumer harm. My take is that we still do not know very much about how algorithms work and how the development of artificial intelligence may impact firms' business models and competition more broadly. Given that we are still at early stages, an important first step is to conduct market studies and sector inquires to investigate whether algorithms commonly result in coordinated effects and, if so, under which conditions. This should provide competition authorities with more clear information to address the problem.

4. What antitrust liability, if any, can be imposed on the creators and users of algorithms?

I would put this question into a different perspective: can we identify any explicit harm to the competitive process? If so, how can we prove it? If a conduct or a practice is found to be anticompetitive, then comes the question of liability. In general, algorithms are programs that follow human instructions. Therefore, where the behavior is unlawful, it would be normal to impose liability on the creators.

On the other hand, the development of artificial intelligence and machine learning enables algorithms to more efficiently achieve a collusive outcome without being specifically programmed to do so. This would be the most complex and subtle way for companies to collude, without explicitly programming algorithms to do so. In other words, there is the risk that some algorithms with powerful predictive capacity, by constantly learning and readapting to the actions of other market players (who may be human beings or artificial agents themselves), will be able to collude without the need for any human intervention.

5. We understand that the OECD will be holding a roundtable in June 2017 on Algorithms and Collusion. Can you give us more details?

The OECD roundtable on "Algorithms and Collusion" is part of the wider work stream of the OECD Competition Committee on Competition, Innovation and the Digital Economy. This work stream will keep us and the Competition Committee busy for the next couple of years. We started in November 2016 with a Hearing on Big Data, which identified many of the challenges of Big Data for competition law enforcement and market regulation. One of the topics discussed was the role that computer algorithms could have in enabling new forms of collusion, which will now be address in more detail in June. At the same time, work is underway on whether agencies need to rethink the application of traditional economic tools (such as market definition, market power, efficiencies, etc.) to multisided markets and platforms.

The Roundtable on Algorithms and Collusion will comprise a panel of experts, Michal Gal, Ariel Ezrachi and Avigdor Gal who will explain in simple terms the technology behind algorithms and artificial intelligence, who will discuss the competition challenges brought by algorithms and debate potential solutions based on the existing antitrust literature and on their own recent research. We also look forward to the participation of competition agencies who will share their experiences in competition cases, which can be of enormous value given the lack of well-established best practices in this area. Finally, the roundtable discussion will be supported by a background note that the OECD Secretariat is currently preparing.

6. Mr. Gomes, if there are any topics or issues that you would like to specifically discuss or address, you can do so here.

There have been some proposals to regulate algorithms and artificial intelligence systems, and some of the measures discussed include making algorithms more transparent and accountable for their effects. Any regulatory interventions should, however, be carefully assessed as they may also involve risks if they result in new barriers to entry and reduce the incentives of companies to invest in developing algorithms which could generate efficiencies.