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ANNEX TO THE SUMMARY RECORD OF THE 115th MEETING OF THE COMPETITION COMMITTEE HELD ON 13-14 JUNE 2012

-- Summary Record of the Discussion on Behavioural Economics --

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SUMMARY RECORD OF THE DISCUSSION

The summary of the Hearing is based mainly on the submissions, presentations and interventions of three expert panellists: Xavier Gabaix (New York University), Steffen Huck (University College London), and Maurice Stucke (the University of Tennessee). While the summary also reflects the general discussion that took place during the Hearing, it does not necessarily represent the consensus views of the Competition Committee.

1. Differences between neoclassical economic theory and behavioural economics

Over the past 30 years, behavioural economics has been empirically testing neoclassical economic theory's assumptions of perfectly rational market participants who pursue their economic self-interest with perfect willpower. This testing has led to the formulation of the concepts of bounded rationality, bounded willpower and bounded self-interest, which reflect that (i) there are biases and heuristics (i.e. approximate rules of thumb) that affect decision-making processes;(ii) willpower is imperfect; and (iii) people do not care only about their economic self-interest, and therefore are willing to incur additional costs to punish unfair behaviour.

Rationality has a narrow meaning under neoclassical economic theory. It presupposes that individuals are objective, seek out the optimal amount of information, and have stable preferences. Behavioural economics literature, however, shows that there are three important deviations: i) intuitive thinking; ii) motivated reasoning; and iii) prospect theory.

The first deviation – intuitive thinking – implies that people may not engage in calculated, deliberative, and slower thinking and instead think automatically and quickly – with little of no effort. One example is the availability heuristic, where people assign a higher probability to events that come more quickly to mind. The second deviation, motivated reasoning refers to the fact that people are not necessarily objective. One example is belief perseverance, where people give greater weight to evidence that supports their beliefs, and tend to discount evidence that undermines them. Finally, according to the prospect theory, people are more risk-averse with respect to certain gains, but more willing to take on risk to avoid losses. This is because losses hurt more than comparable gains. For example prospect theory predicts the pain one feels in losing $100 would be two to two-and-a-half times greater than the joy in finding $100. An important aspect of the prospect theory is the reference point: whether something is framed as a sure gain or loss to be avoided can impact the way people respond.

In terms of bounded willpower, individuals occasionally act contrary to their long-term interest and at times they use commitment devices. These commitment devices can, for example, take the form of an automatic salary deduction, where the deducted amount is put into an account in order to help with long-term savings. A question of extreme relevance concerns the extent to which firms provide commitments devices to help consumers address their imperfect willpower, biases and heuristics or whether they exploit them.

With respect to self-interest, the behavioural economics literature has pointed out that people are concerned about fairness, and if there is a widely shared norm of what a fair outcome is, deviations from that norm will be punished. While it does not mean that everyone is fair, a substantial majority of

individuals in the behavioural games co-operate and act pro-socially so long as they believe that most others will do the same. Self-interest should be distinguished from rationality and will-power. Indeed, whilst the latter two are normatively desirable as a goal, it is not clear whether self-interest should also be. The relevant question concerns the extent to which bounded self-interest is important in terms of consumers' notion of fairness, and the extent to which it can actually help promote a market economy and deter free riding.

2. Behavioural economics' insights into neoclassical economics' theory of profit maximisation

2.1 Is a firm driven out of market when it does not profit maximise?

The idea that if a firm does not profit maximise it will be driven out of the market is so uncontroversial that people do not think much about the truth of that premise. Empirical research, however, does not offer much evidence on whether this assumption is correct. It simply accepts this assumption when estimating data.

Some studies suggest that one possible reason why firms do not maximise their profits is that the evolution towards profit maximisation is very slow because firms do not experiment enough. However, there are also some theoretical arguments for why the profit maximisation argument is flawed. The first argument is that Darwinian selection in markets is actually driven by relative and not by absolute profits, which means that it is important to simply outperform other firms in order to stay in the market. The second reason is that behavioural biases or bounded rationality may foster collusion.

In terms of collusion, the question is precisely what kind of behavioural biases might make collusion easier. For example, in markets with unpredictable demand and firms selling substitutes, a firm's owner may intentionally hire over-optimistic managers to achieve higher prices in the market and make the outcome more collusive. Some heuristics have actually been shown to create collusive outcomes.

2.2 What says neoclassical theory?

(3) Neoclassical economic theory is both predictable and systematic, which make it attractive for competition authorities. The discussion at the hearing revealed that there was a general concern that it may be impossible to guarantee the level of clarity that already exists if behavioural effects are incorporated into competition analysis.

Behavioural economics does not seek to replace neoclassical economics, but rather to complement it. However, because complementary use will complicate the analysis, it is important to understand when competition authorities can rely on standard neoclassical models and when these models need to be complemented by insights offered by behavioural economics.

To do that, competition officials must become more familiar with the literature so that they can identify emerging patterns and determine whether any of them are crucial for understanding firms' behaviours.

2.3 About firms' rational decisions

One of the criticisms that have been raised about the idea that firms are bounded rational is that in firms, decisions are most often taken not by individuals, but by groups of people. This means that there is a chain of control and internal rules that may be designed precisely to ensure that decisions are rational.

However, more consistent evidence showing that groups systematically perform much better is needed. Moreover, this argument is further complicated by the role of corporate governance. Also, to the

extent that firms' behaviour is driven not only by profit maximisation, but also by the desire to reduce competitors' profits, understanding firms' expectations and belief formation process is further complicated.

2.4 Asymmetric information

Asymmetric information is very important in most markets and it can significantly complicate matters. When the problem of incomplete or asymmetric information is ignored in a given analysis or discussion there is a risk of formulating unreliable conclusions. Thus, more progress is needed in this area.

In a way, behavioural economics can be seen as an extension of asymmetrical information because a concern that arises is that bounded rational consumers with imperfect willpower may still act differently even if they are given the information they need to take a well-informed decision. While one of the standard remedies is to provide disclosure, in behavioural economics it is important to understand whether a given remedy would work, what type of disclosure is best, how a given issue should be framed, and how to present information to consumers.

In terms of bounded rationality as an ingredient that can sometimes make markets work, it is possible to show that some markets that would fail in the presence of perfectly rational consumers, can actually flourish where the presence of the bounded irrational consumers can benefit perfectly rational consumers.

Finally, it has also been stressed that competition is a dynamic process. The behavioural economics literature points out that one facet of competition concerns steps taken by firms to de-bias their decision making in order to provide them a competitive advantage over rival firms. This can be observed in the business literature. For example, Harvard Business Reviews has run several studies on how to use behavioural economics to gain a competitive edge over rival firms.

3. Behavioural economics and exploitation of consumers

3.1 Consumer protection

Consumers need protection for two reasons: first, consumers are not perfectly informed so they need information to be disclosed; second, consumers are not perfectly rational and have imperfect willpower. The first reason is a traditional concern of economic and competitive analysis. The second, on the other hand, is a concern of behavioural industrial organisation. When consumers make mistakes, firms may want to exploit those mistakes. While in some markets competitive pressure may undermine the risk of exploitation, in others the exploitation of consumers may not disappear even if there is competition. Shrouding of add-on prices and drip pricing are cases in point.

Many goods have shrouded attributes (high, hidden mark-ups) that some people do not consider when deciding on a purchase. For example, a study published in the American Economic Review revealed that with respect to credit card pricing, consumers look at initial rates, without considering future rates. Rational consumers infer that hidden add-on prices (e.g., the cost of ink for a printer) are likely to be high prices. If consumers behave rationally, firms will not shroud information in equilibrium. However, shrouding can occur in a market with some myopic (unaware or naïve) consumers. Shrouding creates an inefficiency, which firms may have an incentive to eliminate by educating their competitors' customers. However, if add-ons have close substitutes, firms are not able to profitably educate and de-bias consumers by unshrouding add-ons.

However, there are also forces, such as demand size effects, consumer heterogeneity or third party consumer education, that favour unshrouding. In terms of diagnosing shrouding, it is possible to conduct consumer surveys to measure 'consumer I.Q.' The leitmotiv is that it is impossible to rely only on competition to achieve the desired outcome. Often firms will set monopoly prices for add-ons and

competition will not take care of it. Therefore, in addition to measuring elasticity of substitution, SSNIP and HHI indexes, competition authorities should consider additional factors, such as shroudedness, the proportion of naïve consumers, or consumer I.Q.

The second potentially exploitative practice is drip pricing, where optional price increments (such as card or delivery charges) are added in stages during the buying process. There are two important issues concerning the framing of compulsory versus optional charges. First, if something is optional that should be clearly explained to the consumer. Second, pre-ticked boxes on the order form tend to bias the consumer's final decision: if a given option is already pre-ticked, consumers tend not to un-tick it, and *vice versa*. Therefore, if something is pre-ticked, it should be treated in the same way as something that is compulsory, and consequently, it should also be included in the headline price.

There are clear links between drip pricing and the economics of proprietary aftermarkets models in the extent to which consumers make a purchase decision before knowing the full price. However, with respect to drip pricing consumers do typically see the full price before making the purchase.

To understand potential problems raised by drip pricing, it is necessary to take a behavioural economics perspective. First of all, value that consumers care about is a rather abstract and not absolute concept. As people tend to use cues from the world around them to decide whether an offer has a good or bad value, price framing (i.e., the way price information is presented) can have the power to influence and mislead. Misleading price frames, in turn, can lead consumers to spend more than they need to or to buy a product that is not best for them. Misleading pricing is bad not only for consumers, but for competition, as it may create an uneven playing field between fair dealing businesses.

Research by the UK's Office of Fair Trading (OFT) has revealed that drip pricing triggers a number of common behavioural biases. One is anchoring, which means that consumers anchor to the piece of information they think is the most important, and in case there is a lot of information, consumers use a heuristic. They then fail to adjust their perception of the value of the offer sufficiently as more costs are revealed. Another bias is an endowment effect: consumers feel they have already made the decision to purchase. This creates loss aversion and increases willingness to pay. Also, consumers want to be consistent with their initial decision.

The 'advertising of prices' market study carried out by the OFT further revealed that drip pricing had the most egregious effect of any of the analysed price frames, and that consumers' purchasing decisions are driven by headline prices. In the UK, when airlines were asked by the UK's civil aviation regulatory authority to comply with a new regulation that required them to include all taxes and compulsory charges in their headline prices, the first airline to comply saw a 5 per cent loss in consumer traffic to its website as it waited for the others to comply.

In order to understand whether drip pricing constitutes a general problem, the OFT commissioned a lab experiment. It revealed that when a simple drip was added, over-search by consumers was completely eradicated, and instead there was under-search. Moreover, the first trader visited received 112 per cent of optimal sales. While the results of the experiment depend on the specific price design, it nevertheless revealed the largest welfare loss relative to the baseline of all the price frames. The experiment also showed that firms invest heavily in being the first trader that the consumer visits, even though there may be an overall negative impact on industry profit if everybody invests heavily.

The literature suggests that the likelihood and extent of harm of drip pricing depends on a number of factors, including the proportion of naïve buyers, the extent to which add-ons are important, the ability of firms to distinguish between naïve and sophisticated consumers, the presence of third parties engaged in

educating and de-biasing consumers, whether naïve consumers learn from their experience, and the extent to which the profit from drips can be competed away in a competitive primary market.

An important implication that emerged from the hearing is that in a competitive market some people benefit more than others and there may be no mechanism to redistribute gains.

3.2 Drip pricings

Even if drip pricing fits naturally under consumer protection law, there may be variants to which competition law applies.

Consumer law may seem the most appropriate means to address drip pricing because there is not always a relevant market with a dominant firm – a prerequisite for the application of competition law to unilateral behaviour. However, drip pricing can actually lead to enhanced market power and reduced competition since in the presence of drip pricing firms compete in the wrong dimensions, and search and switching may be reduced. In any case, gaining a better understanding of how consumers respond to drip pricing may enhance our understanding of issues that are definitely covered by antitrust law, such as aftermarkets and follow-on sales.

The discussions of drip pricing and shrouding revealed that consumers' actual choices do not necessarily reflect their utility maximisation. Competition authorities need to distinguish between behavioural exploitation and firms competing to help consumers address their bounded rationality and bounded willpower. Where firms enter the market to find new ways to exploit consumers, competition can actually have a detrimental effect. Lastly, it is important to consider whether a given remedy is capable of preventing behavioural exploitation without unduly restricting firms' freedom to experiment with methods that can be used to de-bias consumers.

4. The impact of behavioural economics on antitrust enforcement

4.1 When behavioural economics can be used

There are at least four levels in which competition authorities can consider the implications of behavioural economics on competition policy and enforcement. Behavioural economics can be used (i) as a gap filler, (ii) to critically assess the assumptions underlying specific competition policies, (iii) to revisit three fundamental competition questions, and (iv) to assess the future evolution of convergence/divergence of competition laws.

(i) First, behavioural economics can be used as a gap filler, to help explain 'real world' evidence when it cannot be explained under the neoclassical economic theory.

For example, in the EU's *Microsoft* case, it was hard to argue foreclosure when consumers can readily download an alternative media player. Behavioural economics could have provided support for the European Commission's case by explaining the importance of the default option and the default standard, which can have a substantial impact on consumers' behaviour.

(ii) Second, behavioural economics can help critically assess the assumptions of specific competition policies, such as merger review and cartel prosecutions.

It has been stressed during the discussion that it is really important to understand whether the assumptions used by competition authorities are correct and the extent to which they are empirically robust. For example, in reviewing a proposed merger, competition authorities typically assume that the relevant anticompetitive effects would often manifest themselves in

higher prices. To decide whether such effects are likely, competition authorities first carry out the SSNIP test to define the boundaries of the relevant market, which then allows the authorities to infer whether the merged entity would be in the position to exercise market power.

According to neoclassical economic theory, the way in which competition authorities frame the choice should not affect survey data on a SSNIP test. However, the behavioural economics literature suggests that the way in which an issue is framed does matter. In particular, consumers typically evaluate offers in terms of the deviation from an established reference point. Consequently, they may assign different value to two offers with the same effect: in particular, consumers may be less concerned if a discount is eliminated than when a price is increased.

With respect to cartel prosecutions, neoclassical economic thinking predicts that setting the fine at the optimal level would result in the socially optimal level of price-fixing. The optimal fine, in turn, corresponds to the cartels' expected net harm to others divided by the probability of detection and successful prosecution. The behavioural economics literature suggests that to reach optimal deterrence, it can be useful to examine some of the situational and dispositional biases that may affect a decision to engage in an anticompetitive behavior, such as for example a decision to form a cartel. Dispositional factors, which refer to inherent personal qualities, would for example consider whether executives are over-confident and the extent to which they think they are actually going to be prosecuted. Situational factors, on the other hand, refer to factors external to the actor that increase or constrain an executive's willingness to join a price-fixing conspiracy.

(iii) Third, behavioural economics can be used to revisit three fundamental questions underlying competition laws and policies, namely what competition is, what the goals of competition law are, and what the legal standards to promote those goals should be.

Although the notion of competition is central to competition policy, there is no worldwide consensus on a theory of effective competition. Any theory of competition depends on various premises. However, as behavioural economics shows, there are a number of caveats to premises underlying the neoclassical economic thinking. Accordingly, competition authorities may find it useful to consider how the theory of competition they follow changes when some of the assumptions are relaxed.

For example, with respect to rationality, it is possible to distinguish four scenarios. Scenario I reflects the predominant current thinking that assumes that both consumers and firms are rational. Scenario II assumes that firms are relatively more rational than consumers. Scenario III presumes that firms have bounded rationality that may not be corrected by the marketplace, while under the last scenario IV, both firms and consumers have different biases and heuristics.

These scenarios can have various implications for competition policy. For example, scenario II raises the issue of behavioural exploitation as a market failure, and the need to distinguish behavioural exploitation from firms' legitimate attempts to help bounded rational consumers.

In addition to re-examining the assumptions underlying theory of competition, competition authorities may reconsider competition goals they choose to pursue. For example, the surveys carried out by the ICN revealed that various jurisdictions' monopolisation statutes pursue multiple goals, and that goals that are vaguer (such as promotion of effective competition or consumer welfare) are more popular.

Referring to the work done by the OECD on well-being, the question has been raised as to the extent to which well-being should be the objective of competition law. The initial reaction would be to let quality of life be addressed by other authorities. However, the behavioural happiness literature has shown that once a country has fulfilled basic needs of its citizens, the increasing aggregate wealth does not necessarily increase experienced well-being. To maximise well-being, competition policy must balance material well-being and other quality of life factors.

(iv) Fourth, competition authorities could assess how behavioural economics will affect the degree of convergence/divergence of competition law among the over 100 jurisdictions with competition laws today.

On the one hand, neoclassical economic theory is sufficiently simple and uniform that it can be applied across various industries and countries. Arguably, behavioural economics cannot provide such a simplifying, unifying theory. There can be various dispositional and situational factors in different countries, and this could create the risk of greater diversions. It would therefore seem that behavioural economics would hamper convergence and would actually increase uncertainty, because now a court with an effects-based legal analysis would have to decide not only which economist, but also which economic theory should be given greater weight, and then how to incorporate together the behavioural economics and the neoclassical economic theory into competition analysis.

4.2 Impact of behavioural economics

To date, the impact of behavioural economics on competition policy has been rather limited. However, the discussion at the hearing revealed that behavioural economics supplies an increasingly rich source of empirical observations that can inform antitrust and consumer protection enforcement.

To date, behavioural economics have mostly been used in level one – gap filling, which means that there has been no revolution in competition authorities' mission or how the mission is pursued. While the insights stressed by behavioural economics (i.e. consumers do not always take optimal decisions and firms do not always maximise profits), are not new, behavioural economics offers a new way of looking at some of the problems and adds new understandings about how decisions can fail to be optimal and how markets can fail to lead to efficient outcomes. Accordingly, behavioural economics can be seen as a very important extension to a practical toolkit for thinking about how people, firms, and markets actually behave.

The limited examples of the impact behavioural economics has had on competition highlight two aspects. First, while the behavioural economics has not yet offered a framework that displaces the analytical approach that is currently used, it offers insights that can be added to the traditional competition analysis. For example, if the evidence shows that the use of a default option is able to lead to a meaningful exclusion, then such fact has to be taken into account during the analysis. This is an example of the impact of behavioural economics on level one. Second, the discussion at the hearing highlighted the importance of retrospectively examining what has been done in order to evaluate whether competition authorities achieve correct outcomes. For example, it has been suggested that the examination of whether efficiencies in mergers are realised is a good area for conducting retrospective evaluation.

Another important contribution of behavioural economics concerns search costs. The question of when does competition in the sense of additional entry into the market help consumers relates to the question of search because as long as consumers search properly to obtain the best deal according to their preferences, additional entry can never harm consumers. In contrast, when search is impaired, some consumers will not search at all, or will make errors in the search process. In such a situation additional entry can harm consumers. It is so because when search is impaired, firms typically have two strategies:

they can either focus their efforts on the mass searching consumers or they can exploit the consumers who do not search. Behavioural economics can help competition authorities understand what is driving search cost, how search is impaired through such practices as shrouding or drip pricing. This is a clear example of where intuition from the neoclassical models can be enhanced by behavioural economics.

While to date, behavioural economics has had a limited impact on competition policy, it has played a more decisive role in the area of consumer protection. Competition authorities in the UK and in the US, for example, held conferences on the negative option marketing, on behavioural economics and consumer protection, on price framing and drip pricing. They also conducted studies on the effects of price framing, on the way information is disclosed and how much information is disclosed on the consumer's ability to make good decisions.

4.3 Differences across jurisdictions regarding the impact of competition policy

There may be a slight difference of emphasis across different jurisdictions regarding the impact that behavioural economics has on competition policy. While some claim that behavioural economics is causing no real paradigm shift in competition policy because it is already integrated into the analysis, others consider it to be too misleading and highly complicated to be meaningfully incorporated into competition analysis. However, if behavioural economics were to lead to the introduction of new rules, they need to be clear and predictable.

While for the moment, behavioural economics has not led to the replacement of the neoclassical economic framework with a new general framework, it has produced an important set of separate explanations for certain types of human behaviour that should be integrated into the competition assessment as they can help understand how markets work in specific circumstances. Also, as current competition policy does not amount to a mechanic application of the principles of neoclassical economics based on perfect rationality, it may already take into account some of the findings of behavioural economics. The question is what to do in those cases where preserving competition does not suffice to ensure an efficient allocation of resources and to maximise welfare and where behavioural biases may play a significant role and potentially reduce consumer welfare.

In many cases consumer protection will seem to be more appropriate than competition policy since as a general principle competition policy should not be used to correct all practices that reduce social welfare, but only those that correct distortions of the competitive process. Accordingly, policy interventions should always be based on a theory of harm that is consistent with the facts of the case. To the extent that some of the behavioural economics findings are robust or would become robust, they can be integrated into the analytical framework provided by the existing competition economics and policy. This, however, should be done cautiously. Moreover, it could be useful to focus analysis on those cases where behavioural economics and neoclassical economic theory predict different outcomes as such a confrontation would be particularly informative. Finally, remedies should rather seek to enable consumers to make well informed choices rather than to make those choices for them.

The rise of citations to behavioural economics in legal journals in the US testifies to the rising interest in the legal implications of behavioural economics. However, it remains to be seen whether and how academic interest in behavioural economics will translate through the judicial opinions or whether behavioural economics is too ad hoc and unruly to generate meaningful legal rules that can be applied by courts in predictable ways.