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Behavioural Economics and Competition Policy

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Management Summary

Behavioural economics is a fascinating interdisciplinary field of research that studies the impact of psychological factors on economic decision making. Behavioural economics contributes significantly to our understanding of how real individuals make choices and shows us that there is a difference between choices made by real people and those by the 'homo economicus'.

In this paper we consider what behavioural economics can mean for competition policy. Our conclusions are based on our own research and draw upon a study commissioned to Oxera.[1]

For the purpose of this paper we will adopt a narrow definition of behavioural economics to distinguish it from the existing body of economic theory informing competition policy. There is no a priori reason to reject a wider definition of behavioural economics which would also include parts of the 'traditional' economic theory guiding competition practise. However, such a definition would make it difficult to reflect upon the possible novel impact of behavioural economics to existing practise.

We use the term 'behavioural economics' to refer to a) a field of study that identifies cognitive mechanisms (called biases) which influence economic decision making and which lead to different decisions than those that would be made by the agents assumed in rational choice models and/or b) a field of study which incorporates cognitive biases in theoretical models about market outcomes. This latter field is sometimes called behavioural industrial economics. Biases can be exhibited by consumers (consumer biases) and by firms (firm biases).

The beneficial impact of competition on consumers is an underlying premise of competition law. This premise is supported by a large body of empirical and theoretical work that confirms the welfare enhancing effects of competition. Some interesting theoretical studies that originate from the 'behavioural industrial organisation' literature and incorporate consumer biases do however suggest that in specific circumstances, competition may not improve (even worsen) consumer welfare and highlight that a blind, uncritical belief in competition is not always warranted.

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[1] See Oxera (2013), "The report was originally commissioned by the NMa in 2012, before ACM [The Netherlands Authority for Consumers and Markets] was formed. The conclusions presented in this report are largely based on our own research". Our conclusions and those of Oxera are to a large extent consistent, even though Oxera's more practically oriented framework differs from our framework, which focusses on the theoretical implications of behavioural economics.

The theoretical economics underlying competition analysis is designed to explain market outcomes (such as market price) and is not designed to explain individual behaviour. Consumer behaviour is nevertheless relevant for this theory, through the aggregate demand curve. The theoretical models are based on the general principle that the relationship between price and the quantity demanded is negative (the so called downward-sloping market demand curve). They assume that the quantity demanded will decrease (increase) as the price increases (decreases). The general principle of a downward-sloping demand curve appears not to rely on consumers making 'rational' and/or unbiased decisions' [2] and is empirically validated. Theoretical models guiding competition analysis show that the market price can be affected by the sensitivity of the quantity demanded to price increases (elasticity of demand). They do not assume a specific level of sensitivity as a general principle. Widespread biases/heuristics can lead to specific levels of elasticity of demand in specific markets. Such findings are theoretically neutral. These arguments suggest that the findings of behavioural economics regarding consumer behaviour do not necessitate a re-evaluation of the theoretical basis of competition economics.

The impact of consumer biases on demand elasticity can be factually important in individual competition cases. Potential biases and their effect on the price elasticity of demand are often taken into account by competition authorities when they estimate demand. Biases are in this sense part of the integral assessment of the economic effects in competition cases. Behavioural economics highlights that demand might be more or less elastic than one might expect a priori and underscores the importance of empirical research in concrete cases.

The literature on *firm biases* is developing and potentially of great relevance. How exactly firm biases might impact market outcomes and competition analysis is currently unclear. This literature is as yet sparse and its results ambiguous. ACM will continue to follow this line of research with great interest.

An interesting policy issue highlighted by behavioural economics concerns situations in which firms may use consumer biases to extract more profits, in so called 'pockets of market power'. In these situations, (biased) consumers do not/no longer actively switch between suppliers even in the absence of switching costs. We believe that there is little reason to intervene in such situations if it is likely that dynamic learning effects on the part of consumers and/or institutional innovations will undermine such firm behaviour. When learning effects are limited, the relevant question, from a policy perspective, is whether or not to intervene and if intervention is

[2] Becker (1962).

warranted, which policy instrument (or which combination of instruments) is best suited to resolve the resulting market problems. We believe that such situations are better addressed by consumer protection and policy aimed at empowering the consumers rather than competition law enforcement. Consumer protection laws and policy aimed at consumer empowerment have the advantage of being able to address the root causes of 'pockets of market power' caused by biases and can protect consumers in the long run by stimulating competition.

We consider it likely that behavioural economics will add significant value to consumer protection and consumer empowerment, and recommend further research into these areas.

Fortunately, the ACM has not only competition powers, but also regulatory and consumer protection powers. It can view potential market problems caused by behavioural biases from a broad perspective, and can determine which policy regime, or instrument, is best suited to solve particular problems.

1 INTRODUCTION

In the last decade there has been a growing interest in behavioural economics. The topic has not just gained interest in academic circles[3] but also among practitioners and policymakers. Several institutions and academics have started to explore what behavioural economics could mean for competition policy, consumer protection and sector regulation[4] – with some deducing quite far-reaching conclusions for competition policy.[5] The newly formed ACM[6] - which has powers in all these three areas – is interested in this development.

[3] See for example Rabin (1998) for an introduction to behavioral economics. Spiegler (2011) presents an advanced overview of behavioral industrial organization.

[4] See for instance OECD (2010), EC (2010) or the special issue of *Competition Policy International* in 2010 on behavioral economics and competition.

[5] Reeves and Stucke (2011), for instance, argue that "[behavioural economics] raises questions about our ability to predict outcomes and optimize efficiency through antitrust's rule of reason standard, suggesting that antitrust's prevailing legal standard be brought closer to rule of law principles."

[6] The Netherlands Authority for Consumers and Markets (ACM) was officially launched on 1 April 2013, uniting the former Netherlands Competition Authority (NMa), the Independent Post and Telecommunications Authority (OPTA) and the Netherlands Consumer Authority (CA). See https://www.acm.nl/en/about-acm/our-organization/the-netherlands-authority-for-consumers-and-markets/ for more information.

The question we address in this paper is what behavioural economics can mean for competition policy. In order to answer this question we conducted our own research. We also asked Oxera to explore the implications of the behavioural economics literature for competition and competition policy[7], with a focus on practical implications of the literature on consumer behaviour for the day-to-day application of economic analyses in competition cases (e.g. mergers, cartels and abuse of dominance).

In order to assess the potential impact of 'behavioural economics' on 'competition policy' we assessed if and how the behavioural economics literature affects our current understanding of the effects of competition on consumer welfare and the explanatory/predictive value of the economic models commonly used in competition analysis including the definition of markets, assessment of potential entry and the measurement of dominance.

This paper is organised as follows. In Section 2, we set out what we consider 'behavioural economics' for the purpose of this paper. In Section 3, we consider what the behavioural economics literature has to say about the policy basis of competition policy: the relation between competition and consumer welfare. Then, in Section 4, we discuss the role of assumptions in, and the explanatory value of, 'traditional' economic models used in competition analysis – and what this means for the policy relevance of the main finding of behavioural economics, namely that people do not always act rationally. Section 5 discusses the issue of firms exploiting consumer biases and possible policy responses. Section 6 concludes.

2 WHAT IS BEHAVIOURAL ECONOMICS?

2.1 Definition

Since the aim of this paper is to understand the implications of behavioural economics for competition policy it is important to delineate behavioural economics in such a way that behavioural economics can be distinguished from the existing body of economic theory underlying competition policy. In this paper, we use the term 'behavioural economics' to refer to:

> *a) A field of study that identifies cognitive mechanisms called biases which influence economic decision making and which lead to different decisions than those that would be made by the agents assumed in rational choice models and/or*

[7] To limit the scope of the research project, we asked Oxera to focus on competition policy, though with full regard for the wider regulatory context, including consumer protection policy and regulation.

b) a field of study which incorporates cognitive biases in theoretical models about market outcomes. This latter field of study is sometimes referred to as behavioural industrial organization.

Biases can be exhibited by consumers (consumer biases) and by firms (firm biases). As a short-cut and in accordance with much of the literature, we will denote behaviour characterized by these biases as 'non-rational' or 'irrational'. [8]

The fact that we choose to work with this definition in this paper does not mean that we reject other definitions of behavioural economics. It is for example common to describe behavioural economics as the application of psychological insights to economics. There is no a priori reason to reject such a definition. However, such a broad definition would classify an important part of 'traditional' economics as behavioural economics. As such, it would blur the attempt to specify the contribution of behavioural economics to the 'traditional' theoretical foundations and practical implementation of competition policy. The following example can be used to illustrate this point: If we defined behavioural economics as the application of psychological insights to economics, traditional theories about switching costs might be considered to constitute behavioural economics. These theories consider the implications of different types of switching costs, including the 'annoyance' caused by the effort required to switch. We could thus label the wish to avoid annoyance as a 'psychological' mechanism and consider switching costs models as behavioural economics. There is no a priori reason to reject to such a classification. However, since models incorporating switching costs are part and parcel of 'traditional' theory guiding antitrust practice, such a definition would not help identifying the distinct contribution of behavioural economics. This definition might also blur the fact that the wish to minimise annoyance is consistent with the rationality hypothesis and can be incorporated into economic theory without an explicit foundation in psychology. We therefore exclude switching costs models in our definition of behavioural economics. For similar reasons, we classify models of asymmetric information and models of imperfect information as traditional economic theory and not as behavioural economics. Given the explicit emphasis that behavioural economics gives to the use of heuristics (below we show that the concept of heuristics is one of the defining characteristics of behavioural economics) and the overlap between the literature on heuristics and the 'traditional' bounded rationality literature, we will consider bounded rationality models as a part of behavioural economics.

8 'Non-rational' and 'irrational' must be regarded as describing deviations, for instance in the sense of the biases described, from a consumer that maximizes a utility function (or expected utility function) that is based on specific assumptions regarding preferences and the consumption set (e.g. Debreu, 1959), generally called a 'rational' consumer or 'homo economicus'.

2.2 Biases

We distinguish three categories of non-rational behaviour (recognising that several possible classifications exist in the literature), consistent with the report by Oxera.

i. Biases revealing context dependent preferences

Behavioural economists stress that preferences are reference-dependent. According to behavioural economics, the way in which information is presented, or framed, can affect the preferences of consumers. The loss aversion effect illustrates why framing matters. Behavioural economists stress that people dislike losing what they perceive they already own more than they like making gains. The idea that people dislike losses more than they like equivalent gains is called 'loss aversion'. For example, behavioural economics shows that a prospect of a reward of €200 may be needed in order to outweigh the prospect of a loss of €150.

ii. Biases revealing time-inconsistent choices

Behavioural economists argue that consumers can face a conflict between their short-term urges and what would be 'best' for them in the long term. In other words, consumer preferences can be 'present-biased' or 'time-inconsistent'.

iii. Heuristics

Behavioural economics has demonstrated that decision-making involves taking shortcuts. Conscious, fully rational, deliberation is not applied to every single decision that people make. Decisions are often made subconsciously and automatically. Between the extremes of conscious and subconscious decision-making lies a series of shortcuts known as 'heuristics'. Individuals may make decisions based on a selection of the information provided in the marketplace, their memories of recent experiences, looking at what others are doing, or focusing on what they think are salient aspects of the information. Heuristics saves a lot of time and effort, in particular when dealing with complex problems.[9]

[9] Note that there is a difference between the first two biases and the last bias. Whereas the first two biases reflect upon the nature of the preferences and how people would weight different outcomes ("gain versus loss" and "now versus later") the third bias reflects upon the nature of the cognitive processes that are used during decision-making. As such, the first two biases define very specific discrepancies between actual behaviour and those we would associate with a rational agent. The last bias states that decision making in general would lead to different outcomes than those associated with rational agents due to the use of heuristics as opposed to rational deliberation in decision making. This is also called 'bounded rationality'.

3 THE RELATION BETWEEN COMPETITION AND CONSUMER WELFARE

Generally speaking, competition improves market performance, measured in terms of efficiency, total welfare and consumer welfare.[10] These market performance criteria have been incorporated in policy objectives of competition authorities and regulators around the world – including ACM. ACM aims to "provide effective and efficient oversight on well-functioning markets for the purpose of optimising consumer welfare".[11] Given, then, that the generally positive relation between competition and (consumer) welfare lies at the very heart of competition policy, it would be interesting to know if behavioural economics offers any insights that could, or should, cast doubts on the goals and benefits of competition policy. In this chapter, we will analyse what behavioural economics has to say about the effects of competition on consumer welfare. In the following chapter, we will assess the implications of the behavioural economics literature on a different level, namely the explanatory value of the economic models commonly used in competition analysis.

The behavioural economics literature to date appears mostly concerned with studying behavioural biases of individuals or firms, and has looked much less into the relation between biased (consumer and/or firm) behaviour and market outcomes. However, a recent strand of literature, commonly called 'behavioural industrial organisation', has begun to explore how rational firms may respond to consumer biases, and how this may affect market outcomes. Important contributions in this field are Spiegler (2006), Heidhues, Kőszegi and Murooka (2012) and Gabaix and Laibson (2006). A typical result is that firms may exploit naivety of consumers by hiding the true quality or price of their products. According to this literature more competition – for instance in the form of an increase in the number of firms – will not always improve market outcomes. More competition may even deteriorate welfare when consumers have a limited ability to compare competing products and the number of firms increases, then firms may be more likely to further complicate making comparisons, instead of lowering their prices.[12] The empirical validity of this result, and other findings of the behavioural industrial organisation literature, has not yet been systematically tested. Questions such as 'Under which

[10] Note that the term 'consumer welfare' is ambiguous and often ill-defined. In economic terms, 'consumer welfare' can mean either total surplus or just consumer surplus – and competition authorities do not always specify which interpretation they use in their policy objectives. See Werden (2011) for further discussion.

[11] https://www.acm.nl/en/publications/publication/11303/Draft-version-of-Strategy-Document-Netherlands-Authority-for-Consumers-en-Markets/

[12] This response is called obfuscation.

circumstances do firms obfuscate?' and 'How do consumers or other firms (such as comparison websites) respond to this?' have not yet been answered.

The behavioural industrial organisation literature is still developing.[13] It is unlikely that this literature will alter the fundamental basis of competition policy – but if and when empirically validated, it may highlight specific circumstances under which competition authorities may not simply assume competition (e.g. in the form of new entry) to have the expected benefits.

4 THE (IR)RELEVANCE OF (NON-)RATIONAL BEHAVIOUR

In the literature on behavioural economics to date there is little consensus on the implications of behavioural economics for competition policy. In fact, where some think behavioural economics has, or should have, minimal impact, others argue it offers grounds for legal reform. The latter argue that the fact that evidence exists showing that individuals and firms do not always act in order to maximise utility- or profit, this means that our ability to predict market outcomes (and optimise efficiency through the effects-based rule of reason standard) can be questioned – and that the 'rule of reason' standard should be brought closer to 'rule of law' principles instead.[14]

Before anything can be said about adapting policy rules or legal standards, it is essential to know what the implications are of such evidence of non-rational behaviour for the explanatory value of standard economic models guiding competition analyses.

A little reflection should suffice to conclude that given any real life situation, an individual's choice in fact might very well differ from those of a fully rational economic actor (the so called homo economicus). Indeed, behavioural economics presents plenty of evidence of individuals not maximising utility and emerging literature shows that firms may not always maximise profits either.[15] But that does not necessarily mean that standard theory which explains market outcomes will be different.

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[13] For example, learning possibilities do not seem to have been included in the models so far.

[14] This point is argued by a small number of legal scholars that question competition law doctrines under the heading 'behavioural antitrust'. See for example Stucke and Reeves (2011) and Thor and Rinner (2011).

[15] Armstrong and Huck (2010) present a survey of the behavioural economics literature on firm behaviour in markets. They show that firms may not always maximize profits, as the optimization problem can simply be too hard or social preferences (e.g. vengeful behaviour, or, oppositely, solidarity among collusion partners) may result in other strategies. Alternatively, optimization may still occur, but with alternative aims (e.g. maximizing relative profits) or under mistaken beliefs (e.g. over-optimism).

Consumer biases could affect competition practise through their potential impact on the validity of the standard economic models used in competition analysis. The economics guiding competition analysis contains theoretical models designed to explain market outcomes such as market price and are not designed to explain individual behaviour. Consumer behaviour is nevertheless relevant for these models, through market demand. The models generally assume a negative relation between price and the quantity demanded (i.e. a downward-sloping demand curve). The realisticness of this assumption is itself contingent on the validity of certain assumptions regarding consumer behaviour. No less than five decades ago, Gary Becker explained that an important (and empirically validated) theorem of traditional economics– that demand curves tend to be downward-sloping – does not depend on consumers (households) taking rational decisions but instead is generally true *regardless* of the decision rule consumers use in making choices.[16] In other words, even if individual consumers act impulsively, or, oppositely, are inert, aggregate market demand would still be downward-sloping – and the predictive value of standard economic theory would thus not be affected.[17] [18]

Theoretical models guiding competition analysis show that the market price can be affected by the sensitivity of the quantity demanded to price increases (elasticity of demand). They however do not assume a specific *level* of sensitivity as a general principle. Wide spread biases/heuristics can lead to specific levels of elasticity of demand in specific markets. Such findings are empirically interesting but theoretically neutral.

The impact of biases/heuristics on demand elasticity *can* be factually important in individual competition cases. We argue that when competition authorities estimate demand on the basis of available statistical data (i.e. sales data), any potential biases and their effect on the price elasticity of demand are often already taken into account. Where such data are not available, and competition authorities use more qualitative sources of evidence and economic reasoning to understand demand, they should be aware of the possibility that actual market demand may be more or less elastic than they might expect depending on any underlying consumer biases. We suspect that, in such cases, the potential presence of the biases in question will usually be

[16] Becker (1962).

[17] This is because aforementioned theorem largely results from changes in opportunities (i.e. relative prices) alone. I.e., a higher price for product X, holding income and prices of all other goods constant, simply means people can buy less of it, and consumption patterns will shift accordingly, irrespective of *how* people choose to spend their income (utility-maximising or not).

[18] Another example of real life behaviour differing from that predicted by standard economic theory might be that people procrastinate. But delayed individual choice does not imply that there is no aggregated downward sloping demand curve.

reflected in the qualitative evidence – and thus will also be taken into account. In short: the existing analytical framework allows biases and heuristics to be part of the integral assessment of the economic effects in competition cases. Nevertheless, behavioural economics highlights that demand might be more or less elastic than one might expect *a priori* and underscores the importance of empirical research in concrete cases.

As for firm behaviour: it is not evident that individual consumer behaviour (often tested in lab experiments with students) is at all informative about firm behaviour. Firms are repeat players that can learn from and correct their mistakes. They may leave business decisions to experts or specialized departments, and collective decision-making may correct individual biases. Even if insights on individual consumer biases could simply be carried over to firm behaviour, it is unclear if – and if so, how – firm biases would impact competition and, ultimately, market outcomes. Behavioural economics does not, as yet, offer much insight in this issue. Empirical research on firm biases is still scarce. Since this literature is growing and potentially of relevance, the ACM will continue following it with great interest.

Aside from the issue of whether consumer biases can be carried over to firms, the evidence to date shows that biases can work in opposite directions, resulting in either excess entry (over-optimism) or sparse entry (lack of confidence), stable or instable collusion (trust or vengeance), etcetera. A firm may be subject to multiple biases that do not necessarily work in the same direction. This makes it difficult to predict *ex ante* what the overall effect will be on its behaviour. As with consumer biases, it is often not the behaviour of a single firm that needs to be predicted, but the market outcome when various firms interact – some of which are subject to biases, while others possibly are not. Experimental literature on the impact of non-rational behaviour in oligopolistic markets suggests that one thing that matters in determining the potential impact of firm biases is the type of competition between firms.[19] A relevant question in this respect is to what extent firm biases are economically viable beyond the short term. A well-known argument by Milton Friedman suggests that the competitive process will eventually eliminate firms that do not maximise profits, as they can simply not survive.[20] On this reasoning, firms learn to behave as if they were rational due to the pressures of a competitive market.

[19] Non-rational behaviour is said to have more impact under strategic complementarity (for example Bertrand competition with substitutable goods) than under strategic substitution (for example Cournot competition with substitutable goods). This is because in the case of strategic complementarity, rational agents have the incentive to move in the same direction and thus magnify the impact of the non-rational behaviour. See Fehr and Tyran (2005) and Potters and Suetens (2009), for example. Note that the 'agents' in these experiments are individuals, not firms.

[20] Friedman (1953).

5 POCKETS OF MARKET POWER

One of the possible implications of behavioural economics for market outcomes, is that, if consumers are found to focus mainly (only) on the primary price when comparing competing product offerings and are less price sensitive to the price of add-ons, suppliers may enjoy market power vis-à-vis individual consumers with regard to the add-ons, possibly to the extent that they could constitute (possibly very small) separate relevant markets, or pockets of market power.

In markets with pockets of market power, firms can effectively exploit consumer biases. In such circumstances the legal rules against the abuse of a dominant position could be used to address the problem. Indeed, Article 102 TFEU[21] prohibits, among other things, exploitative behaviour (such as excessive pricing) of dominant firms. However, several questions arise.

First, there is a question regarding the existence and the persistence of pockets of market power. While defining markets, what matters is whether the *marginal* consumers (i.e. those that are most likely to switch after a price increase) are biased, or that the inframarginal consumers are biased. If mostly inframarginal consumers are biased and price discrimination is not feasible, then a firm may not be able to profitably increase prices above the competitive level. To what extent marginal consumers are biased in a way that limits substitution, possibly resulting in pockets of market power, is an empirical question. If pockets of market power are found to exist, the question rises if the exploitation of consumers can be maintained beyond the short run. Consumers could learn from their mistakes and stimulate the competitive process that 'weeds out' such practices. The power of dynamic learning effects is a subject of debate among economists. Some believe that in most situations, consumer learning will eliminate exploitation by firms, and that policymakers should therefore be reluctant to intervene in markets; others think that under certain circumstances, biases may be more persistent and that consumers do not always act more rationally over time.

If exploitation of consumer biases is found to be persistent, there is a second, more or less political, question as to what extent regulators should intervene. In the case that consumers remain inert despite objectively low switching barriers, for example, why should regulators intervene at all? To what extent, and at what cost, do we want to protect consumers against themselves? We would argue that regulators be reticent, and carefully balance the costs and

[21] And its Dutch equivalent, Article 24 of the Dutch Competition Act.

benefits in these situations – possibly the greatest cost being the dis-incentivising of consumers to learn from their mistakes and to actively compare product offerings.

Nevertheless, if exploitation of consumer biases is found to be persistent (i.e. learning effects are limited) and it is decided that intervention is warranted, the third question to be answered is which policy instrument is best suited to address the issue. We believe that such situations are better addressed by consumer protection and policy initiatives aimed at empowering the consumers rather than by competition law enforcement (e.g. in a 'abuse of dominance' framework). In such cases, measures aimed at consumer empowerment have the advantage of being able to address the root causes of pockets of market power caused by biases and can protect the consumer in the long run by stimulating competition. Consumer protection measures can focus on the firm(s), in the form of transparency requirements and/or fines. A recent example of this is ACM's decision to fine Ryanair for a form of drip pricing.[22] Alongside that, interventions should focus on 'de-biasing' and informing consumers. After all, markets are best served by critical consumers who actively participate in the marketplace and learn from their (biased) behaviour. To this end, authorities can also perform market scans, effectively communicate the results and urge relevant parties to take action.[23] Whereas communication has traditionally been considered as supportive of 'actual' interventions, it is now increasingly seen as a potentially very effective instrument in its own right.[24]

6 CONCLUSION

"What can behavioural economics mean for competition policy?" is the question we set out to answer. For this purpose, we used a relatively narrow definition of 'behavioural economics', focusing on biases and heuristics in consumer and firm behaviour, and excluding the effects of asymmetric information, imperfect information and switching costs, which have long been incorporated in 'traditional' economic theory guiding competition policy.

[22] Decision of the Netherlands Consumer Authority (now ACM) of 20 March 2013. See https://www.acm.nl/nl/publicaties/publicatie/11253/Consumentenautoriteit-beboet-Ryanair/ (Dutch only). In the meantime, the decision has been appealed.

[23] An example is the recent study on shopping for financial products by ACM's Monitor Financial Sector Monitor, which showed that households could save up to EUR1,000 per year by comparing alternative offers. See NMa (2012).

[24] A good example is the use of insights from behavioural economics in ConsuWijzer, ACM's online consumer information desk.

We analysed the implications of the main finding of behavioural economics – that people display certain behavioural biases – for the effects of competition on consumer welfare (i.e., the very basis of competition policy) and for the explanatory value of the theory underlying competition analysis. We found that the findings of behavioural economics do not necessitate a re-evaluation of the fundamental basis and benefits of competition policy or the explanatory value of standard economic models. The literature on behavioural industrial organisation as well as the literature on non-rational firm behaviour in markets is still sparse and ambiguous. This literature is developing and remains of great interest.

In individual competition cases, the existing analytical framework already allows biases and heuristics to be part of the integral assessment of the economic effects in competition cases. Behavioural economics highlights that demand might be more or less elastic than one might expect *a priori* and underscores the importance of empirical research in concrete cases.

We also discussed the issue of potential pockets of market power in which firms may exploit consumer biases. If dynamic learning effects are limited and exploitation of consumer biases appears persistent, regulators may decide to intervene. In our opinion, the enforcement of consumer protection laws, market scans and effective communication (to help 'de-bias' consumers) are the best instruments to deal with this issue.

This research has focused on the implications of behavioural economics for competition policy. We consider it likely that behavioural economics will be of significant value to consumer protection and consumer empowerment and recommend further research into the exact implications of behavioural economics for these areas.

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