

# Does Product Complexity Matter for Competition in Experimental Markets?

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CCP Executive Summary

## BACKGROUND

- It is often said that consumers are confused by the complexity of products such as modern cars, broadband, electronic products and financial services.
- Product complexity can be understood as consumers' inability to understand what the value of the product is, which can be justified in terms of combinations of possible utility outcomes that can be obtained by multiple product features.
- When a product has a large number of features the combination of which provides some level of utility to consumers, consumers need to reason in terms of expected utility and the distribution of possible utility values from buying a particular model of the product. As the number of possible outcomes grows, so does the computational complexity for consumers of figuring out what value they should attach to a given model, and so does the likelihood that they may be confused, exploited or at least exploitable by firms. The 'consumer exploitation effect' may lead to higher prices and higher quantities being bought than those that the consumers would buy were they able to exactly identify the value of each product in advance.
- But it may also be the case that consumers react to complexity by being less willing to buy. The 'complexity aversion effect' has been found in individual choice experiments but it has never been tested in a market setting, which is the setting most relevant for consumer decisions.
- Markets for complex products may be expected to have a more elastic demand than markets for simple products: if consumers have less to rely on because information about the quality features of the product is fuzzy, then they are more likely to rely on the piece of unequivocal information which is available, namely that on prices.
- It has been argued that agents have unclear preferences and so their willingness to buy may be affected by anchors provided either artificially or through the operation of auction mechanisms. These psychological mechanisms can be thought of as 'shaping effects'.

## METHODOLOGY

- The authors report a first experiment designed to test whether a net consumer exploitation effect or the complexity aversion effect dominates in the presence of complex products, and if there is a sense in which consumers are more exploitable in the presence of complex products.
- The authors test for the presence of shaping effects. If buyers have experienced lower prices for a given product, they may believe that the

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value of the product is low and as a result they may be less willing to buy the product. If this is true, consistently pricing high is then a better strategy for firms to try to exploit consumers' uncertainty about their preferences than following a strategy with more variability in terms of the mix of low and high prices.

## KEY FINDINGS

- No significant evidence of a net complexity aversion effect is detected, except insofar as the demand elasticity for complex products is higher than for simple products.
- However, there is qualified evidence that complex products have the potential to induce consumers to buy more than they would otherwise: for a given price, more is bought of the complex product than of the simple one. In this sense, consumer exploitability in quantities cannot be ruled out.
- There is evidence for shaping effects: consumers' preferences are shaped by past experience with prices, and firms may in principle exploit this to sell more.

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## THE CCP

The ESRC Centre for Competition Policy (CCP), at the University of East Anglia, undertakes competition policy research, incorporating economic, legal, management and political science perspectives, that has real-world policy relevance without compromising academic rigour.

## FOR MORE INFORMATION

The full working paper (CCP Working Paper 08-33) and more information about CCP and its research is available from our website: [www.ccp.uea.ac.uk](http://www.ccp.uea.ac.uk)

## ABOUT THE AUTHORS

- **Stefania Sitzia** is a PhD student in the School of Economics at the University of East Anglia. Her work is on economic methodology and on the effect of complexity of products and lotteries on decision making.
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