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Spurious Complexity and Common Standards in Markets for Consumer Goods

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CCP Policy Briefing

BACKGROUND

- Behavioural and industrial economists have argued that, because of cognitive limitations, consumers are liable to make sub-optimal choices in complex decision problems. Firms can exploit these limitations by introducing spurious complexity into tariff structures thereby weakening price competition and inducing a welfare loss.
- These findings appear to strengthen the case for regulation by showing that, in the absence of regulation, consumers do not merely have to navigate the 'natural' complexity of competitive markets; they also have to cope with the unnecessary complexity which has deliberately been created to confuse them.

METHODOLOGY

- The authors model a countervailing force on spurious complexity that has been neglected by the literature: the 'common standard effect'. The idea is that consumers' choice problems are made less complex if competing firms follow common conventions about tariff structures, package sizes, labelling, etc. By facilitating comparisons between products, such conventions promote competition between the firms that follow them. But, precisely because they promote competition, they also signal that goods that meet common standards are likely to offer good value for money. Thus, consumers learn by experience to favour products which meet common standards. If consumers act in this way, profit-seeking firms are induced to adopt those standards and are penalised for deviating from them.
- The authors develop a model of a market for a single consumer good, sold directly by producers to consumers. Competition can only be in terms of prices but price can be presented in many different ways. The equilibrium concept is Bertrand-Nash, that is, firms move first to simultaneously choose tariffs and then each consumer chooses a tariff that determines the sales of each firm.
- The authors investigate the conditions under which, despite the opportunity for the exploitation of consumers' cognitive limitations, common standards can evolve and become self-sustaining.

KEY FINDINGS

- Two equilibria exist. In the first, firms take advantage of consumers' cognitive limitations and spurious complexity in tariffs prevents consumers from making accurate price comparisons. In the second, firms do not take advantage of consumers' cognitive limitations: because firms use a single common standard, each consumer is able to make accurate ordinal comparisons between the *ex post* utility of buying from different firms. As the degree of price differentiation tends to zero, the relationship between firms converges to Bertrand competition, and price tends to marginal cost.
- The stronger the background propensity of consumers to favour common standards, the more likely it is that a transitory episode in which such standards are used will initiate a self-reinforcing process of movement from the first to the second equilibrium. Since, in any given market, either of the two equilibria can be sustained, we might expect consumers' experience of *markets in general* to include instances both of common

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standards and of individuated standards, and to provide evidence of the association between common standards and low prices. Thus, learning acquired in one context might then be applied in other contexts.

POLICY ISSUES

- The analysis can be read as a rationale for some degree of light-touch regulation to impose common standards on tariff structures, for example, requiring staple food products to be labelled with prices expressed in terms of a stipulated unit of quantity, or requiring all offers of loans to express interest rates in a standard 'annual percentage rate' form. Such regulation is 'light-touch' in the sense that it supports a transition from one equilibrium (with high prices) to another equilibrium (with low prices); once the transition is complete, the regulation is effectively self-enforcing.
- It may not be necessary to impose the regulation on all firms; all that is needed is that the number of firms that are required to use a common standard is enough to initiate a self-reinforcing process of transition.
- The paper implies that it is important to understand the self-regulating powers of the market system and to be cautious about inferring, from the growing evidence of the cognitive limitations of economic agents, that when markets offer 'hundreds of thousands of options', that is too many. We need to take account of how conventions might evolve to help boundedly rational consumers navigate the complexity of the market.

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 07-20) and more information about CCP and its research is available from our website: www.ccp.uea.ac.uk

ABOUT THE AUTHORS

- **Dr Alexia Gaudeul** is an industrial economist with an interest in the Internet, open source software and media industries. She is currently working on the analysis of competition between information intermediaries on the Internet (such as auction sites or search engines). She is also studying the open source software production model in order to evaluate its impact on traditional methods of software production. More generally, Alexia works on the effect of the Internet as it extends the set of available contracts that can be signed between agents, and looks at the new competitive strategies that this allows.
- **Professor Robert Sugden** uses a combination of theoretical, experimental and philosophical methods to investigate issues in welfare economics, social choice, choice under uncertainty, the foundations of decision and game theory, the methodology of economics, and the evolution of social conventions. He is the author or editor of eight books, of which the most widely-read are *Principles of Practical Cost-benefit Analysis* (1978, with Alan Williams) and *Economics of Rights, Co-operation and Welfare* (1986 and 2004).

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