



Transparency regulation in broadband markets: Lessons from experimental research

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ABSTRACT

This article presents a research project in experimental law and economics about transparency regulation in markets for experience goods, with implications for the implementation of transparency requirements in broadband markets. European and American regulators have introduced transparency policies in the broadband sector, although their effects on market actors are not fully understood. The experiment evaluates the effects of increased transparency on various market outcomes. Four scenarios are compared in which end-users have different amounts of information about quality. Findings of this research suggest that (1) more information about quality leads to higher total surplus and higher consumer surplus; (2) quality provided by firms increases with the level of transparency; and (3) quality and efficiency are marginally higher when full information about quality is only available to some consumers, than when all consumers have imperfect information about quality. To these findings a number of conclusions are attached relevant for broadband policy.

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1. Introduction

European and American policymakers in telecommunications have introduced a transparency policy to regulate broadband markets, according to the rationale that consumers can come to a better informed purchasing decision when they have more understanding of the actual quality that Internet Service Providers (ISPs) offer. Currently the only product information available to the average consumer consists of advertised up and download speeds and price—which is not very informative. Moreover, switching costs are still substantial for consumers in broadband, which makes ex-post information about quality less valuable. At the same time ISPs implement increasingly complex network management practices, which makes it more complex for consumers to observe overall quality. These features make broadband Internet a prominent example of an experience good, that is, a good whose quality can only be observed after consumption. There thus seems to be a legitimate demand for increased transparency in broadband.

Both in Europe and the US these transparency requirements can be interpreted as a light-touch regulatory approach in which the fostering of market mechanisms in a dynamic sector such as broadband is favored over heavy-handed ex-ante intervention. Transparency as a regulatory instrument affects firms and consumers. However, it is unclear whether transparency about actual quality of broadband leads to better outcomes for consumers (and ISPs) to begin with, and how these transparency requirements should practically be implemented in broadband markets. The many potential ways in which transparency regulation can be implemented place different burdens on the involved actors.

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This article presents results from a laboratory experiment on transparency regulation in markets for experience goods. The experiment investigates whether more transparency about the actual quality of an experience good leads to better outcomes for firms and consumers. The results of this research project are relevant for broadband markets and its implications can be applied to broadband policy.

Experiments provide researchers and policy makers with the opportunity to assess the consequences of proposed policy changes prior to their implementation. By analyzing the decisions of real people in a fully controlled laboratory environment, experiments can either be utilized to test theoretical predictions or deliver insights which can neither be obtained by means of theoretical analysis nor simulations. Experimental research necessarily abstracts from some of the complexities of reality and focuses on its essential features to allow for such a controlled setting. Its results should thus be interpreted in a qualitative manner. The experimental design of this study focuses on the effect of transparency on firms and consumers in a market for experience goods, such as broadband Internet. Firms and consumers interact by selling and buying products in this experiment, which contains four different treatments in which different shades of transparency about the actual quality of the offered products are available to consumers.

The findings of this research indicate that transparency requirements increase efficiency in markets, and contribute to a significantly higher consumer surplus compared to no transparency about a product's actual quality. The main driver of this enhanced efficiency is the quality supplied: firms increase the quality of the products they offer when consumers have more information about the actual quality. At the same time, there is no significant difference in prices across the four treatments. Concluded can be also that it is marginally more efficient to disclose complete information that is only accessible to a subset of consumers, than to disclose imperfect information that is accessible to all consumers.

The findings of this research have a number of important implications for the broadband sector. First, transparency about actual Quality-of-Service (QoS) would likely lead to a higher quality in offered broadband plans. Second, the price of broadband plans should be largely unaffected by transparency. Finally, it may be more efficient to oblige ISPs to disclose technical information about their actual QoS that is not accessible to all consumers, than to provide imperfect summary information about QoS that is accessible to everyone. This conclusion is reinforced if one takes into account other practical considerations that are outside of the experimental design such as the cost of implementation for regulators.

The remainder of this paper is structured as follows. First transparency as a regulatory instrument will be introduced, and how it is applied in telecommunications policy in the US and Europe. Subsequently methodology and research design will be described to test the efficiency of transparency regulation. Hereafter, the results of the experiment will be discussed in detail, and interpreted in relation to the implementation of transparency regulation into broadband markets. This article in general thus provides insight into how experimental research can be of use in regulating telecommunications markets, and in particular points out how transparency regulation can be implemented in broadband markets most efficiently.

2. On transparency regulation and broadband

Transparency (or disclosure) is a regulatory tool commonly used in environmental law (Konar & Cohen, 1997; Pedersen, 2001) or financial regulation (Bushee & Leuz, 2005; Mahoney, 1995), by which firms are obliged to disclose information about their product or service so that consumers can come to a better informed purchasing decision and regulatory agencies can rely on ex-post enforcement (Fung, Graham, Weil, & Fagotto, 2004). Transparency regulation seems particularly suited for experience good industries, where actual product features such as quality can be evaluated by consumers only after consumption (Cabral, 2000, p. 223). As such, transparency requirements have also been introduced in telecommunications regulation, such as 'truth-in-billing' obligations on mobile telephony operators (Ellig & Taylor, 2006). The European institutions have more recently advanced a transparency policy in the regulation of broadband markets. The resulting directive requires ISPs to disclose more detailed information about the actual quality of a broadband connection, and how this is affected by so-called network management—that is methods by ISPs to shape, differentiate, prioritize or block certain online traffic:

“Member States shall ensure that national regulatory authorities are able to oblige undertakings providing public electronic communications networks and/or publicly available electronic communications services to publish transparent, comparable, adequate and up-to-date information on applicable prices and tariffs, on any charges due on termination of a contract and on standard terms and conditions in respect of access to, and use of, services provided by them to end-users and consumers”. (art. 21(1) of Universal Service Directive 2002/22/EC, amended by Directive 2009/136/EC, 2010)

These undertakings should also inter alia:

“[I]nform subscribers of any change to conditions limiting access to and/or use of services and applications, where such conditions are permitted under national law in accordance with Community law;” (art. 21(3)(c) of Universal Service Directive 2002/22/EC, amended by Directive 2009/136/EC, 2010);

and

“provide information on any procedures put in place by the provider to measure and shape traffic so as to avoid filling or overfilling a network link, and on how those procedures could impact on service quality.” (art. 21(3)(d) of Universal Service Directive 2002/22/EC, amended by Directive 2009/136/EC, 2010)

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