Quality Provision in a Search Engine Environment

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Abstract

This paper focuses on competition for prominence in the organic results of a search engine which account for the 80% of the traffic in websites. Firms for gaining prominence have to decide whether they should invest on Search Engine Optimization (SEO) or increase the quality of products and services they offer. Using a monopolistic competition model with search costs we evaluate the impact of the search engine algorithm for prominence on firms' optimal allocation of investments between SEO and quality, approximating the quality distortion that SEO could possibly bring and its impact on consumer surplus and total welfare. When SEO and quality do not interact in terms of ranking, even asymmetrical quality firms invest symmetrically on SEO and there is no quality distortion. The presence of the search engine increases consumer surplus and total welfare under certain conditions. When SEO and quality are complements, good quality firms invest more on SEO increasing consumer surplus and the total welfare. When they are substitutes, bad quality firms invest more on SEO which has ambiguous effect on total welfare. When only quality matters for the search engine, then in any case search engine presence is beneficial, investments in quality are increasing.

1 Introduction

Prominence has always been an advantage that firms seek to gain over the competition. Being able to stand out from your competitors provides the opportunity to get a first pick over the consumer base. This holds true in any kind of market, and so does in the online ones. In online markets though, consumers usually do not approach the firm directly, but through search engines. In search engines, the user performs a search and it returns a list

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