How do Sponsored Links on Search Engines Affect Market Competition?

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For commercial players on the Net, one critical issue is to be visible in order to attract a higher number of customers and increase their market shares. Beside word-on-mouth mechanisms and traditional e-advertising campaigns (banners), one efficient way to achieve a greater visibility is to pay for being favourably indexed by search engines such as Google or Yahoo!. This gives birth to a competition among sellers for being referenced by these intermediaries. In this paper, we study the impacts of this type of competition on index strategies. Based on an original dataset collected from three search engines (namely Google, Yahoo! and Live Search) for several keywords, we first present some empirical evidences about keywords competition. Using run test and Markov chain transition matrices, we show that firms’ ranking using keywords exhibit some heterogeneity: some firms always choose to be ranked first (thus paying high advertising fees), while others select alternative ad strategies. To better understand the causes of such heterogeneity, we consider such competition within a simple model where two firms sell homogeneous products and consumers have a differentiated ex ante perception of these two firms. Beyond 'organic results', the two firms can choose a strategy based on sponsored links to get a higher visibility. We consider the outcomes (firms’ keyword strategy, and market shares) and show in which conditions firms’ strategies will be symmetric or asymmetric.