Competition in Mobile Search: Evidence from Antitrust Policies Targeting Default Search Engines

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Abstract

Defaults have a prominent role in the market for mobile search and Google has been able to position its search engine as the default on most devices sold to consumers. According to the CMA Report on Online Platforms and Digital Advertising, manufacturers where Google was set as the default search engine, accounted for over 94% of the mobile device sector, by usage, in the UK. Moreover, the DOJ antitrust complaint against Google showed that in exchange for being the default search engine on Apple products, Google pays Apple around 8–12 billion dollars each year, a figure that makes up approximately 15–20 percent of Apple's worldwide net income. Google can leverage its market power into a monopoly position in mobile search through several approaches, including occupying exclusive default positions on mobile devices and controlling home screen design through pre-installation of a series of Google apps. To design effective pro-competitive regulation, it is critical for policymakers to determine whether regulating these behaviours targeting default positions will generate a significant effect on competition in the market.

In this study, we empirically analyze the interaction between default options and competition in mobile search, by evaluating three interventions in the European Economic Area ("EEA"), Russia, and Turkey. All these interventions tackled Google's position as the default search engine on Android devices. Understanding the effects of these policies facilitates our knowledge of whether and how users' behavioral biases affect the market. The three antitrust interventions we consider are related but present important distinctions. In the European Economic Area, starting in March 2020, new Android users are required to choose the default search engine during the initial phone installation by means of a choice screen displayed on their device. Users are presented with a choice screen that includes multiple search engines, one always being Google, while the others are determined according to some specific rules that are discussed later and that evolved over time. A choice screen to select the default search engine was also shown to users in Russia starting from April 2017. However, in the Russian choice screen, two competing domestic search engines - Yandex and Mail.ru - always appeared alongside Google. Moreover, the Russian choice screen was not shown solely to new Android users, but was made accessible to all Android devices active in the country. In Turkey, users were never presented with a choice screen. However, in September 2018, the Turkish Competition Authority ("TCA") required Google to remove all restrictive terms in its contracts with device manufacturers which made Google the default search engine on Android mobile devices. After negotiations with the antitrust authority, Google modified its contracts with manufacturers, allowing them to select alternative search engines as the default on their mobile devices. We study how these three different antitrust interventions affected competition among search engines in the EEA, Russia, and Turkey.

The empirical approach pursued in this paper is founded upon combining data from different sources. The main data source is the traffic analysis website StatCounter which tracks more than 2 million member sites, recording more than 10 billion page views each month. The data from StatCounter endow us with detailed information about the evolution of search engine market shares across countries and over time. The other data sources we use are Gartner's data on mobile device shipments, Newzoo's data on the number of actively used mobile devices, Apptweak's data on app downloads and SEMrush's data on sponsored search auctions. From these data, we quantify the effect of the three policy interventions on search engines' market shares and on Google's revenues via a difference-in-differences strategy. We find that in all three cases, the interventions were effective in reducing the market share of Google, allowing competitor search engines to gain a larger

share of the market. The extent of this reduction, however, varies drastically across policies. The decrease in Google's mobile market shares amounts to less than 2 percentage points in the EEA, to about 7 percentage points in Russia and to about 12 percentage points in Turkey. These estimates are robust to alternative specifications of the control group and different time frames.

Overall, this study offers the first systematic evidence on the effectiveness of public interventions aimed at fostering competition in online search. Our results show that three different antitrust interventions in the EEA, Russia and Turkey have induced a causal drop in Google's market shares in mobile search, but with important differences due to policy design. These findings thus underscore the need for a nuanced approach in designing effective interventions to enhance competition in those digital markets dominated by large platforms. In the conclusions, we highlight the policy lessons that can be learned from our evaluation of the EEA, Russian and Turkish interventions.