

The Impact of acquisitions by digital platforms on innovation

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Digital platforms are increasingly permeating various aspects of modern life, integrating numerous services and expanding in part through the acquisition of startups. This trend can impact the innovative activity of the merging firms, as the acquisition of a startup also grants the digital platform access to the startup's patented technologies, the future of which hinges on the platform's strategic goals regarding the acquisition. The platform may acquire a startup to increase its market power, or it may do so with the intention of obtaining patents for further development (Bryan K., Hovenkamp E., 2020). Moreover, acquisition can enhance digital platform's market power, which has drawn heightened scrutiny from antitrust regulators in recent years. Recent amendments to Russian antitrust law now mandate a review of mergers exceeding 7 billion rubles (Amendments to Article 28 of Federal Law No. 135-FZ 'On Protection of Competition' dated July 26, 2006). This additional criterion aims to incorporate the acquisitions of startups by digital platforms that are currently not required to be reported. At the same time, there has been a shift in antitrust regulation in the United States, moving towards a relaxation of regulatory measures (T. G. Wollmann, 2019). In the article 'Changes in antitrust regulation and merger activity in Russia: Price manipulations and need for additional antitrust scrutiny' authors explore the short-term effects of changes in antitrust merger regulations and identify cases of stealth in Russia, however, they sidestep the impact of change in antitrust regulation on innovative activity (Stavniychuk A. and Markova O., 2024). 'Antitrust Policy and Innovation' paper presents assessments of the effects of easing merger and acquisition regulations on innovation in the United States (Morzenti G., 2023). There are also studies that identify the impact of acquisitions by digital giants on innovation in the United States (Bars and Gautier, 2024) and studies assessing the effects of horizontal mergers on the innovation for specific industries. For instance, in the pharmaceutical market, the average indicators of patenting and R&D activities for the merged company and its competitors significantly decline in the periods following the merger. The negative effects of merger transactions on innovation are concentrated in markets with high R&D intensity and in technology sectors where there is overlapping in the prior innovations of the merging and competing firms (Haucap J. et al., 2019).

In this paper, I address the question of whether the acquisition of a startup by a digital platform fosters the development of patented technologies. At the same time, I examine the impact of the tightening of antitrust policies related to the M&A on innovation activity. To address the questions posed I concentrate on patented technologies and examine whether an acquisition by a large tech company facilitates their development. For this analysis, I use patent citations as a measure of the innovation efforts made by the acquiring company.

The study utilizes data from the Mergers portal (Mergers and Acquisitions in Russia). This paid database, which is not publicly accessible, offers independent information on business acquisition and sale transactions, as well as strategic investment insights in Russia, including expert estimates of deal values. Patent data is sourced from Yandex.Patents, a platform designed for searching patent documents, which contains information on patent citations. In my analysis,

I create two samples of patents. The first sample consists of patents filed by companies that were subsequently acquired by major digital platforms. Additionally, I compile a second sample of similar patents that remain unacquired for comparison purposes.

To evaluate the effect of acquisitions by digital platforms on innovation, three methods were chosen based on the analysis of existing literature: the Dynamic Difference-in-Differences method with panel matching (Imai, K., Kim, I.S., Wang, E, 2023), event study while controlling for life-cycle and business-cycle trends, and propensity score matching with evaluation using the Difference-in-Differences method. A natural experiment involving the tightening of pre-merger notification rules allows me to compare mergers that were notified to the authorities with those that were not, in order to assess the impact of tightening antitrust regulations on transactions. Using a triple difference-in-differences approach, I assess this effect.

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