Investigating the Kill Zone: Evidence from the Virtual Reality Sector

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Digital platform companies have profound effects on the way we live, do business, and connect with each other. Unchecked growth of these companies may have equally profound negative effects on business and society. And yet, their market power is difficult to define, measure, and regulate. Because power cannot be measured in price increases in a business that offers services that are free to consumers, price theory cannot serve as the basis for the regulation of platform companies. Traditional market structure analysis also falls short when applied to the tech sector in general and to platform companies in particular. The large sizes of the companies and their dominant positions in the market are inevitable given the winner-take-all nature of the business.

The success of technology companies is inextricably tied to innovation, which is well reflected in patent activity. Patents offer exclusive rights to the owners of innovations and create monopolies until the end of the exclusion period. Patents can also be used to create entry barriers for other companies. In this dissertation, I investigate the impact of Facebook's acquisition of Oculus on innovation activity in the virtual reality sector and use patent data as a proxy for innovation. To study the impact, I focus on two outcome variables: exit from the sector and the average growth rate of patents. I use survivor models and differences-in-differences (DID) methodology to study the impact of Facebook's entry in the sector.

I find that the direct competitors of Oculus have lower probability of survival compared to its indirect competitors, and that the competitor companies that do survive experience lower rates of growth. My results provide a concrete way of measuring the impact of tech companies' market power by focusing on innovation. This approach of studying the impact of market power provides an innovative avenue for regulators to follow in the future and possibly may help them keep the most dominant players in check.