The browser war — Analysis of Markov Perfect Equilibrium in markets with dynamic demand effects

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Abstract

When a concentrated market for differentiated products exhibits dynamic demand effects due to inertia, contagion, or network externalities, forward-looking firms consider the strategic impact of investment, pricing, and other conduct that can tip the market by grabbing market share. When the contested market provides a line of defense for a more lucrative core market, a firm can have a powerful strategic incentive to capture and control the contested market, as a “loss leader” if necessary. We use this framework to analyze the browser war between Netscape and Microsoft. Adopting a Markov Perfect Equilibrium model to capture firms’ strategic behavior, we discuss the steps needed for such analysis. We compare as-is market trajectories with but-for trajectories under a counterfactual without “anticompetitive acts” deemed in violation of anti-trust law. Our empirical analysis uses incomplete and noisy public data. Consequently, specifications and results should be viewed only as illustrating the method in a highly parametrized model with restrictions that might not be robust. Access to complete and confidential firm data would result in a less restricted model with potentially different results.