What is the value of attention? Supply and demand estimation of attention in a mobile phone setting. (by Johan Orrenius)

Abstract

I investigate the digital market for attention, documenting large heterogeneity in the use of attention as payment in a freemium mobile game. Using a detailed event-level dataset, I estimate user elasticities for a 30-second Rewarded Video, which is my attention unit. In the aggregate, the elasticity of a Rewarded Video is 2.2 with regard to the in-game currency of the mobile game. When accounting for individual heterogeneity the elasticity reduces to 0.5. I further find that the elasticity of a Rewarded Video is the largest during evenings. By relating the use of Rewarded Videos to the revenue received to show the ad to the user, I find that the attention of individuals who watch more Rewarded Videos is valued less by the advertisers. The relationship is stronger in the Android operating system, which shares more data with advertisers. Finally, I model the willingness to pay to avoid a Rewarded Video to 9.7 in-game coins, corresponding to about 0.1 Euro. This is of the same magnitude as the value of time, as previously documented for the value of travel time.