Youngeun Choi

Abstract

This paper estimates the impact of Disney’s acquisition of Pixar on the image quality of Disney’s animated feature films. Image quality is one of the explicit measurements for the product’s key attributes. By improving image quality, Disney reduces the cost of technology that animation makers use. Better image quality, therefore, signifies that another innovation has been created to make technology cheaper and more competitive. Although visual attributes in the animated films are the critical factor for the decision making of the firm’s production, previous literature describes them as unobservable. This paper uniquely adopts a modern image quality assessment technique –Blind/Referencelss Image Spatial Quality Evaluator (BRISQUE)– used in engineering literature to quantify image quality. In this technique, statistical properties are used to extract features of the images, and this information is identified through the algorithm. Those predicted features are used to compute the image quality of animated films. To find the impact on quality improvement following the merger, this paper conducts a causal analysis using the Synthetic Control Method. Still, it is hard to know which variables should be included to find the optimal synthetic controls. In this studies, the best set of possible predictors is chosen by applying the out-of-sample (OOS) model selection technique. In the OOS approaches, the pre-treatment period is split into two parts. The first training set is used to build control units among all possible models. The second testing set is then used to evaluate the performance of each model, and the least root mean squared prediction error is selected as the best optimal set of alternative predictors. Our empirical findings from the SCM imply that the merger between Disney and Pixar has improved the image quality of Disney’s animation since the transaction in 2006.