

MISQ Archivist

The Takeoff of Open Source Software: A Signaling Perspective Based on Community Activities

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Abstract

A few open source software (OSS) products exhibit an abrupt and significant increase in downloads. However, the majority of OSS products fail to gain much interest. Identifying early success is important for catalyzing growth in OSS markets. However, previous OSS research has not examined early product success dynamics and assumes adoption to be a continuous process. We propose OSS takeoff in adoptions as a measure of eventual product success. Takeoff is a nonlinear inflection point separating the early development from the growth phase in the product lifecycle. Using arguments from the signaling literature, we propose that community activities send signals about product quality and reduce information asymmetry faced by potential adopters of OSS products. Estimating a Cox proportional hazard model using a large sample of OSS products from SourceForge, we find that takeoff times are significantly associated with signals of quality deficiency and improvement. Further, we find that target audience and product innovativeness moderate this relationship.

Keywords: Open source software, takeoff, signaling, product quality