

Title:

Platform Investment in Integrating Third Party Content Development

Abstract:

Many two-sided platforms (e.g., eBay, Google, iOS, Android, Twitter, Amazon) provide integration tools, such as modular interfaces, interactive development environments, application programming interfaces (APIs), and help desks to reduce the costs and improve the functionality and seamless user experience of third party content developed for the platform. While crucial to platform success, these integration tools are costly to create. We develop an analytic model to explore the key trade-offs behind investment in integration tools and how that investment interacts with pricing decisions in a two-sided market. We model these decisions under various scenarios including monopoly and competitive platforms as well as symmetric and asymmetric platforms. Our results suggest that the consideration of integration investment can push the market into regimes in which the standard pricing results from extant platform literature does not obtain, in particular the tendency to reduce prices to one side of a market in response to an increased benefit of the network to the other side. Moreover, we show that integration investments must be well-coordinated with developer and consumer pricing decisions and may have to be revised dynamically as the platform gains traction in the market. Further, higher levels of investment into integration become desirable when the platform (1) faces favorable expectations, (2) has access to a high-quality developer community, and (3) operates in a market where developers earn a high profit margin creating content that is highly valued by the consumer market. Finally, we also discuss a number of policy implications of this work.

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