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Quality, Pricing, and Release Time: Optimal Market Entry Strategy for New Software-as-a-Service Vendors

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Abstract

As a new software licensing model, software-as-a-service (SaaS) is gaining tremendous popularity across the globe. In this study, we investigate the competition between a new entrant and an incumbent in an SaaS market, and derive the optimal market entry strategy for the new entrant. One interesting finding is that, when its product quality is significantly lower than that of the incumbent, the new entrant should adopt an *instant-release* strategy (i.e., releasing its product at the start of the planning horizon). If the initial quality gap of the two products is small, the new entrant is better off adopting a *late-release strategy* (i.e., deferring the release of the new product until its quality surpasses that of the existing product). We also find that instant-release and late-release are essentially low-quality/low-price and high-quality/high-price strategies, respectively. In addition, we explore the scenario where the two competing products are partially compatible, and characterize the impact of asymmetric incompatibility on the two vendors' market strategies at equilibrium. We find that the new entrant's zero-profit region expands as the level of incompatibility between the two competing products increases. Moreover, if the new entrant adopts the instant-release strategy, its profit decreases with the level of incompatibility. When the level of incompatibility is sufficiently high, the instant-release strategy may not be viable for the new entrant. On the other hand, if the new entrant adopts the late-release strategy, its profit increases with the level of incompatibility from its product to the incumbent's, but decreases with the level of incompatibility in the other direction.

Keywords: Game theory, duopoly, market entry strategy, Software-as-a-Service, network effects, asymmetric compatibility, switching cost