Strategy for Launching Data-Intensive Services: A Tipping Point for Market Adoption

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Abstract

New advancements in information technology and the availability of large datasets have provided new opportunities for industries to offer customized services that highly rely on big data (Brown, Chui, & Manyika, 2011). Referred as data-intensive services, the process of value generation in these enterprises relies on continuous data gathering, and the end product is in the form of data/information (Davenport & Kudyba, 2016). Previous strategic management theories of service industries are yet to explain success and failure of these data-intensive services, and we offer a dynamic theory to fill the gap.

Based on a major case study from the IT industry, we develop a system dynamics model of market adoption of data-intensive services. In our model, the classic Bass Diffusion Model (1969) is modified to reflect the unique value chain of data-intensive services where data as raw material derive from the service adopters. The model also captures the interplay between firm's analytical capabilities and the value of adoption.

We use the model to show that diffusion success is sensitive to the launching mode, specifically regarding the initial value of adopter population, data volume, and analytical capabilities of data-intensive services. We also show that there is a tipping point where small changes in initial conditions result in significant outcome differences. In contrast to the common belief, a high volume of initial adopters may negatively influence market adoption of data-intensive services in the long run.

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