

It's in the way that you use it : usage behavior, sales performance, and their interrelationships

Citation for published version (APA):

Datta, H. (2014). *It's in the way that you use it : usage behavior, sales performance, and their interrelationships*. [Doctoral Thesis, Maastricht University]. Maastricht University. <https://doi.org/10.26481/dis.20140207hd>

Document status and date:

Published: 01/01/2014

DOI:

[10.26481/dis.20140207hd](https://doi.org/10.26481/dis.20140207hd)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
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It's in the Way That You Use It

Usage Behavior, Sales Performance, and Their Interrelationships

Summary

How can the widespread accessibility of consumers' usage data, e.g., via online social networks or smart devices, be used to improve managerial decision-making?

In this dissertation, we use big data and advanced econometric methods to shed light on this crucial question. Specifically, we investigate the relevance of consumers' usage behavior in two settings that have recently received academic attention and spark managerial controversy.

Study 1 investigates the effectiveness of free-trial promotions to acquire new customers. Despite the omnipresence of free-trial promotions (e.g., three-month trials for digital TV), managers wonder whether customers acquired with free-trial promotions differ systematically from regular customers in terms of their usage and retention behavior, and customer lifetime value. To address this issue, we conceptualize how a consumer's retention decision is driven by marketing communication and usage. We next develop hypotheses how the effects of these drivers are moderated by the mode of acquisition, i.e., free-trial or regular. To test the hypotheses, we model a customer's retention decision and usage behavior of both flat-rate (e.g., watching TV programs), and pay-per-use services (e.g., watching videos-on-demand). The model allows for unobserved heterogeneity, selection effects, and endogenous marketing instruments. On the basis of panel data from a digital TV service for 16,500 customers, we demonstrate behavioral differences which make free-trial customers, on average, worth 55% less than regular customers. However, free-trial customers are more responsive to changes in marketing communication and usage rates, which offers opportunities to target marketing efforts and enhance customer equity.

In study 2, we address the rapid digitization of the entertainment industry which urges managers to find new ways to improve marketing effectiveness and combat online piracy. While smart devices and innovative online services generate brand-related tracking data (e.g., digital usage rates, Facebook Likes), managers are unaware of how to use these big data to improve brand performance. We therefore propose a model to assess how digitally tracked

customer engagement behaviors – consumer brand usage (CBU, measured by digital usage rates) and consumer brand endorsement (CBE, measured by Facebook Likes) drive brand sales and affect the role of piracy. We apply our framework in the U.S. music industry, and develop web scrapers and API mining scripts to collect data for 569 music artists over 66 weeks. Both CBU and CBE enhance marketing effectiveness and mediate the negative impact of piracy, though CBU is more important than CBE. When accounting for the effects of online piracy on consumer engagement, the negative effect of piracy diminishes by about 55%. The overall impact of piracy on sales remains negative, but its impact can be mitigated using insights gained from digitally tracked customer engagement behaviors.