

Organizational Adoption and Diffusion of an Online Channel: The Effects of Competition and Legitimation

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Abstract

There is a rich literature in marketing that focuses on explaining the diffusion of new consumer durables within a target population. At the same time, there is a paucity of research to explain organizational adoption and diffusion, or the diffusion of digital products and services, which is the focus of our study. We draw upon the literature in institutional theory and population ecology of firms to propose that competitive and normative (i.e., legitimation) pressures play central roles in the diffusion of products across firms, particularly for products that can influence the business models of the adopting firms. We test the validity and value of our model using a unique data source related to the diffusion, within a population of car dealers in Germany, of a new online channel for the listing of used cars. For this population, we know the exact time sequence of adoptions by the dealers, and we also have data for several key covariates associated with the dealers and the locations of all the dealerships. For estimating the diffusion trajectory, we propose choice models that accommodate both the adoption and timing decisions of each car dealer. Our models are flexible and can be specified either in terms of proportional hazards or proportional odds of adoption versus non-adoption in each time period, and the effects of covariates on those odds. We also propose a way to measure the time-varying constructs of competitive and normative pressures (along with a time-varying measure of market opportunity) based on the adoption times of dealers and the proximity network between them.

A number of insights emerge from our study, and we highlight two: (1) Competitive pressure acts as the “trigger” in inducing adoptions (i.e., contributes strongly to likelihood recovery), but normative pressure creates the pre-disposition for adoption (i.e., contributes strongly to the utility of adoption). (2) Contrary to the claims of the “death of distance” that we see in the trade press, the adoption of digital products by firms is influenced strongly by local competition.



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Professor Rangaswamy joined the Smeal College of Business at Penn State in 1993. He has previously been a faculty member at the Wharton School, University of Pennsylvania and at the J.L. Kellogg Graduate School of Management, Northwestern University. From 2009 to 2012, he was the Senior Associate Dean for Research and Faculty, and was responsible for managing Smeal's research agenda as well as oversight of the PhD program, international business, and faculty affairs.

He has published numerous professional articles on marketing analytics and online marketing, and has co-authored a widely used textbook titled Marketing Engineering. He has served on editorial boards of major marketing journals, including being an Area Editor for Marketing Science (1997- 2009). He has consulted for many companies, including engagements at Abbott Labs, IBM, ImpactRX, J.D. Power Associates, Pfizer, Xerox, and Unisys. He is a Principal and co-founder of DecisionPro, Inc., an IC² fellow at the University of Texas at Austin, and was an IBM Faculty Partner (2000-2001).

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