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Differentiation Via Technology: Strategic Positioning of Services Following the Introduction of Disruptive Technology

Dan Padgett[a,*,1], Michael S. Mulvey[b,1]

[a] College of Business, Auburn University, Auburn, AL 36849, United States
[b] School of Management, University of Ottawa, Ottawa ON K1N 6N5, Canada

Abstract

Introducing a "disruptive" technology into an existing service market provides new opportunities for firms and customers, often altering the nature of the market. Consequently, new technology often destabilizes market equilibrium, forcing firms to consider the role new technology will play in determining the new market structure. In this paper, we focus on understanding how significant new technology forces firms to evaluate and renegotiate their market positions in a service industry newly infused with technology (i.e., brokerage market). Specifically, we examine how firms integrate technology into the service process to create new forms of interaction. We used content analysis and a combination of structuralist methods including multidimensional scaling analysis (MDS), clustering methods, and property-fitting regression techniques (ProFit) to examine how technology changes the service process, and how firms leverage these changes for positioning. Our research demonstrates a strategic approach to positioning that suggests (1) introducing significant technology opens new positioning avenues by providing new service interactions, (2) technology must be leveraged via links to customer value sets, and (3) firms that leverage technology through customer values outperform their competitors.

Keywords: Positioning strategy; Disruptive technology; Services

Introduction

Innovation is important for long-term success in the market. However, not all innovations are the same. Govindarajan and Kopalle (2004, 2006a, 2006b) distinguish between disruptive and radical innovations. An innovation is disruptive if it comes to change the products mainstream customers use. How radical an innovation is depends on the level of difference between existing technology in the market and the new innovation. For example, high-speed Internet service, whether DSL or cable, is a disruptive technology compared to dial-up Internet service. However, high-speed Internet service that is twice as fast as the current DSL capability might be considered a radical innovation, but would not be disruptive, since it would not inherently change the market. The more radical and disruptive the innovation, the more potential impact the innovation will have on the market and the more potential for competitive advantage.

Because it alters the product form and functionality, new technology is often the source of disruptive innovations, and new technology has had an especially profound impact on service industries. Computers, cell phones, PDAs, kiosks, and other devices have become central to many service transactions between service firms and their customers, often replacing the traditional interaction between employees and customers with direct interaction between customers and technology (Bitner et al. 2000; Meuter et al. 2000).

The introduction of new technology has the potential to fundamentally change a service market. For example, consider the introduction of the online interface and the additional technology-based services developed in the late 1990s that provided the opportunity for investors to manage their own investments online. The new online service options drew large numbers of new customers to the market, which, in turn, also drew many new competitors. In effect, the introduction of significant technology changed not only the behavior of customers in the market but also the playing

* Corresponding author. Tel.: +1 334 844 2462; fax: +1 334 844 4032.
E-mail addresses: padgedt@auburn.edu (D. Padgett), mulvey@uottawa.ca (M.S. Mulvey).
[1] The authors contributed equally.

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field for firms in the market, instigating a positioning battle between firms with technology playing a central role in the positioning strategy. Unfortunately, while researchers have made significant advances in our understanding of innovations (e.g., Adner 2002; Govindarajan and Kopalle 2006a, 2006b) and positioning measurement and representation (e.g., Alden et al. 1999; Carroll and Green 1997), positioning research that addresses the unique context of an existing service market following the introduction of significant new technology is surprisingly sparse.

To begin to address this important topic, the goal of our research is to gain a better understanding of how service firms can use technology as a point of differentiation in a competitive market space. Drawing on literature from marketing, technology innovations, and services management, we present and illustrate a framework for positioning services following a significant influx of technology using the brokerage industry as a case study. We present a research program that involves three stages. In Stage 1, we analyze the structural impact of disruptive new technology on an existing service market to determine how technology changes the general playing field for both incumbents and new entrants. In Stage 2, we investigate the specific use of technology as a competitive weapon, analyzing how firms use specific depictions of technology and link technology to specific customer value sets to differentiate their offerings in the market. In Stage 3, we assess the relative effectiveness on several dimensions of the different positioning strategies using technology to determine which approaches work best. This program of research is of both practical and theoretical importance, given the pace at which firms are adding new technology to their services and the lack of positioning guidance for such situations.

Stage 1: General Impact of Technology on Market Space

Service firms can gain a competitive advantage by using technology to either improve the economics of their service delivery system or as a means of differentiating their service offering by adding value to existing services (Fleming 1991). Replacing service employees with technological interfaces often does both, and the prevalence of "do-it-yourself" (DIY) service options has had a profound impact on a variety of service industries ranging from retailing to banking to education (Bitner et al. 2000; Meuter et al. 2000). While using technology to provide a direct interface with customers is the most obvious technology-based innovation, firms also use technology in less obvious, but perhaps equally effective, ways to gain a competitive position in the market. For example, firms use technology to monitor and improve backstage service processes or to provide employees with improved tools. New technology has the potential to disrupt existing service markets in a number of ways because it changes the service process, and firms can use these changes for gaining a competitive advantage.

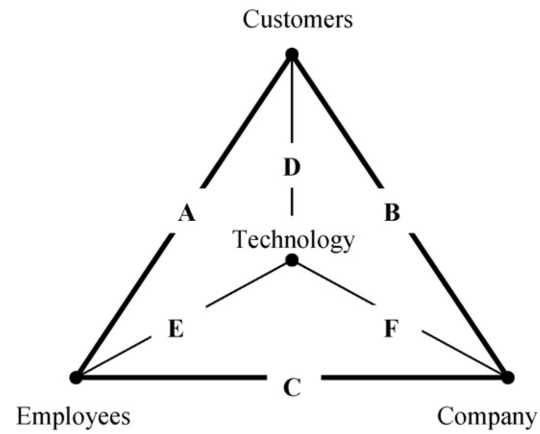

Fig. 1. Services marketing Pyramid Model. Source: Parasuraman (2000) and Parasuraman and Grewal (2000).

If firms are to realize a competitive advantage from new technology, they must understand how new technology impacts the existing market structure and how changes to the current structure can be used to gain a competitive advantage. Parasuraman's (2000; Parasuraman and Grewal 2000) conceptualization of the potential interactions involved in services marketing captures the impact of a new technology on an existing service process structure. From Fig. 1, the traditional set of service interactions would include interactions between the customer and service employee(s) (A), customer and the company (B), and the company and its employee(s) (C). Adding technology to the service market implies three additional potential service interactions: customer and the company's technology (D), employee(s) and technology (E), and the company and technology (used directly or in backstage processes) (F).

The Pyramid Model has two important implications for positioning strategy. First, since service structure and positioning are inherently linked (Shostack 1987), the introduction of disruptive technology into an established market forces firms to decide if and how to integrate the new technology into their existing service system. Farley et al. 2004 show technological innovations can be used to enhance product offerings in a financial services context. However, technology need not be the only option for effective product positioning. Incumbents have an especially difficult decision to make, since, by definition, a disruptive technology will not appeal to its current customers and would typically be more applicable to lower margin customers (Christensen and Overdorf 2000). Will the firm continue to emphasize the traditional service interactions, or will technology be introduced into the service process? If technology is introduced, will technology provide a customer interface (customer–technology interaction), support employees (employee–technology interaction), or be a focal point of the company's image or a backstage support tool (company–technology interaction)?

Second, positioning (both the company's and its competitors') can be executed via any of the interactions (whether