

How technology advances influence business research and marketing strategy

Roland T. Rust^{*}, Francine Espinoza¹

Robert H. Smith School of Business, University of Maryland, College Park, MD 20742, United States

Received 1 June 2006; received in revised form 1 July 2006; accepted 1 August 2006

Abstract

Technology has a profound impact on business research, and especially on marketing, because (1) technology changes the way marketing managers do their job, (2) these changes lead to major changes in the topics that are important to study, and (3) technology provides new ways of doing research. The most important result of technological advance is the increasing impact of information technology, resulting in the growing importance of service and relationships in the economy. Future advances in marketing are likely to build from advances in technology and relating improvements in communicating, storing, and processing information about customers.

© 2006 Elsevier Inc. All rights reserved.

Keywords: Technology; Information; Service marketing; Customization; Communication; CRM; Relationship marketing

1. Introduction

This article offers an overview of how technology influences the way business research is done, especially in the field of marketing. The article explores the proposal that research in marketing follows advances in technology. Technology influences the way marketing is done in practice, the focus of research topics, and the design of research methods.

This article offers examples of how advances in technology modify major marketing practices. The service revolution leads not only to fast growth of the service sector but also to a shift of emphasis from goods to service among goods sector firms. Technology supports the tasks of reaching customers and satisfying specific needs, which increases the demand for more sophisticated models of market segmentation and customization. Technology advances influence customer relationship management to the extent that gathering customer information, interacting with customers, and, eventually, building relationships with them become easier. These changes in the way marketing managers do their job lead scholars to observe and

analyze market trends and propose new and improved models applicable in the field.

The information technology revolution leads to the transformation of central marketing frameworks. Topics such as service marketing, customization, and relationship marketing, which benefit from technological advances, have developed into “hot topics” in the marketing literature. Regarding research methods, technological advances provide researchers the opportunity to make use of new tools to collect and analyze market data. Computers and sophisticated software facilitate data analysis, resulting in new substantive and theoretical results.

2. Technology and marketing

Increasing demand for both new and traditional services drives growth of the service sector, resulting in service becoming the core economic and marketing activity in most developed economies. The service sector grows steadily in its contribution to the gross domestic product in almost every country and accounts for most of the growth in new jobs (Lovelock and Wirtz, 2004). Marketing practice continually adapts to the increased demand for service and, as a result, the topics that are important to study in academia are changing over the years. Scholars are able to look at marketing practice and propose new theories and models to improve marketing

^{*} Corresponding author. Tel.: +1 301 405 4300; fax: +1 301 314 2831.

E-mail addresses: rust@rhsmith.umd.edu (R.T. Rust),
fespinoza@rhsmith.umd.edu (F. Espinoza).

¹ Tel.: +1 301 314 1968.

management (e.g., Bucklin and Gupta, 1999; Rust et al., 2004; Woodside et al., 1999). Three major marketing areas especially benefiting from advances in technology are service marketing, customization, and customer relationship management.

2.1. Service marketing

Implementable technology innovations in business lead to an increase in available information and knowledge about markets, customers, and competitors, and as a result companies can offer more, newer, and better services to satisfy specific needs of their customers. The increased availability of information and service provide the structural change necessary to the rise of a new paradigm: the service revolution, which makes service the focus of business in virtually all developed economies.

The focus on service brings a new philosophy into marketing management that is applicable to all businesses, including those that involve tangible goods in the process of service provision (Vargo and Lusch, 2004). Marketing shifts the center of its attention from products to customers (and relationships with them), and businesses compete vigorously in applying technology to service (Rust and Thompson, 2006). As service becomes more important, companies realize the necessity of enhancing service quality perceptions and, consequently, service quality and customer satisfaction become increasingly critical metrics in successful marketing (Parasuraman et al., 1985; Rust et al., 1996) in such diverse industries as health care organizations (Woodside et al., 1989), fast-food, and amusement parks (Brady, 2001).

The new paradigm has led the service sector to become the largest sector of most developed economies (Rust and Thompson, 2006). For example, in the early 1950s, goods represented about 65% of the U.S. gross domestic product (GDP), whereas services represented about 35% (Bureau of Economic Analysis, 2006). Since the 1950s, a large shift has occurred as goods now represent about 26% and services represent about 74% of the U.S. GDP (Bureau of Economic Analysis, 2006). A similar pattern is observable in nations such as Japan, where services represent 74% of the GDP, and in the European Union, where services represent 70% of the GDP (Central Intelligence Agency, 2006). Additionally, today in the U.S. about 80% of the work force is employed in jobs in the service sector (Bureau of Labor Statistics, 2006). In the European Union, about 67% of the labor force works in the service sector (Central Intelligence Agency, 2006). In developing nations this percentage is lower, but the evolution to a service-dominated economy is likely to take place over time as per capita income rises (Lovell and Wirtz, 2004). In India, for instance, about two-thirds of the workforce is in agriculture (60%), whereas less than one-quarter is in services (23%). However, services are the major source of economic growth in that country and today the service sector accounts for 51.4% of India's GDP (Central Intelligence Agency, 2006).

Totally new markets arise as a consequence of technological expansion: examples are personal computers, software, and cell phones. Technology also allows higher levels of service in the goods sector (Woodside, 1994, 1996), effectively turning every business into a service business (Rust et al., 1996). For example,

Ford, Chrysler, and General Motors, besides making cars, are regularly offering leasing services. Many goods are now largely commodities and, as a result, service becomes the core business of most enterprises. Companies as diverse as Dell and IBM are popular examples of this trend, offering highly differentiated, high-value service and relying on these services as their most important source of profits. Companies whose core business is a service, such as the mobile service companies, invest regularly in technology to provide better service.

More recently, computers and the rapid expansion of the information economy and electronic networks have converged in the concept of e-service, the provision of service over electronic networks such as the Internet (Rust, 2001; Rust and Kannan, 2002). The rise of interactive computer networks is currently one of the most impactful technological developments (Rust and Thompson, 2006). These networks promise the capability of supplying new interactive services to billions of people around the world. Therefore, service marketers must do a good job of adapting to this technological environment by becoming effective interactive marketers and bearing in mind that tools such as search engines (e.g., Google) portend a fundamental shift in how marketing should be done. Such tools facilitate the consumers' search process, easily providing them with information and making a wider number of offers readily available. Even though search engines are not the end users, interactive service providers must market their services to them. Marketers are used to utilizing traditional media such as television or magazines, but now new modes of communication are available. The Internet and other computer networks offer the capability of sending a message to customers and also receiving messages from them. Consumers can now participate more fully in the process of goods/services provision, they can share their opinions with the company, and companies can supply them with new interactive services (Rust, 1997).

By using information technology, companies have an increased ability to be customer-centric and market driven. Information technology permits interactive communication and personalization, assisting companies on collaborating with and learning from customers to offer services suited to their customers' dynamic needs (Vargo and Lusch, 2004). Therefore, the information revolution and the service revolution are two sides of the same coin, as technology applications generate knowledge and information used to expand service provision.

2.2. Customization

This section describes how technology contributes to the offering of individually customized goods and services. Readily available information technology and flexible work processes permit companies to customize goods or services for individual customers in high volumes at low cost (Gilmore and Pine, 1997). Mass customization is the ability to provide individually designed goods and services to every customer: consumers can choose from large assortments and match product configurations to their exact preferences (Rust and Thompson, 2006). For example, Levi Strauss sells custom-fitted jeans and Nike allows customers to personalize their own sneakers. Even though this

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات