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Technical note

Factors influencing the utilization of Internet purchasing in small organizations

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Abstract

Many companies have jumped on the Internet bandwagon in an attempt to get rich quick in today's marketplace. While there have been numerous success stories, the amount of reported failures has been extremely high. In spite of all the recent failures, a select few organizations have been able to use e-commerce as a means to increase the overall profitability of their firm. An often-overlooked factor in website effectiveness and development is the effect of individual user differences on the acceptance of the new technology. This exploratory study examines how individual user views and preferences affect the use of the Internet as a purchasing medium.

This research presents an exploratory study of data gathered through a survey of 416 customers of a major Internet retailer of commodity office supplies. Cluster analysis is employed to develop a model that classifies users of Internet purchasing into six distinct groups. The clusters are developed using a variety of items that measure end users' viewpoints and preferences regarding the Internet as a purchasing medium. These factors are based on the widely supported Technology Acceptance Model (TAM). The classification system is then used to demonstrate how these groups vary on strategic items, cost issues and individual productivity measures. The findings provide important insights to companies seeking to capitalize on the Internet as a retailing channel by identifying factors that may lead to a loyal customer base rather than an opportunistic one that switches sites frequently solely to obtain lower prices.

Keywords: E-commerce; Purchasing; Supply chain management; Technology management; Operations strategy

1. Introduction

Recent reports indicate annual on-line consumer sales have increased 40% in the past year (Moore, 2002). Despite this growth in online retailing, many companies continue to struggle with the development of effective Internet-based systems. Even with the proper supporting infrastructure, many established businesses have struggled with their expansion into the on-line arena. These organizations have discovered that their sales fall far short of what they had originally expected. For many, the goal was to dramatically increase sales and profitability. Unfortunately, many have discovered that such ambitious goals represent a brass ring that is difficult to reach.

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What causes some of these businesses to succeed and others to fail? There are many underlying reasons why so many businesses fail when competing in the on-line arena. Failing to pay attention to customer desires and required supporting infrastructure are two common lapses. Specifically, most companies do not comprehend the driving factors that sway their customers to use the Internet as a purchasing tool. This can lead to poor performance when customer concerns are neglected. A recent study reports that 28% of all attempted purchases failed and four out of five ordering on-line have experienced at least one failure (Boston Consulting Group, 2000).

There are several driving forces that affect consumers' use of on-line purchasing. Research suggests that end user viewpoints and perceptions have a significant impact on adoption and implementation of new technologies (Agarwal and Prasad, 1999; Davis et al., 1989). Unfortunately, scores of websites are designed to have the latest animation or other new gimmicks and do not consider what the customer actually desires. These websites are attractive, but are often slow to load and very difficult to order from. Reports suggest that consumers are not likely to use the web to purchase goods and supplies after an initial unfavorable experience (Boston Consulting Group, 2000).

The main goal of this study is to investigate how end users' viewpoints and preferences influence the use of the Internet as a purchasing avenue. This research examines data gathered from a survey of 416 customers of Office Depot, a major Internet retailer of commodity office supplies. Office Depot is a leading retailer of office supplies, with 825 office supply super stores in 46 states and US$ 11.6 billion in sales for 2000 (Office Depot, 2001). More importantly, for the purposes of this study, Office Depot is also a leader in Internet sales with both a relatively lengthy (for Internet companies) and successful track record. They have been selling online for 5 years and had annual Internet sales of US$ 849.5 million for 2000, on which they actually make a profit unlike the vast majority of Internet only startups (Office Depot, 2001). Office Depot is widely considered to be the leader in the online office supplies market (Gulati and Garino, 2000; Haddad, 2001; Troy, 1999; Warner et al., 1999). Their goal is to move 50% of the orders from its business services division to the net.

Office Depot provides an excellent opportunity to study online purchasing patterns for several reasons. First, the company is a pioneer in this area and one of the few companies actually showing a profit on Internet sales. Second, Office Depot sells to a cross-section of American business, from Fortune 500 firms to the mom and pop stores in your neighborhood. This allows us to develop a well-stratified sample designed to compare the Internet usage patterns of a variety of businesses. Third, Office Depot stocks approximately 8000 commodity type products. Their customers do not require highly specialized applications or products. Thus, the results of surveying Office Depot's customers are readily generalizable to those companies that are considering adoption of Internet purchasing. Finally, Office Depot straddles the line between B2B and B2C applications. It deals directly with large, Fortune 500 firms using customized applications that can be considered B2B sources of office supplies. It also deals with much smaller businesses with fewer employees that are more characteristic of B2C transactions. Office Depot, thus, offers a view of both the B2B and B2C sectors.

2. Background and research questions

Motivation for this research stems from three areas. First, the massive expansion of the Internet as a tool for a wide variety of businesses implies that it will act as a catalyst for radical change. Second, many corporations and businesses have experienced mixed results using the Internet to exchange data and information. Finally, end users' views and beliefs should impact how technology is adopted and implemented. Most of the companies and media in the tidal wave of e-commerce appeared to treat customers as a single homogenous group, in defiance of decades of marketing segmentation research. Now that the initial flurry of Internet activity has passed, we seek to identify groupings of customers with different approaches and attitudes to online purchasing.

Modern websites offer consumers the ability to perform a variety of tasks ranging from purchasing materials to market research. Consumers are faced with a tough decision when choosing between competing websites. Based on content alone, many of the websites appear to be virtually identical. What causes