Linking the customer purchase process to website development and e-commerce performance
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1 Introduction

1.1 Importance of e-commerce

Electronic commerce is fundamentally changing the way consumers buy goods and services (Peterson et al., 1997). The low costs of global communication and the possibilities of online interaction and sales promised to overturn established business practices in many areas. E-business has become a critical factor for competitiveness and productivity growth. Companies in all sectors are increasingly using the Internet to do business. In parallel to the continued search for cost-cutting potential, companies are becoming more creative in using information and communication technology (ICT) for new forms of customer service.

The European e-business report 2006/2007 edition (e-Business Market Watch) states that e-business has gained new momentum in the European Union and in other advanced economies of the world. Forrester Research predicts that global online retail sales (business-to-consumer sales including auctions and travel) will grow from 172 billion US Dollars in 2005 to 329 billion US Dollars in 2010, a compound annual growth rate of 14% (The Economist, 2006). During the same period the number of Europeans shopping online will increase from 100 million to 174 million and their average yearly Internet retail spend will grow from around 1,000 Euro to 1,500 Euro, with British web shoppers outspending even their US counterparts. What is more, the number of people with online access is still increasing. The world Internet population will keep hurtling towards 2 billion, a milestone which (according to Computer Industry Almanac) is expected to be reached in 2011. The Economist (2006) reports that much of the growth will come from countries such as India, Brazil, Russia,
Indonesia and China, where the broadband market was expected to reach 79 million subscribers in 2007 – overtaking the USA.

The expansion of the Internet has made it a vital marketing and sales medium for many firms. These new circumstances have forced managers to seek guidelines on how to act effectively in the electronic marketplace (Lederer et al., 2001). Researchers and practitioners try to understand the specificity of e-business. Numerous opportunities in various domains are explored by e-commerce researchers. Wareham et al. (2005) distinguished four main domains of electronic commerce research in the years 1997 – 2003. The domains and their primary topics are: information technology and infrastructure (e.g. security, integration), applications and industries specific themes (e.g. auctions, e-services), business issues (e.g. business-to-consumer, business-to-business), and other social issues (e.g. technological adoption, privacy). Extensive research in such a diverse range of topics has brought many new insights into electronic commerce. Retailers apply new findings and make large improvements and investments in their online businesses but are still struggling to make money online (Dayal et al., 2002). Not all website investments lead to increased performance (Xue et al., 2006), and not much is known about how organizations should evaluate their e-commerce investments (Standing and Chad, 2007). Auger (2005) argued that a closer focus on performance is critical for e-commerce, given the large investments that are often required in designing and maintaining a commercial website. Mahmood et al. (2004) argued that objective evidence is needed that a well-executed e-business initiative will provide benefits to a business. Hence, the search for ways to make the web profitable is still on.

In fact, to sustain the profitability of any business, keeping the customer repurchasing products or services is essential. Thus, e-loyalty is crucial for e-business (Srinivasan et al., 2002; Devaraj et al., 2003). Enduring relationships with customers are the most wanted by e-tailers. Repeat customers are five times more profitable than new customers (Zeithaml, 2000). Companies understand that customer service is critical as it is a primary determinant of patronage and loyalty (Walsh and Godfrey, 2000). Hence, to keep e-clientele, e-
commerce has to be customer focused. In order to develop customer-oriented e-commerce strategies, it is essential for managers to understand what the customers’ needs are in the online environment (Loiacono et al., 2007; Nikolaeva and Sriram, 2006; Heinze and Hu, 2006; Chu et al., 2005).

1.2 Customer purchase process

Most customers follow more or less the same process when making a purchase and using a product (Engel et al., 1995). The customer purchase process model was developed by Engel et al. (1995). It provides a comprehensive framework for understanding consumer behavior phenomena. The initial stage in any purchase process is need recognition, the state of desire that initiates a decision process. The next step is information processing. This consists of internal search into memory to determine whether enough is known about the available options to allow a choice to be made without further information search. An external search will usually be required when this is not the case. The next step is pre-purchase alternative evaluation, defined as the process by which a choice alternative is evaluated and selected to meet consumer needs. Search and pre-purchase alternative evaluation are strongly connected during decision making. The next stage is purchase. Several issues must be contended with within the purchase process: whether to buy, when to buy, what to buy, where to buy, and how to pay. The next stage is consumption and post-purchase alternative evaluation. Divestment is the final stage in the consumer purchase process model, where the consumer faces the options of outright disposal, recycling, or sale on the second-hand market.

To capture this general process, Ives and Mason (1990) proposed the customer service life cycle (CSLC) model. This model has already been applied in e-commerce, e.g. to support customers at various stages of the purchase process (Saeed et al., 2003 and 2005). The CSLC model (Ives and Learmonth, 1984; Ives and Mason, 1990) covers the stages of requirement, acquisition, ownership and retirement. In the requirement stage customers formulate their needs and explore which products and suppliers could possibly satisfy their
needs. In the acquisition stage the customers obtain a product, order, pay. The ownership stage is concerned with product usage, service, maintenance, and the retirement stage is for divestment.

The customer purchase model has been adapted and applied in e-commerce studies (Butler and Peppard, 1998; Saeed et al., 2002), demonstrating its utility in this field. All the stages can be facilitated online. Advances in technology have produced a vast menu of applications that can be used to enhance customer service offerings (Kolesar and Galbraith, 2000). Nonetheless, despite the ability of e-commerce to support customers’ needs, there are still reports about poor e-service offerings such as information overload, poor focus, and inappropriate links (Zeithaml, 2002; Downie, 2003). Consequently, customer support online might function poorly, which might be an obstacle in e-commerce development. Also, it might explain why some websites succeed and others fail.

A growing body of literature documents the importance of the Internet in all phases of the customer buying process, from the search for products, evaluation of alternatives and customer support, to online purchasing (Walsh and Godfrey, 2000; Zeithaml, 2002). However, there is a lack of thorough analysis of how customers’ needs in the purchase process could be incorporated in e-commerce practice. Hence, research should further focus on exploring the challenges and consequences of integrating knowledge about the customer purchase process into electronic commerce. There is also a lack of standardized methods of evaluation of the e-commerce customer focus. Therefore, this thesis aims to give guidelines in developing e-commerce strategies derived from the customer purchase process stages and the customers’ needs in these stages. The findings can assist in developing customer-oriented websites and e-commerce strategies.

### 1.3 Goal of the thesis

The intent of this thesis is to provide insights into practices that enable companies to use e-commerce in a more customer-focused way. Implementing a
customer-centred focus is very important for contemporary marketing (e.g. Hoekstra et al., 1999; Leeﬂang and Wittink, 2000). It is important both in offline and online business to better meet the needs of existing customers, and also to attract and retain new customers. Hence, using knowledge on customer needs in the purchase process may provide many essential insights for e-commerce strategy.

The main goal of this thesis is to provide insights into how online customers’ needs structured in the customer purchase process affect website development and e-commerce performance. E-commerce development should be based on the customer needs in the online setting. Hence, customer behavior theory, in particular the customer purchase process is used in this thesis to reach the stated goal. Customer needs are defined as the needs of customers while visiting websites for search or purchase purposes.

The thesis consists of three studies. Study 1 and study 2 are based on all customer purchase process stages (excluding need recognition and retirement stages). The stages of the customer purchase process serve as a source for deriving website goals in studies 1 and 2. Study 3 looks more in-depth into customer needs in the post-purchase stage. These three studies aim to provide insights into how to achieve greater customer focus into e-commerce practices. The first study looks for website development paths based on customer-oriented website goals. The second and third studies intend to establish links between e-commerce practices and performance measures. In study 2, e-commerce performance is considered at a company level. In study 3, performance is measured at a customer level, namely by means of repurchase intentions. Figure 1.1 illustrates the thesis framework and how the three studies are related.
Across studies we refer to the term: e-commerce. This term is defined as follows: electronic commerce encompasses delivering information, providing customer service before and after the sale, and purchasing and selling products and services on the Internet or other electronic networks (based on Napier et al., 2001).

1.3.1 Research problems
In study 1 the objective is to determine the stages of website advancement based on the hierarchy of website goals. A goal hierarchy implies that different firms
pursue website goals in the same fixed order. Moreover, we explore whether the degree of website advancement differs depending on various firm and industry characteristics. An advancement model can be based on different aspects. Bégin et al. (2001) found three levels of advancement, with firms having informational, promotional or transactional websites. Daniel et al. (2002) found four clusters of firms, which they labeled as developers, communicators, web presence and transactors. At the successive levels, firms perform greater numbers of e-commerce activities. Teo and Pian (2004) proposed a stages model based on different business objectives and distinguished five levels, ranging from email adoption to business transformation. In this study, we examine website advancement stages based upon the support the website provides to customers. Identification of this order has important implications for website development. It may guide firms in their continuous search for improvement of their website, and it may also enhance our understanding of their current Internet use as a phase in an extended process.

Study 2 provides new theoretical and empirical insights into the relative importance of the informational and transactional functions of company websites by establishing the chain of effects from website features, through informational and transactional success towards overall website and company performance. By establishing this chain of effects three important contributions are made. First, we are able to determine the relative importance of the informational and transactional functions of a website. In particular, the question is to what extent using the website for informational and/or transactional purposes improves first website success and ultimately company success (Hsu et al., 2006; Teo and Pian, 2004). Second, by linking features to success measures, we identify which website features impact website success. Third, by establishing the chain of effects we link website features (the content of the site) through a number of intermediate performance measures ultimately to the financial performance of a company. By empirically validating these links we provide an important argument for the e-commerce accountability debate. For practitioners, a better understanding of whether and how the transactional and relational functions link with success would allow them to use resources
more effectively and improve the return on their Internet-related investments. The conceptual models of studies 1 and 2 are tested in an empirical setting with data from 380 firms with commercial websites. The sample is obtained from a wide range of industries in the Netherlands.

Next, in study 3 we give insights into online customers’ needs in the post-purchase stage of the purchase process. The goal is to investigate the impact of consumers’ complaint behavior and service recovery satisfaction on the intention to repurchase on the Internet channel. We study whether dissatisfying experiences with online purchases and complaining by consumers impact their intentions to buy on the Internet. The literature on traditional (offline) commerce (e.g. Dunning et al., 2004) indicates that even a dissatisfied customer is willing to repurchase from a retailer if his/her complaints were well handled. Hence, proper service recovery actions can win the consumer back (Holloway and Beatty, 2003), while if customers experience poor recovery efforts they may move to another retailer (Schneider and Bowen, 1999). However, complaint behavior and this so-called service recovery paradox (De Matos et al., 2007) has hardly been addressed in the e-commerce literature. Customers dissatisfied with an online purchase may not only switch to another online retailer, but they may discard the Internet channel for future shopping. Thus, online customers’ satisfaction and dissatisfaction is considered important for future online purchases. Hence, adding to knowledge on post-purchase dissatisfaction, complaint behavior and service recovery satisfaction shows the importance and managerial relevance of study 3. The conceptual model of study 3 is empirically tested based on a cross-European (15 countries) survey, which allows for generalization and international comparison of the findings.

1.4 Outline of the thesis

This thesis contributes to the existing knowledge by giving insights on how online customers’ needs structured in the customer purchase process affect website development and e-commerce performance.
Chapter 1: Introduction

In Chapter 2 (study 1) the advancement stages of customer-oriented websites are derived. In Chapter 3 (study 2) the effect of informational and transactional website functions on overall website success, and market and financial performance is discussed. In Chapter 4 (study 3) the intention of future purchases on the Internet channel depending on customer complaint behavior and service recovery satisfaction is studied. Finally, in Chapter 5 the main conclusions of this thesis are summarized and further avenues of research discussed.