Service Value Chains to Support Knowledge-Based Personalized Recommendations

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We investigate how consumers evaluate service value chains designed to create and deliver knowledge-based personalized recommendations. We conceptualize the underlying benefit trade-offs that consumers make in evaluating such systems as the manifestation of a psychological contract in which consumers contribute their personal information and effort in exchange for a more useful, tailored recommendation by the firm. Consumer benefit perceptions are differentially affected by the stages of such a system, and the context in which the use of a knowledge-based personalized recommendation system originates moderates the impact of consumer benefit perceptions on consumer willingness to use such systems.

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profiles are presented to the participants. Instead of using words to describe the two profiles, we will demonstrate the brand personality profiles by print ads. Accordingly, two print ads will be developed based on the two brand personality profiles. The ads will be pre-tested to ensure that they represent respective brand personality profiles. Another group of consumers will be presented with the two ads and be asked to answer the questions similar to those from study 1. The purpose of study 2 is 1) cross-validate the findings of study 1, and 2) illustrate the brand personality profiles in a more natural marketing setting (than description in words), namely, print advertising.

The literature of brand personality suggests two different profiling methods. The goal of this study is to identify which method generates a more accurate and appropriate brand personality profile of a single brand. The present study contributes to the literature as the first attempt to compare the two methods and demonstrate the pros and cons of each method using consumers’ evaluations.

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Sophisticated consumer and market information databases increasingly allow firms to provide consumers with personalized recommendations that can assist them in finding lower prices and better quality items in the marketplace (Xiao and Benbasat 2007). Most research pertaining to personalized recommendations to date has focused on the development of new methods to improve the quality of these product recommendations or analyzed how consumers make product choices when they use product recommendation systems (Ricci and Werthner 2006). Increasingly it is argued that it would be desirable if product recommendation systems were extended to also allow for more complex, knowledge-based recommendations in service domains such as health and personal finance (Felfernig et al. 2006). Such knowledge-based recommendations are likely to require the exchange of more complex, more fuzzy, and often more sensitive information between consumers and the supply chain (Punj and Moore 2007). Typically, also these recommendations would rely on a greater involvement of the consumer (in sharing detailed information), and of multiple partners in the service supply chain (to provide the necessary expertise to generate a recommendation) (Prahalad and Ramaswamy 2004). Thus, knowledge-based recommendations are expected to require a much more elaborate type of service value chain.

In the current study, we address the question how consumers evaluate such service value chains designed to create and deliver knowledge-based personalized recommendations. To do so, we conceptualize the underlying cost-benefit trade-offs that consumers make in evaluating knowledge-based personalized recommendation systems as being determined by a psychological contract in which consumers contribute personal information and effort in exchange for a more useful, tailored recommendation by the firm (Rousseau 1989, Zeithaml 1988). This overall structure provides the basis for two key contributions of our study.

First, since service value chains to support knowledge-based personalized recommendation systems require input from consumers at different stages of the value creation process our initial research objective is to investigate how consumers evaluate the fact that they need to actively participate in the recommendation generation process. We anticipate that service stages in which consumers maintain decision control and can choose the contributions they wish to make freely (e.g., in applying a recommendation in their own home) will be evaluated differently from stages in which consumers are more dependent on firms’ input (e.g., when exchanging information with firms) (Namasivayam 2004). We expect that for stages in which little or no firm input is required, consumers will be overly optimistic about the quality, efficiency, and pleasure connected with their own contributions to the personalized recommendation systems (Metcalfe 1998; Pelletier et al. 2001). In particular, we expect that consumers’ perceptions of usefulness, ease of use, and enjoyment are influenced less by variations in these stages than by variations in other stages, during which consumers are more dependent on firms. At the same time we expect that this level of optimism will not hold for the consumers’ evaluations of the privacy safety of their personal information. The reason is that even in service stages in which consumers can freely determine their own actions they will still depend on firms to safely handle their personal information.

Second, we address the impact of service channel task context on the benefit trade-offs that determine consumers’ willingness to use a service value chain with knowledge-based personalized recommendations. Previous research shows that benefit trade-offs may vary depending on the task context in which consumers are introduced to a product or service (Wendel and Dellaert 2005). We anticipate that the service channel through which a personalized recommendation is introduced plays a crucial role as a key contextual factor in determining consumers’ cost-benefit trade-offs. In particular, we investigate how consumers’ cost-benefit trade-offs may shift when they are introduced to the service value chain out of their own interest, compared to when they use the system because of service channel requirements (Novak, Hoffman, and Duhachek 2003).

We test our proposed conceptualization and hypotheses in the area of nutrition recommendations. Recently a number of health organizations (commercial and non-commercial) have begun to implement personalized nutrition recommendations that rely on both detailed consumer input and on sophisticated firm expertise, and that offer a very promising tool to assist consumers in their decision making (Brug, Onema, and Campbell 2003; Kreuter et al. 1999). Data collection involved 204 respondents from a large, ongoing consumer panel in the Netherlands who responded to hypothetical scenarios of different nutrition recommendation value systems. Our findings provide support for the proposed conceptual model and hypotheses. The results also provide managerial guidance to firms and public health policymakers wishing to promote the use of personalized health recommendations by consumers, as well as to consumers, who may find that they overestimate their own ability (or underestimate the effort involved) to implement the recommendations provided by personalized health recommendation systems.