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Consumer innovativeness and its correlates: A propositional inventory for future research

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ABSTRACT

This article summarizes the results of a systematic review of the literature on consumer innovativeness and its correlates and provides a propositional inventory for future research. The authors identified seventy-nine relevant empirical articles from international journals through a search of multiple databases using specific search terms, a manual search of marketing and consumer behavior journals and a cross-reference search. The results show that innovativeness consists of different levels of conceptualization and operational processes. Based on these different conceptualizations, the authors offer propositions for further empirical exploration on consumer innovativeness.

1. Introduction

Innovation is one of the main drivers for organizational success (Pauwels et al., 2004). Despite constant developments in product design and marketing, most new products fail (Srinivasan et al., 2009). Although innovation has been studied in many independent research traditions (Hauser et al., 2006), the literature has mainly addressed the adoption and diffusion of innovations (Greenhalgh et al., 2004, 2005; Rogers, 1995; Wejnert, 2002). Most of these studies focus on organizational innovations and product characteristics.

However, the failure of innovations is most often due to a firm's lack of understanding of consumer needs. In this respect, a vast amount of literature on the acceptance of new products by consumers has focused on personal characteristics (e.g., Hirschman, 1980; Foxall and Haskins, 1986; Venkatraman and Price, 1990; Lassar et al., 2005). More specifically, much attention has been paid to the concept of consumer innovativeness (Goldsmith and Hofacker, 1991; Goldsmith et al., 1998; Im et al., 2003, 2007; Midgley and Dowling, 1978; Steenkamp and Gielens, 2003; Steenkamp et al., 1999).

Nevertheless, in a recent review of innovation research, Hauser et al. (2006) argue that no studies attempt to synthesize research or findings regarding consumer innovativeness. Although Burns (2007) presents a more systematized framework of innovative behavior, he only focuses on one aspect of consumer innovativeness (i.e., innovative behavior). In addition, Roehrich (2004) also discusses concepts and measures of consumer innovativeness. Although his extensive review furthers understanding of the concept, the author concludes that a more integrative model is necessary.

This study attempts to synthesize research, provide a propositional inventory and formulate an integrative model of innovativeness. The model offers a structured representation of three different levels at which the innovativeness construct has been conceptualized in previous studies. To achieve this we conducted a systematic literature review of empirical studies on consumer innovativeness that have been published in international refereed journals. We organized the remainder of this paper as follows. First, we briefly explain the method used for the systematic literature review. Second, we briefly present the results of this review. Finally, we provide a propositional inventory and the conceptual model of consumer innovativeness.

2. Method

A systematic review is an overview of primary studies that contains an explicit statement of objectives, materials, and methods, and has been conducted according to an explicit and reproducible methodology (Greenhalgh, 1997). For an extensive explanation of systematic reviews, see Bero and Rennie (1995) or the Cochrane Handbook for Systematic Reviews of Interventions (2006). First, the authors performed a database search using the following databases: Web of Science, PsycINFO, and Scopus. The search included articles available through December 2008 (e.g., the Web of Science timespan was from 1945 to 2008).

The included search terms in the final overview should occur in the topic section of the database or in the keywords, title, or abstract of the article under consideration. Because the focus of this systematic review is consumer innovativeness, the term “consumer” had to be included in

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the title, summary, or keywords. To obtain a more complete overview of the literature, the searches utilized both "behaviour" (British English spelling) and "behavior" (American English spelling). More specifically, the primary search topics were the following search terms: "innovativeness," "innovative behaviour," "innovative behavior," "consumer innovativeness," "consumer innate behaviour," "consumer innate behavior," "consumer innovative behaviour," and "consumer innovative behavior."

During the first stage of the literature search, the terms "innovativeness" and "innovative behavior" led to a broad range of research on organizational contexts. In particular, the following topics were found: organizational innovativeness (e.g., Han et al., 1998; Hult et al., 2004), organizational innovation adoption (e.g., Frambach and Schillewaert, 2002), market orientation on innovation (e.g., Atuahene-Gima, 1996), employee behavior in organizations (e.g., Hurley and Hult, 1998) and product innovativeness (Garcia and Calantone, 2002). The authors excluded these studies from the final overview of consumer innovative behavior. One exception to the rules mentioned above occurred in the systematic reviews of "diffusion of innovations." Systematic reviews on the diffusion of innovations may provide insight into consumer innovative behavior and (consumer) adoption processes. As such, this review incorporated this class of studies.

Table 1 presents an overview of the number of articles found in each database. The table shows that the three databases include a large number of articles on innovativeness in general. Table 1 shows a strong structural decline in the number of articles from the "and" condition for "innovative behavior (behaviour)." The decline after the "and" condition was the cut-off point for analyzing the abstracts. For the final analysis we incorporated approximately 120 articles from the database search.

The second step in the review process was a manual search in international scientific marketing and consumer behavior journals (e.g., *Journal of Marketing, Journal of Marketing Research, Journal of the Academy of Marketing Science*, and *Journal of Consumer Research*). This portion of the review utilized the ISI Web of Knowledge (e.g., Journal Social Citation Reports) as a primary source for selecting the journals. The third and final approach in the review was a cross-reference search of the articles found by using the first two search methods.

After removing the duplicates from the results of the electronic database search, the manual search in several journals, and cross-reference search, the final systematic literature review included 79 articles on consumer innovative behavior and the correlates of this behavior.

Table 1
Results database: Research found in Web of Science, PsycINFO and Scopus, June 2006–December 2008.

Database	Web of Science	PsycINFO	Scopus
	# of articles	# of articles	# of articles
Innovativeness	798	337	1100
Innovative behaviour	777	1771	1580
Innovative behavior	1746	1771	4223
"Innovative behaviour"	54	78	95
"Innovative behavior"	89	78	122
Consumer innovativeness	103	97	138
"Consumer innovativeness"	35	22	37
Consumer innovative behaviour	20	132	71
Consumer innovative behavior	48	132	182
"Consumer innovative behaviour"	–	–	–
"Consumer innovative behavior"	1	–	1
Consumer "innovative behaviour"	3	12	4
Consumer "innovative behavior"	8	12	7
"Consumer innovative" behaviour	1	1	1
"Consumer innovative" behavior	2	1	1

"–" means no articles were found.

These 79 studies have the following general characteristics. First, most are questionnaire studies conducted in the United States. Only a few are experimental designs, pan-European, or pan-continental studies. Second, the studies mainly focus on durables and new technologies (e.g., VCRs and TVs in earlier studies, and Internet shopping in current studies), shopping, and food products. In the next paragraph, we describe the results of the review in more detail.

3. Results

3.1. Three approaches to consumer innovativeness

Table 2 presents an overview of the characteristics of the final 79 articles. The studies in the systematic literature review use one or more of three different levels of consumer innovativeness: general personality trait innovativeness or "innate innovativeness" (II), "domain-specific innovativeness" (DSI), and innovativeness as actualized behavior or "innovative behavior" (IB). Currently, II still seems to be the most widely investigated approach ($n=44$), followed by DSI ($n=41$). Studies on II and/or DSI seemed to outnumber studies that have incorporated actual IB ($n=24$). Moreover, literature mostly used innovativeness as behavior in combination with DSI or II. However, only a third of the studies included multiple approaches, combining II with IB, II with DSI, or DSI with IB. Only four studies focused on all three approaches to consumer innovativeness. The next sections present the principal theoretical and empirical findings from the literature, organized around the three levels of innovativeness.

3.2. Innate innovativeness

The study by Midgley and Dowling (1978) is among the first to identify innovativeness as a generalized personality trait called "innate innovativeness." They state that innovativeness is "a function of (yet to be specified) dimensions of the human personality" (Midgley and Dowling, 1978, p. 235) and that "all members of society possess a greater or lesser degree of innovativeness." According to Hirschman (1980), innovativeness as a personality trait reflects an innate tendency to seek out new information, stimuli, or experiences (Hirschman, 1980). In addition, Venkatraman and Price (1990) decomposed the construct into a cognitive component and a sensory component. According to these authors, consumers' propensities for engaging in thought, as well as the degree to which they actively seek or avoid arousal based on change may affect consumer innovativeness.

Wood and Swait (2002) measure the underlying bases for innate innovativeness using two subscales reflecting the cognitive and sensory components: need for cognition and need for change. They state that "both elements influence an individual's general innovative tendency, but are not always positively correlated at an individual level" (Wood and Swait, 2002, p. 2).

Besides decomposing the construct, the literature uses a number of synonyms to label innate innovativeness: open-processing innovativeness (Joseph and Vyas, 1984), global innovativeness (Goldsmith et al., 2006) and dispositional innovativeness (Steenkamp and Gielens, 2003).

Table 3 describes the correlates of II found in empirical studies. Table 3 shows ambiguous relationships between II and new product adoption. Studies have found the relationship between the two constructs to be either positive or non-existent. In addition, II does not have a significant influence on the actual number of purchased or owned products. However, the review of studies shows a positive relationship between II and purchase and usage intention.

Studies have also tried to examine the relationship between innate innovativeness and other personality traits. II was positively correlated with DSI in a few studies (Goldsmith et al., 1995; Hirunyawipada and Paswan, 2006) and with opinion leadership in others (Girardi et al.,