Consumers' Resistance to Innovations – Investigating the Cases of Passive and Active Innovation Resistance

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Innovation is a strategic imperative in today's economies. In the US, for example, firms have invested $269 billion in current-year dollars on research and development (R&D) in 2007. However, innovations face a severe risk of failure. Recent studies report failure rates between 50% and 90%. Innovations can only become successful in the market if they are accepted and finally adopted by consumers. Most new products, however, fail as they are rejected by consumers due to their resistance to innovation. The aim of this research is to investigate which adoption barriers are responsible for triggering innovation resistance. First, we use a qualitative study to identify potential product-specific barriers and to conceptually link them to innovation resistance. Then, we use a quantitative survey to determine the relative influence of these product specific-barriers and their interaction with consumers' predispositions on attitude formation within the adoption process.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/1008976/volumes/ap09/AP-09

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Consumers’ Resistance to Innovations – Investigating the Cases of Passive and Active Innovation Resistance
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EXTENDED ABSTRACT

The literature on innovation adoption largely follows the assumption that consumers are principally open to change and thus interested in evaluating and eventually adopting new products. However, empirical studies show that new products are usually associated with a high failure rate (Kuester, Homburg & Robertson 1999). Recent studies emanate from failure rates about 50 to 90% (e.g. Andrew & Sirkkin, 2003; Cierpiciki, Sivadas & Dwyer, 2000). For consumer products, failure rates are generally considered to range between 80% and 90% (Homburg & Kuhn 2007). Innovation failures cannot generate future revenues and, therefore, can even endanger the competitiveness of companies in the long run (Bayus, Erickson & Jacobson 2003). Therefore, one should identify those barriers in the adoption process that trigger consumers’ innovation resistance. Based on this insight, strategies can be developed to reduce these barriers, thereby minimizing the risk of innovation failures and of misallocating resources.

Most studies that investigate innovation failures use the concept of innovation resistance to explain why new products are rejected by consumers (e.g., Bagozzi & Lee, 1999; Ellen, Bearden & Sharma, 1991; Ram & Sheth, 1989). The conceptualization of innovation resistance, however, varies fairly across studies. Some authors conceptualize innovation resistance as result of product-specific factors (e.g., Laukkanen, Sinkkonen & Laukkanen, 2008). Others conceptualize innovation resistance as a special form of resistance to change, caused by adopter-specific factors rather than product-specific ones (e.g., Ellen, Bearden & Sharma, 1991; Sheth, 1981; Kuusima, Laukkanen & Hiltunen, 2007). We thus propose to differentiate between two forms of innovation resistance: Active and passive innovation resistance.

Active innovation resistance represents a negative attitude formation, which follows new product evaluation, and which is likely to lead to an innovation rejection. When consumers compare perceived innovation characteristics with individual expectations of an optimal innovation, a certain degree of divergence will result. Depending on the amount of divergence active innovation acceptance or resistance will result (e.g. Bagozzi & Lee, 1999). Therefore, active innovation resistance can be seen as a result of perceived product-specific barriers.

Passive innovation resistance already forms just after the moment of awareness prior to product evaluation. It can be seen as an initial response of a consumer to an innovation without considering its product-specific factors (Bagozzi & Lee, 1999, Nabihi, Bloem & Poiesz, 1997). An innovation, which is perceived as new or different, always imposes change to the individual, endangers the actual status quo, and is thus likely to provoke initial resistance. Following this rationale, passive innovation resistance seems to be a generic predisposition to resist evolving from an individual’s resistance to change disposition and a status quo satisfaction in the moment of awareness (Bagozzi & Lee, 1999; Ellen, Bearden & Sharma, 1991; Nabihi, Bloem & Poiesz, 1997).

Despite scientific acknowledgement of consumers’ predisposition to resist innovation and several product-specific factors for consumers’ resistance to innovations (e.g. Ram, 1987; Sheth, 1981; Nabihi, Bloem & Poiesz, 1997; Oreg, 2003), empirical research into this topic is surprisingly scarce (Kleijnen et al. 2009; Oreg, Goldenberg & Frankel, 2005; Nov & Ye, 2008). The aim of this research is to systematically explore the relevance of passive innovation resistance and product specific barriers in forming active innovation resistance, leading to innovation rejection.

RESEARCH METHOD

First potential causes of resistance to innovation are derived within an exploratory study. The empirical research design was based on a study by Greenleaf and Lehmann (1995). 240 members of an online-panel were asked to recall an innovative product they recently encountered but did not buy. With regard to this product, consumers were asked to report reasons for their non-purchases. The collected reasons were reviewed on content uniformity and compared to known causes from literature by several experts and thereafter grouped into specific adoption barriers. Overall 18 product-specific barriers could be identified.

Finally the relative influence of these identified product-specific barriers and their interaction with passive innovation resistance on active innovation resistance is quantified within a large scaled online survey. From a larger set of innovative products, three technological products (1 RNP, 1 DNP, 1 INP), were taken as adequate stimuli for the final consumer survey. Subsequently, those products were evaluated by 424 members of an online panel. Possible product-specific barriers were assigned to 2 formative constructs, representing functional and psychological product-specific barriers to adoption. Passive innovation resistance is operationalized as second order construct of type 4 (Jarvis, MacKenzie & Podsakoff, 2003), consisting of two first order dimensions (formative). One represented by consumer’s resistance to change disposition. The other represented by consumer’s status quo satisfaction. Using component-based structural equation modeling (PLS) (Lohmöller 1989; Hulland 1999; Tenenhaus et al. 2005), the influence of each product-specific barrier and their interaction with passive innovation resistance on active innovation resistance was determined. PLS supports the testing of higher-order models, using the hierarchical component model (Lohmöller 1989; Wold 1982).

RESULTS

Preliminary results indicate that active innovation resistance is mainly caused by functional barriers ($\beta = 0.469, t = 7.687$), whereas psychological barriers ($\beta = 0.385, t = 6.655$) also have a positive impact on active innovation resistance. Furthermore, active innovation resistance most
likely leads to an intention to reject the product ($\beta = 0.725$, $t = 21.035$). Further statistical analysis show that passive innovation resistance has a strong positive effect on psychological ($\beta = 0.413$, $t = 7.907$) and functional barriers ($\beta = 0.359$, $t = 5.502$). Since no direct effect of passive innovation resistance on active innovation resistance is present ($\beta = 0.03$, $t = 1.094$), its effect on active innovation resistance is fully mediated by product-specific barriers ($\beta = 0.331$). Hence passive innovation resistance strongly influences the perceptions of product-specific barriers, which finally drive active innovation resistance leading to innovation rejection. Additionally interaction effects of passive innovation resistance and product innovativeness on psychological barriers ($\beta = 0.104$, $t = 2.248$) and functional barriers ($\beta = 0.105$, $t = 2.281$) could be confirmed.

REFERENCES


