How Does Perceived Firm Innovativeness Affect the Consumer?

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Abstract

We present a broad-based, consumer-centric view of innovation—referred to as "perceived firm innovativeness" (PFI). PFI is conceptualized as the consumer's perception of an enduring firm capability that results in novel, creative, and impactful ideas and solutions. We develop and validate a PFI scale and show that PFI impacts consumer loyalty via two processing routes: a functional-cognitive route and an affective-experiential route. Our results indicate that a firm needs to consider consumer perceptions of the firm as a whole, and not just new products and technologies, and take into account a functional-cognitive perspective as well as consumer emotions and experiences.

Keywords: perceived firm innovativeness; functional-cognitive route; affective-experiential route; consumer satisfaction; consumer loyalty

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1. Introduction

Innovation that results in the acquisition of new customers and the retention of existing ones is imperative in most organizations. Yet, many innovation fail within the first three years of their introduction into the marketplace (Wilke & Sorvillo, 2005). To ensure that innovations will be more successful in the marketplace, a consumer-centric perspective is essential. It is the end consumer that ultimately determines the success of an innovation. Purely expert-based views of innovation often fail to provide solutions for consumer needs because experts and consumers may view innovation differently (Rogers & Shoemaker, 1971). For example, experts may view innovations solely from a technical and functional perspective, whereas consumers may be concerned whether the company's offers fit their lifestyles and create new experiences for them (Danneels & Kleinschmidt, 2001).

Some marketing research has provided a consumer-centric view, focusing primarily on consumers' perceptions of new products (e.g. Hoeffler, 2003). In this paper, we propose that consumers adopt a broader view of innovation: they use not only their perceptions of new products, one by one, as they are being introduced, to judge whether a firm is innovative. Rather, they observe a range of company activities to derive a judgment of a *firm's overall innovativeness*. When a firm positions itself as innovative in the mind of consumers, it is critical that the firm adopts this broad view of innovation.

Consider Apple, identified as the most innovative company by BusinessWeek (2009). Apple does not only offer new products on an ongoing basis (e.g., the iMac, iPod, and iPhone). Rather, Apple is perceived, organizationally and culturally, as a creative powerhouse by many consumers. An innovative firm may thus be associated with images of creativity or dynamism, and whether a firm is seen as changing markets with its offers. Taken together, such associations make up what we call "perceived firm innovativeness" (or PFI), we propose that PFI affects consumer behavior, and, ultimately, firm success.

A broad-based, consumer-centric perspective on firm innovativeness has been largely missing from the literature, despite repeated calls for developing such a point of view (Danneels & Kleinschmidt, 2001; Rogers & Shoemaker, 1971). Only few studies have taken this perspective, and each study focused on isolated aspects such as perceptions of a firm's introduction strategy (Boone, Lemon, & Staelin, 2001), pioneer status (Kamins, Alpert, & Elliott, 2000; Niedrich & Swain, 2003), or market leadership (Kamins, Alpert, & Perner, 2007; Kamins & Alpert, 2004).

In the following, we conceptualize and define PFI. We show how PFI differs from related constructs and how it can be measured. Moreover, we investigate how PFI affects consumer loyalty. Finally, we discuss managerial implications of our research.

2. Conceptualizing PFI

Although the terms "innovation" and "innovativeness" are often used interchangeably in marketing and management research, there is a key difference between the two concepts. Whereas "innovation" focuses on an outcome of firm activity (i.e., goods and services), "innovativeness" refers to the capability of a firm to be open to new ideas and work on new solutions (Crawford & Di Benedetto, 2003). Moreover, innovativeness refers to an enduring characteristic and not to success at one point in time (Hurley & Hult, 1998; Im & Workman, 2004).

PFI can thus be conceptualized as the consumer's perception and attribution of such an enduring firm capability. PFI is not an objective assessment. Instead, PFI a subjective consumer perception and attribution based on consumer information, knowledge, and experience. That is, consumers observe certain firms characteristics and behaviors over time and use their observations to judge innovativeness. To build up a consistent image of firm innovativeness, these firm characteristics and behaviors need to be stable over time (Brown & Dacin, 1997). They may include surprising market offers, new product attributes, new design elements, and new marketing approaches as well as the overall creativity of the firm and its dynamic market behavior. To explicate the PFI construct further, we next discuss the central aspects of PFI.

In prior research, novelty (or newness) has been identified as a central aspect of innovativeness (Crawford & Di Benedetto, 2003). In the marketing literature, innovativeness is often seen as the capability of a firm to develop new product solutions at a fast rate within a specific time period (Roehrich, 2004). However, novelty manifests itself not only in new product attributes, but also in design innovations in goods and services (e.g., the styling of a car, the look and feel of a MP3 player, the lifestyle services of a mobile phone service), process innovations (e.g., a new delivery process), marketing innovations (e.g., new communication campaigns or a new web site) and in broad-based business innovations (e.g., selling directly to consumers). Because novelty can manifest itself in different ways a firm engaged in novelty creation is seen as forward-looking and future-orientated.

However, introducing new things alone does not make a firm innovative. An innovative company like Apple is also seen as highly creative. Using a consumer-centric perspective, creativity broadly includes all kind of company efforts and activities that are seen as unique from the competition and as meaningful to the consumer (Amabile, 1988; Im & Workman, 2004; Smith, MacKenzie, Xiaojing, Buchholz, & Darley, 2007). Creativity is strongly associated with surprise and the unexpected (Besemer & O'Quin, 1986). That is, a firm's creativity can stimulate and excite consumers and result in new experiences for them (Haberland & Dacin, 1992).

Finally, consumers are more likely to view a firm as innovative if its novel and creative efforts have market impact. An innovative firm can change established consumption patterns and can be seen by consumers as a pioneer in its industry (Kamins, et al., 2000). Through their "generative capacity" (Moorman & Miner, 1997), firms can radically challenge the status quo and existing industry structure (Usero & Fernandez, 2009). Following Schumpeter's (1934) classic work on "creative destruction," innovative firms are thus seen as progressive, dynamic and risk-taking. Empirically, research has shown a significant effect of firm and brand innovativeness on business performance and on stock returns (Mizik & Jacobson, 2008).

In sum, we conceptualize PFI as the *consumer's perception of an enduring firm capability that results in novel, creative, and impactful ideas and solutions for the market.* We expect that the different aspects of PFI are strongly interrelated and that none of them alone suffices for an overall perception of firm innovativeness. That is, it is not possible for a firm to be seen as innovative if its creative ideas fail in the marketplace most of the time. Conversely, ideas that succeed in the marketplace must also be seen as creative and novel; otherwise a firm will not be seen as innovative.

3. Difference between PFI and Related Constructs

PFI is conceptually distinct from other innovation-related constructs: pioneer status, organizational innovativeness, various aspects of corporate creativity, and corporate reputation.

Pioneer status refers to entry position. It is an objective assessment: a company is a pioneer when it is the first to offer a product in a category or market. Being a pioneer can secure a significant competitive advantage (Alpert & Kamins, 1995; Carpenter & Nakamoto, 1989; Lopez

& Roberts, 2002). In contrast, PFI is a subjective evaluation of the firm based on consumer knowledge and experience. Consumer perception about which company is the true pioneer in a category may differ. Consumers can even be unaware of the market pioneer; in one study pioneer misidentification was 60.1% across five different categories (Kamins, et al., 2000). Moreover, PFI implies more than just knowledge about a specific historical entry rank of a company at one point in time. Because PFI is an enduring characteristic, it stresses innovation over a duration of time and that it is consistently at the forefront of innovation.

Organizational innovativeness has been defined as “the notion of openness to new ideas as an aspect of a firm’s culture” (Hurley & Hult, 1998, p. 44). While organizational innovativeness reflects primarily the perception of internal stakeholders (e.g., employees and managers), PFI offers an external consumer perspective of firm innovativeness. Moreover, organizational innovativeness describes organizational behavior when the firm faces change or adopts new procedures; unlike PFI, it does not include outcome measures such as market success. Hurt and Teigen (1977) developed a scale that focuses on *perceived* organizational innovativeness based on employee perceptions, but not consumer perceptions.

Moreover, a large literature exists concerning yet another related construct: creativity. For example, there are scales for measuring *marketing program creativity* (Andrews & Smith, 1996; Im & Workman, 2004), *product creativity* (Besemer & O'Quin, 1986; Moreau & Dahl, 2005), and *ad creativity* (Li, Dou, Wang, & Zhou, 2008; Smith, et al., 2007). Although the objects of these studies may differ there is consensus that novelty (i.e. difference, divergence, originality) and meaningfulness (i.e. appropriateness, usefulness, relevance) constitute two key aspects of creativity (Amabile, 1988; Im & Workman, 2004; Moreau & Dahl, 2005; Smith, et al., 2007). Thus, creativity can be seen as an important part of firm innovativeness. However, PFI also stresses the importance of market impact. Thus, creativity is a necessary though not sufficient condition for perceptions of innovativeness (Amabile, 1988; Im & Workman, 2004).

Finally, corporate reputation has been defined as “a distribution of opinions (the overt expression of a collective image) about a person or other entity, in a stakeholder or interest group” (Bromley, 2001, p. 317). It is seen as a collective phenomenon that is based on stakeholders’ shared value system (Walsh & Beatty, 2007). Corporate reputation indicates how well the firm has done in the eyes of its stakeholders and the marketplace (Weiss, Anderson, & MacInnis, 1999). While corporate reputation is typically assessed by focusing on managers, employees, and financial analyst, PFI focuses on consumers (Fombrun & Shanley, 1990). Walsh and Beatty (2006), have developed a customer-based reputation scale that focuses on consumers. The scale assesses reputation including several dimensions such as customer orientation, financial strength, and social responsibility, but barely focuses on innovation. Thus, corporate reputation can be seen a broader construct that includes aspects of PFI.

4. Developing and Validating the PFI Scale (Studies 1-4)

In four studies, we developed the PFI scale in successive steps based on the proposed procedures by Churchill (1979), Anderson and Gerbing (1988), and Netemeyer et al. (1995).

In Study 1, we conducted qualitative semi-structured, in-depth interviews to determine how consumers view firm innovativeness and what characteristics they associate with it. Ten students majoring in business administration, medicine, history, and law were interviewed for approximately one hour, using an open-ended elicitation procedure (Netemeyer, Burton, & Lichtenstein, 1995). They were asked, “Please provide typical examples of highly innovative companies and give reasons why these companies are innovative in your opinion. Please provide a brief description of characteristics that you associate with each innovative company.”

The task of naming innovative firms was easy for respondents. They named firms in the consumer goods business (e.g., Sony, Nike, Nokia, Microsoft, BMW) and services industries (e.g., Ebay, Expedia, McDonalds, T-Mobile). Responses to the “reason why” question indicated that participants listed firms as innovative because these firms had produced really new products in the past (e.g., Sony’s Walkman), provided innovative solutions (e.g., Apple), and launched new service concepts (e.g., Southwest Airlines). Participants felt that innovativeness relates to “something new” and is “distinct from the existing.” Producing new products without offering any benefit for the customer was not seen as innovative. Finally, innovative firms were often seen as “trend setters for the industry” (e.g., Apple).

Based on these qualitative findings, we validated our conceptualization and constructed specific scale items to measure PFI. In the item generation process we considered explicitly scales regarding organizational innovativeness (Atuahene-Gima, 1996; Hurley & Hult, 1998; Hurt, et al., 1977), novelty and creativity (Im & Workman, 2004; Michaut, van Trijp, & Steenkamp, 2002; Moreau & Dahl, 2005) as well as innate innovativeness (Goldsmith & Hofacker, 1991; Roehrich, 2004). Because the focus and object of these scales differ, not all items were appropriate to use and selected items needed to be adapted. Two marketing professors and two PhD students assessed the face validity of the items for PFI.

In study 2, we conducted a survey with 83 consumers to identify the most promising items on seven-item Likert scales. The respondents were a mix of participants in a course at the industrial chamber of commerce (39), undergraduate students (22) and graduate marketing students (22). The overall mean for all items was 5.69. We identified all items that were significantly rated below the mean ($p < .05$) and eliminated them from further scale development procedures (similar results were identified for the different respondent groups). The means of the remaining items were between 6.13 and 5.71.

In study 3, we tested the reliability of the PFI scale in a consumer survey focused on an actual industry. We chose the mobile-phone-industry because several participants in the qualitative interviews had mentioned this industry as highly innovative and it allowed us to test the scale for both manufacturers and service providers within the same industry. All the participants in this study were students with a major in marketing. The study was conducted as an online survey. The participants evaluated the innovativeness of their current mobile-phone brand or current service provider. We received a total of 146 questionnaires.

For scale refinement, an explorative factor analysis was conducted. All items had high loadings on one factor (above .7). After final scale assessment, one item ("the performance of the company is always cutting-edge") was excluded from the scale because of a low item-to-total correlation ($r < .3$). The Cronbach alpha of the final scale was .92, and the item-to-total correlations for all final items were above .7. The final scale contained the following items: "The company is dynamic," "The company is very creative," "The company launches new products and creates market trends all the time," "The company is a pioneer in its category," "The company constantly generates new ideas," "The company has changed the market with its offers," and "The company is an advanced, forward-looking firm."

Finally, in study 4, we tested the convergent and discriminant validity of the PFI scale vis-a-vis related constructs. Focusing again on the mobile phone industry, a new group of 216 customers was asked to evaluate their current mobile-phone brand and current service provider. They completed the PFI scale and scales measuring Marketing Program (MP) Creativity (Andrews & Smith, 1996), Marketing Program (MP) Meaningfulness (Im & Workman, 2004), Ad Creativity (Li, et al., 2008), and Customer Based Corporate Reputation (CBCR) (Walsh & Beatty, 2007). As expected, all correlations were positive and significant ($p < .01$), ranging from $r = .28$ to $r = .61$. All constructs fulfilled the Fornell-Larcker-test for discriminant validity. The results thus support that the PFI scale is different from existing scales (discriminant validity), but also similar to related scales (convergent validity).

5. The PFI Consumer Processing Model

As prior research has shown, a positive perception of a company has a significant impact on evaluations of the company (Brown & Dacin, 1997; Walsh & Beatty, 2007). Thus, we propose that PFI will have a positive effect on consumer evaluations of the company and business success over time. Consumer satisfaction and consumer loyalty are constructs that are widely accepted as critical determinants for business success in the long run (Oliver, 1997). They will be the key outcome constructs in our PFI framework.

5.1. The Two Facets of Consumer Satisfaction

Consumer satisfaction is frequently viewed as a cognitive evaluation process. In the well-known expectation-disconfirmation paradigm, satisfaction has been conceptualized as the out-come of a comparison process between expectations and performance on relevant attributes. Consumers infer, in a fairly rational way, whether or not they are satisfied. However, satisfaction is also an emotional experience that consumers feel good about and appreciate as an experience (Liljander & Strandvik, 1997; Mano & Oliver, 1993). Specific emotions such as admiration, affect and appreciation are associated with stimuli triggering this kind of satisfaction. According to Oliver (1997), cognitive and affective responses constitute two separate components of satisfaction. We view *cognitive satisfaction* as a cognitive-evaluative judgment and thus as the cognitive outcome of PFI (Oliver & Swan, 1989) and *emotional satisfaction* as the evaluation of the emotions resulting from PFI (Liljander & Strandvik, 1997). Based on prior frameworks (Chaudhuri & Holbrook, 2001; Mano & Oliver, 1993), we expect that consumers can gain benefit from two processing routes: a functional-cognitive route and an affective-experiential route.

5.2. The Functional-Cognitive Route

Following the functional-cognitive route, consumers should evaluate firm characteristics in a reasoned-based fashion (Chaiken, 1980). They appraise innovativeness as a positive characteristic of the firm, and this should contribute to a positive evaluation (Niedrich & Swain, 2003). Following cue utilization theory, specific characteristics of the target object can become a cue for other attributes of the target, if they have predictive and credence value (Olsen, 1977). Furthermore, prior empirical research has shown that consumers use associations to infer specific attributes when specific information is missing (Brown & Dacin, 1997; Gurhan-Canli & Batra, 2004). For example, a company name can be a signal for firm attributes such as quality and trustworthiness (Walsh & Beatty, 2007; Zinkhan, Ganesh, Jaju, & Hayes, 2001). PFI can be such a cue for other attributes. Because innovative firms have a "track record" of successful and meaningful solutions over time, consumers may infer that the firm will be capable of performing all tasks effectively. Moreover, prior research has shown that the innovativeness of a company and credible business competence are closely related (Niedrich & Swain, 2003). Thus, we define *functional competence* as the consumers' belief that the company has expertise to perform the job effectively and reliably (Ganesan, 1994). We predict:

H1: PFI has a positive influence on functional competence

Functional competence, in turn, should affect the consumer's evaluation of the company. First, functional competence should make the relationship less risky for the consumer (Laroche, McDougall, Bergeron, & Zhiyong, 2004; Zinkhan, et al., 2001). Moreover, as functional competence entails expertise that the consumer can rely on, functional competence should result in perceived value of the company and consumer satisfaction (Gurhan-Canli & Batra, 2004; Niedrich & Swain, 2003). Indeed, the relationship between functional competence and satisfaction has been verified in research on service quality (Cronin, Brady, & Hult, 2000) and trust (Ganesan, 1994).

H2: Functional competence has a positive influence on cognitive consumer satisfaction

5.3. The Affective-Experiential Route

In contrast to the functional-cognitive route, the outcome of affective-experiential processing is hedonic. Hedonic consumption is associated with “multi-sensory, fantasy and emotive aspects of one's experience" (Hirschman & Holbrook, 1982, p. 92). As we argued earlier, PFI includes perceptions of a firm’s creativity. Because creativity surprises and stimulates consumer interest (Haberland & Dacin, 1992), it creates excitement among consumers, suggesting opportunities for new consumer-firm interactions and lifestyles. Consumers will feel good about the firm and derive hedonic value from this feeling. We refer to this state of excitement and feeling as *positive affect*; it is reflected by positive and arousal parts of the emotional circumplex (Watson & Tellegan, 1985). Thus, we expect

H3: PFI has a positive influence on positive affect

Positive affect will result in emotional consumer satisfaction, which is viewed as the appraised primary affect that reflects the evaluation of the consumer-firm relationship (Oliver, 1997). As described earlier, an innovative firm generates continuous positive stimulation for consumers. Based on research on consumer experiences, people seek positive stimulation and try to avoid negative experiences (Brakus, Schmitt, & Zarantonello, 2009; Schmitt, 2009). Positive stimulation is arousing and pleasurable for the consumer and should lead to a positive appraisal of the company. Indeed, positive affect can be an immediate antecedent of satisfaction (Chaudhuri & Holbrook, 2001; Holbrook & Batra, 1987; Mano & Oliver, 1993).

H4: Positive affect has a positive influence on emotional consumer satisfaction

5.4. Bi-directional influence and impact of satisfaction on loyalty

Although cognitive satisfaction and emotional satisfaction are part of two processing routes, we do not expect them to be fully independent (Pham 2004). Emotional satisfaction is seen, in part, as a cognitive reflection of experienced primary affect. Oliver (1997) referred to this relation as "the attribute basis of satisfaction": consumers feel good and appreciated when their choices meet or exceed expectations. Conversely, positive feelings can also influence cognitive evaluations because feelings provide information (Pham, 2004). Thus,

H5a: Cognitive satisfaction has a positive influence on emotional satisfaction

H5b: Emotional Satisfaction has a positive influence on cognitive satisfaction

In line with previous literature, we expect satisfaction to be an important antecedent of consumer loyalty. A positive relationship between consumer satisfaction and loyalty, including repurchase intention as well as the commitment to the firm, has been shown in several studies (Dick & Basu, 1994; Garbarino & Johnson, 1999). When consumers are cognitively satisfied, they should continue the relationship to receive additional functional benefits. When they feel good about the relationship and are emotionally satisfied, they will look forward to additional stimulation and positive feelings (Chaudhuri & Holbrook, 2001).

H6a: Cognitive satisfaction has a positive influence on consumer loyalty

H6b: Emotional satisfaction has a positive influence on consumer loyalty.

6. Testing the PFI Consumer Processing Model (Study 5)

To examine empirically the impact of PFI on consumer loyalty via the two proposed processing routes, we conducted a fifth study.

6.1. Sample of Respondents and Product Categories

A total of 1,690 participants completed a questionnaire focused on our proposed framework (51% male, 49% female; mean age = 25.3). Students and staff at a university received the questionnaire by e-mail. Respondents were asked to evaluate the product brand and service provider that they currently used. The questionnaire was slightly adapted in wording to different industries to improve readability and understanding. We selected goods and services that were seen as innovative and relevant to respondents: banks, car manufacturers, computer manufacturers, mobile phone manufacturers, mobile phone service providers, dentists, and winter sports equipment manufacturers. To eliminate the influence of the category quotas, each category (as well as goods and services overall) were equally weighted in the samples by means of random sampling.

6.2. Measurement Scales

All measures were presented on 7-point Likert rating scales. *Perceived Firm Innovativeness* was measured by the PFI scale described above. *Functional competence* was adapted based on existing scales of brand competence and trust (Ganesan, 1994; Garbarino & Johnson, 1999). *Positive affect* was measured using emotional items of positive and aroused part of the emotional circumplex (Holbrook & Batra, 1987; Watson & Tellegan, 1985). For *cognitive satisfaction*, we used items from Oliver and Swan's scale (1989), while *emotional satisfaction* was measured using emotional items adapted from Mano and Oliver (1993) and Liljander and Strandvik (1997). Following Dick and Basu (1994), we conceptualized *consumer loyalty* as including commitment as well as intention to behave loyal, and measured it based on established scales (Chaudhuri & Holbrook, 2001; Dick & Basu, 1994).

6.3. Reliability and Validity Analyses

We followed the proposed two-step approach by Anderson and Gerbing (1988) to ensure that the measurement model estimation did not influence the structural estimation, and vice versa. Discriminant validity was assessed using Fornell-Larcker criteria and χ^2-difference-tests. All χ^2-difference were significant ($\Delta \chi^2 > 200$, $p < .001$). The reliability and validity measures indicated adequate fit of the measurement model (see Table 1). Following Steenkamp and Baumgartner (1998), we tested for measurement invariance related to the category type of the product and ensured full metric invariance for all group comparisons (category typ: $\Delta \chi^2 = 3.73$, $p > .88$).

—— *Table 1 here* ——

6.4. Main Results

The proposed hypotheses were tested using structural equation models. Because the skewness and the kurtosis of the distribution were not extremely high (i.e., skewness < 2; kurtosis < 7), we applied an LISREL approach with a ML-estimator. For testing hypothesis 5a and 5b, a feedback loop between cognitive and emotional satisfaction was integrated. The resulting model is non-recursive and identified (Bagozzi, 1994). The results of the model estimation are shown in Figure 1. The fit statistics indicate an adequate fit of the model with the data. All path coefficients of our proposed processing model were highly significant ($p < .001$). We analyzed several alternative models that included rival hypotheses, but none of the alternative models fit as well as our proposed model. These findings support the two processing routes of PFI. We can thus assume PFI is mediated by a functional-cognitive route and an affective-experiential route.

—— *Figure 1 here* ——

We also considered the relative contribution of each processing route and the total effect of PFI on consumer loyalty by means of indirect effects. The total effect of PFI on consumer loyalty (.42) is positive and highly significant. Interestingly, the effect size of the functional-cognitive (.23) and affective-experiential routes (.19) are quite comparable in size (see Table 2).

Additionally we tested for moderating effects by means of multi-group analyses for product categories representing goods vs. services and for more vs. less innovative consumers. For the comparison of more vs. less innovative consumers, we conducted a split of our sample based on a domain specific consumer innovativeness scale (Goldsmith & Hofacker, 1991). The results indicated a weaker effect of PFI on loyalty with services than consumer goods ($\chi^2 = 31.0$, $p < .001$) and a stronger effect on loyalty for more innovative than less innovative consumers ($\chi^2 = 41.1$, $p < .001$). The effect is mainly based on the affective-experiential route (.30 vs. .08).

—— Table 2 here ——

7. Discussion

Firms face increased pressure to differentiate themselves in the marketplace through innovation, which is usually addressed through product and technology focused research and development. Our research focused on firm innovativeness from the consumer's perspective showed that consumer perceptions of the entire firm, and not just new products or technologies, play a key role in the success of innovative efforts. Moreover, PFI affected loyalty through two routes—a functional-cognitive and an affective-experiential route. This finding calls for a broad-based, systematic management of firm innovativeness from the consumer's perspective.

How can a firm create the perception of firm innovativeness? As our research has shown, a firm should focus on creative ideas that result in novel solutions that impact the marketplace. For example, senior management can make it a priority to put into place management processes, marketing plans and human resources programs focused on corporate creativity and novel solutions that have the potential to be market changing (Mol & Birkinshaw, 2009; Simpson, Siguaw, & Enz, 2006). Management may also support creativity training that facilitates “out-of-the-box” thinking as well as outside-industry benchmarking that challenges conventional thinking (Schmitt, 2007). The companies that consumers identified in our survey as innovative (such as Apple, BMW, Nokia and Sony) have shown such creativity in developing new ideas and products for their consumers. In addition, research departments can use the short and reliable scale that we constructed to measure and track perceived firm innovativeness.

Innovative efforts should focus on the two consumer processing routes that we identified, providing functional value through functional solutions (e.g., new Blue-Ray functionality by Sony) and/or emotional value through new design and aesthetics (e.g., a new sedan design by BMW) and new communication approaches (e.g., Dove’s “campaign for real beauty”). Microsoft and Apple are good examples. Both companies create new ideas and generate new solutions that influence markets successfully. Microsoft focuses largely on new functional features, while Apple delivers design as well as lifestyle innovation in addition to functional innovation.

We found that PFI exercised a stronger effect on loyalty for goods than services and for more than less innovative consumers. The former effect seems to be due to the tangibility of goods relative to services and the ability to communicate their comparative advantage. The latter effect, which was mainly due to the affective-experiential route, seems to indicate that innovative consumers derive more emotional benefits (e.g., admiration by friends) from their relationship with an innovative firm than less innovative consumers (Kulviwat, Bruner, & Al-Shuridah, 2009). One example of emotional benefits may be innovative consumers who are members of a software beta-testing phase; they may gain self-esteem and pleasure, and not just functional benefits, from being part of such a program. Management should be aware of innovative consumers' need for emotional appeals because such consumers may be opinion leaders for others.

Future research should further elucidate the nature of PFI and investigate how stable PFI is over time. Another important issue concerns the antecedents of PFI. How do new product launches affect PFI? What role do company communications and word-of-mouth play in affecting PFI and the two processing routes? Finally, future research should investigate whether firms that engage in consumer-oriented innovations are seen as more innovative by consumers than firms that run research and development from a purely engineering point of view.

To conclude, our research indicates that innovation research and management can benefit from a broad-based, consumer-centric perspective. A narrow perspective around technical innovation is not enough to be seen as innovative. Consumers need to feel that they are engaged with a firm that is innovative in a broader organizational and cultural sense. Once again, Apple offers an example: at its introduction, the iPhone was, by global standards, an "old hat" technologically: it did not even use the global industry standard of "3G." However, benefitting from its image as an innovative company, Apple could create the perception of a "cutting edge device" and a "must have" for innovative consumers. PFI may thus be a key element in building customer equity and, ultimately, shareholder value. As investors are focused on company growth, they may use PFI as a critical piece of information to judge the value and potential of a company.

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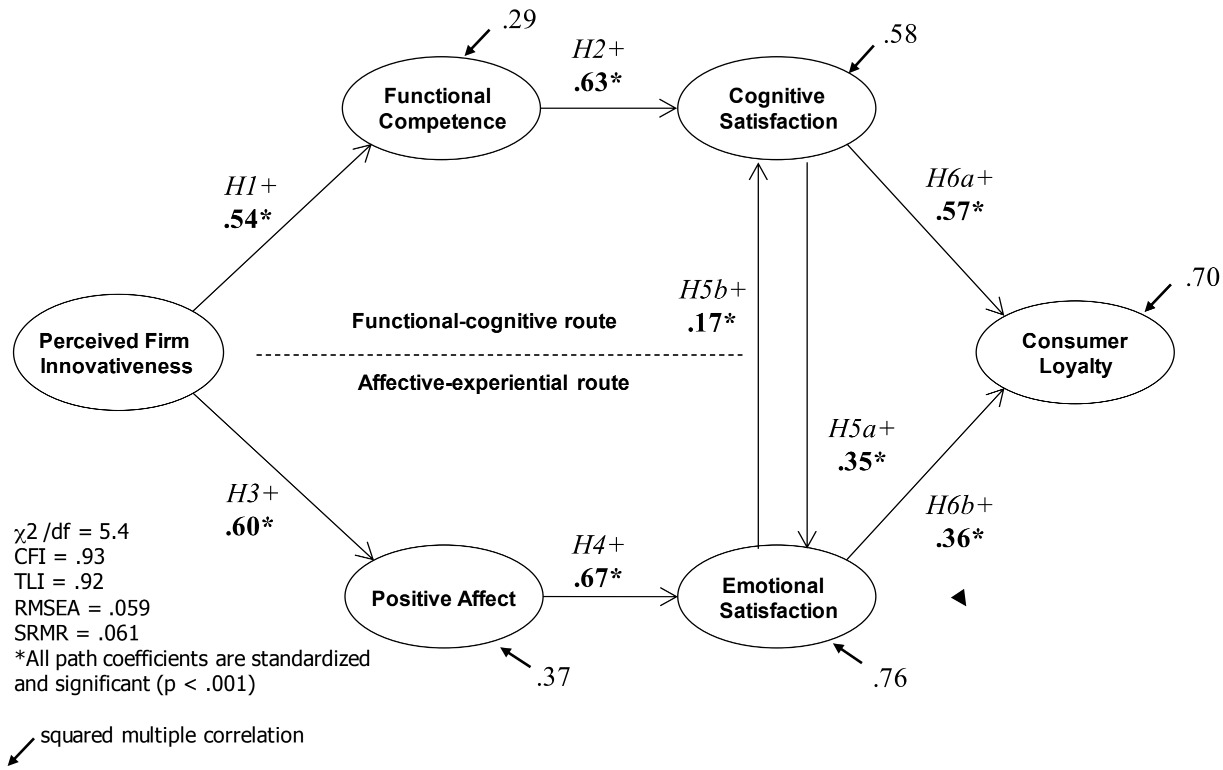
Figures

Figure 1: Processing Model of Perceived Firm Innovativeness



Tables

Table 1: Reliability and Discriminant Validity (Study 5)

	Construct	#[1]	EV[2]	α[3]	CR[4]	SRMR[5]	RMSEA[6]	CFI[7]	Squared Correlations\AVE[8] 1	2	3	4	5	6
1	**PFI**	8	71%	.94	.939	.019	.067	.986	.66					
2	**Functional Competence**	4	71%	.86	.863	.010	.046	.998	.28	.61				
3	**Positive Affect**	7	65%	.92	.917	.017	.062	.990	.37	.14	.61			
4	**Emotional Satisfaction**	5	66%	.85	.851	.017	.061	.992	.24	.33	.64[a]	.54		
5	**Cognitive Satisfaction**	5	78%	.93	.933	.007	.039	.999	.17	.51	.17	.42	.74	
6	**Consumer Loyalty**	4	66%	.86	.834	.007	.021	.999	.22	.38	.29	.52	.64[b]	.56

[1]# of indicator [2] Explained variance (exploratory factor analysis); [3]Cronbach Alpha; [4]Composite Reliability; [5]Standardized Root Mean Residual; [6]Root Mean Square Error of Approximation; [7]Comparative Fit Index'
[8]Average variance extracted on diagonal elements; squared correlation on off-diagonal elements
[a] χ^2-Difference = 453.2, [b] χ^2-Difference = 251.7

Table 2: Moderating Effects (Study 5)

Path coefficient	Total	Product category		Consumer Innovativeness	
		Goods	Services	High	Low
PFI → CO (γ_{11})	.54 (18.0)	.61 (15.3)	.44 (10.8)	.62 (12.8)	.32 (6.1)
PFI → PO (γ_{21})	.60 (18.8)	.65 (16.1)	.50 (12.1)	.63 (12.4)	.54 (10.4)
CO → CS (β_{31})	.63 (21.4)	.53 (13.5)	.66 (17.6)	.72 (13.5)	.64 (12.8)
PO → ES (β_{24})	.67 (20.5)	.73 (17.4)	.67 (17.7)	.68 (13.9)	.61 (12.4)
ES → CS (β_{34})	.17 (5.8)	.28 (6.6)	.15 (4.0)	.09 (1.7)	.10 (1.8)
CS → ES (β_{43})	.35 (14.2)	.25 (7.1)	.39 (11.9)	.38 (9.3)	.41 (8.8)
ES → LO (β_{54})	.36 (11.2)	.47 (9.9)	.38 (10.2)	.51 (8.8)	.19 (3.8)
ES → LO (β_{53})	.57 (17.2)	.44 (9.8)	.63 (16.4)	.39 (7.3)	.74 (13.3)
Functional-cognitive effect (%)	**.23** (55%)	**.20** (44%)	**.22** (56%)	**.19** (39%)	**.18** (69%)
Affective-experiential effect (%)	**.19** (45%)	**.26** (56%)	**.17** (44%)	**.30** (61%)	**.08** (31%)
Total effect	**.42**	**.46**	**.38**	**.49**	**.25**
N	1,280	640/640		422/404	
χ^2-Difference		31.0		41.1	
p-value		.00		.00	

LO = Consumer Loyalty, CS = Cognitive Satisfaction, ES = Emotional Satisfaction, PO = Positive Affect, CO = Functional Competence, PFI = Perceived Firm Innovativeness,
All coefficients are standardized effects. In parentheses are *t* values.