

Theoretical aspects of linking consumer innovativeness to performance indicators¹

Marketing and innovativeness was connected first in 1962, when Rogers proved innovative customer's positive impact on new product's take-up. Since then innovativeness is still on the marketing researcher's agenda, driven by saturated markets and growing need for further segmentation in most industries. This article aims to provide a practical approach to customer innovativeness. It is presented through exhaustive literature review how differently innovativeness has been conceptualized by the academics of management sciences. Furthermore, as its main contribution, this article attempts to establish the theoretical background to link the „soft” category of innovativeness to „hard” performance indicators like market share, sales growth, customer equity and customer lifelong value.

Keywords:

*Market segmentation,
Consumer Innovativeness,
Customer value*

INTRODUCTION

Innovation has become a key research area of corporate management. The desperate need of productiveness has pressed companies to develop innovative solutions in their supply chain systems and in their product and service portfolio as well. A significant number of studies have recently been written on the innovation practices of companies, norms have been given how innovation should have been managed within the company or the whole economy. Researchers although tend to forget about the demand side of the market. Quoting Thomas A. Edison „Anything that won't sell, I don't want to invent. Its sale is proof of utility, and utility is success”.

As its framework, this article uses the integrative approach of innovation developed by Hauser et al. (2006). In this model research of innovation is classified into five categories:

- (1) Consumer response to innovation.
- (2) Organizations and Innovation.
- (3) Strategic market entry.
- (4) Prescriptions for product development.
- (5) Outcomes from innovation.

Present article also refers to the division of marketing and non-marketing innovations used by Gurvinder and Nargundkar (2005). The discriminant factor in judging the type of innovation, whether the final customer's value offering changed or not. In the latter case, innovation only modified the value chain while the value offering remained permanent. These sorts of innovations may increase the profit of the company by process development, but have nothing to do with the customer's market. Marketing innovation takes place only, if any radical changes adopted in any of the four Ps of marketing. Radical marketing innovations have taken place in several industries, especially, on saturated markets, where this tool proved to be the only one for further growth.

Though it might be a critic to the Hauser model that it doesn't deal with the distinction of marketing and non-marketing innovations, it is

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implicitly clear, that consumer response to innovation only happens if marketing innovation took place.²

As the primary goal of marketing innovation is to develop new or modified products for enhanced profitability, besides marketing, other disciplines like supply chain management, organizational sciences are involved. As disciplines have different angles of research, no wonder that the consensus in defining innovation still lacks. This article delimits the term „innovation” solely with reference to marketing innovations, generating consumer response.

According to Hauser et al. (2006), research field of „Consumer response to innovation” includes research topics of (1) Consumer³ innovativeness (2) Growth of new products (3) Network externalities. Being the aim of this article is to provide a practical approach to customer innovativeness it should focus on the mental, behavioral, and demographic characteristics, associated with consumer willingness to adopt innovations.

DEFINITION AND MEASUREMENT OF CUSTOMER INNOVATIVENESS

This section aims to present the relevant constructs and measurements for customer innovativeness, aiming to find the most proper one for linking that with performance indicators. Just like innovation, innovativeness is also a broad topic, and a variety of disciplines address various aspects of it. Despite some authors may think customer innovativeness is a sort of situation attitude, exhaustive set of definitions is already given by the marketing management literature.

The most comprehensive work in synthesizing the definitions of consumer innovativeness is attributed to Gilles Roehrich (2004). In his work, Roehrich (2004) focuses on innate consumer innovativeness, which is in line with the distinction of Midgley and Dowling (1978). Innate innovativeness is determined by both psychological and sociological traits, which most authors seem to agree, its nature though is still under question. Roehrich (2004) identifies four possible antecedents of innovation when categorizing the existing definitions (1) Expression for the need of stimulation (2) Expression of novelty seeking (3) Independence towards other’s communicated experience (4) Expression of need for uniqueness.

„Expression for the need of stimulation” aspect is derived from the work of Hebb (1955) and Leuba (1955) who found there was an optimal level of stimulation,

which level is different individually. Venkatesan (1973) proposed to consider direct dependency between the need for stimulation and innovative behavior. Raju (1980) suggests innovativeness as a mediator variable between need for stimulation and innovative behavior, which has been confirmed by empirical results.

„Expression of novelty seeking” can be led back to Pearson (1970). Inherent novelty seeking motivates the individual to search for new information, which could manifest in (a) informative innovativeness: acquisition of new information about a new product, (b) adoptive innovativeness: adoption of new product, or (c) use innovativeness: using a product in a different way, or knowing all the different uses of a specific product (Hirschman 1980).

„Independence towards other’s communicated experience” factor lacks significant empirical support. It is originated from Midgley and Dowling (1978), based on the idea that innovativeness is „the degree to which an individual makes innovation decisions independently from the communicated experience of others.” It may sound similar to receptivity of new ideas, but as Hirschman’s results proved (Hirschman 1980), these two might address different domains of behavior.

„Innovativeness as an expression of need for uniqueness” was first posed by Fromkin (1968), who found that the need for uniqueness pushes the individual to distinguish himself through the possession of rare items. This proposal lacks empirical proofs, though it is based on the simple idea, that innovativeness is a proper way to satisfy the need for uniqueness.

Critics to Roehrich’s framework, that these dimensions only give insight to the innate innovativeness, which doesn’t determine the actual innovativeness. „Interest in product category” is an important mediator variable, as unless, actual adoption doesn’t emerge (Midgley & Dowling 1978). Even if the interest in product exist, favorable situation for consumption is required for actual adoption. Considering these aspects, in the construct of actual innovation only the innate innovativeness is the stable component, actual adoption is situative depending from the interest in product category, and the situational effects. (Figure 1)

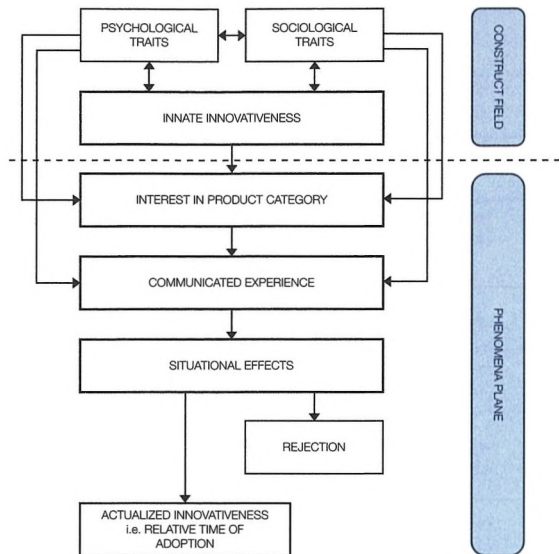
Assuming that innovativeness is a valid predictor for new-product adoption, then measures of innovativeness should identify those consumers most likely to adopt new products so that firms can target marketing

² In case the customer's value offering doesn't change there is nothing to respond on the demand side.

³ The terms „consumers” and „customers” is used in this article as synonyms. Customers and consumers are not limited to be individuals, they may be organizations or institutions.

Figure 1

The New Model of Innovativeness (Midgley & Dowling 1978)



efforts and improve forecasts. After reviewing the wide range of definitions, one can apprehend it is not easy to develop measurements until the theoretical background is not being clarified. Roehrich (2004) made an effort to categorize the significant measurement methods from the field of consumer innovativeness. Two major categories were developed: (1) Life innovativeness scales (2) Adoptive innovativeness scales.

The scope of „Life innovativeness scales” goes beyond the sole adoption of new products. These are rather measuring the traits of innate innovativeness than specific adoption. Scales included in this category Leavitt and Walton’s (1975), Kirton’s (1976) and Hurt et al.’s (1977). These scales are multidimensional: seven dimensions for Leavitt and Walton’s 24-item scale, three for Kirton’s 32-item inventory, four (or five) for Hurt–Joseph–Cook’s 20-item scale. According to Goldsmith and Nugent (1984) these scales are very close to each other, as they do measure very similar concepts. As these scales were developed for measuring general attitudes, it is also common to have poor predictive and face validity with new product purchases.

„Adoptive innovativeness scales” attempts to measure innovativeness as a tendency to buy new products. Raju (1980), Baumgartner and Steenkamp (1996), Roehrich (1995), Le Louarn (1997) all developed innovativeness scales measuring product consumption. Their predictive validity is unambiguously better than the previously presented life innovative-

ness scale’s, but it is still low to average in the dimensions of „newness attraction” and „social context” of innovativeness. Above scales links individual innovativeness to different roots: Le Louarn’s scale highlights novelty seeking as the driver of adoptive innovativeness, while Raju, Roehrich, Steenkamp and Baumgartner all found the need for stimulation as discriminant factor for innovativeness.

By delimiting adoptive innovativeness to certain domains, Goldsmith and Hofacker’s scale proved to be the most valid and reliable. Its predictive validity in all surveyed samples turned out a success with average to high value. Pagani has improved Goldsmith and Hofacker’s domain specific innovativeness scale (ab-

breviated as DSI), applied and validated to 3G mobile services (Pagani 2007). Pagani extended the traditional DSI scale with a psychological construct „need for cognition”, and „ease of use” which both proved to be a valid indicator of innovation adoption in telecommunication services. (Figure 2)

Adapting these scales for further researches have some limitations. Firstly, those have been validated only limited number of industries. Secondly, as studies already shown (Tellis et al. 2004) using non-domestic validated innovativeness scales could bias the research, as innovativeness differs systematically across countries.

DISCUSSION

From the revision of current theory of customer innovativeness following conclusions can be drawn:

- (1) As the motives of customer innovativeness are manifold, no widely accepted definition exists based on mental, behavioral, and demographic characteristics. It also means there is no use to create an umpteenth definition originated from these attributes.
- (2) Numerous scales have been developed based on the different interpretations, but the more general the construct, the less predictive validity it has to new product adoption.
- (3) DSI proven to be efficient to identify innovative customers of specific domains.

Figure 2

**Example to DSI Scale Items in 3G Mobile industry
(Pagani 2007, Goldsmith–Hofacker 1991)**

Valid and reliable DSI scale

1. If I heard a mobile music service was available I would be interested enough to adopt it	Involvement	Goldsmith–Hofacker
2. Compared to my friends I make little use of mobile music services	Usage	Goldsmith–Hofacker
3. I would consider adopting a new mobile music service, even if I had not heard of it yet	Intention to adopt	Goldsmith–Hofacker
4. In general, I am the last in my circle of friends to know the names of, and ways to access, mobile services	Opinion seeking	Goldsmith–Hofacker
5. I know more about new mobile music services than other people do	Perceived knowledge	Goldsmith–Hofacker
6. I adopt a new mobile music service because of the advantages it offers me	Need for change	Goldsmith–Hofacker
7. Before adopting a new mobile music service I think about the benefits introduced by the innovation and its related status quo	Need for cognition	Pagani
8. If I heard that a new mobile music service was available in an easy to use way I would be interested enough to adopt it	Ease of use	Pagani

(4) Domain specific approach (DSI) has the most predictive power, but it only focuses „Newness attraction” sub dimension of innovativeness, while neglects sub dimensions like „Social context”, „Independence of judgment”, „Attitude toward risk/change”

(5) Additional items like „need for cognition” and „ease of use” proven to be valid in a technology intensive industry, like 3G music.

Besides using DSI at the individual level, customer innovativeness can be caught out by using the original approach of Rogers’s focuses on adoption at the aggregate level. Reviewing the actual take-up of given products supports identification of innovative customers. The original model for growth of new products is attributed to Bass (1969), now totaling over 700 estimates of the parameters of diffusion or applications exist (Van den Bulte 2004). By selecting the best fitting model on a corporate database, first stage adopters should be treated as innovators.

With the help of this deductive tool the scope of domain-specific innovativeness scales can be extended, as it gives opportunity for its validation in different domains.

Identification of the innovators is vital in linking innovativeness with firm performance indicators, though not sufficient. As no direct link between innovativeness and any firm performance indicator has been found yet, mediator variables are in need. Customer

equity/customer lifelong value models can reasonably linked to the concept of innovativeness, as from one hand those aim to assess the value of a certain customer portfolio, and from the other, those have a direct impact to such performance indicators like total market share, profit, sales growth, revenue, etc.. Indian researchers (Gurvinder–Narvudkar 2005) already found significant relation between frequency of radical marketing innovations and sales growth, though the scope of the study didn’t include measuring the distribution of the company’s customer portfolio.

NEW RESEARCH DIRECTIONS

This research is promising as it connects consumer innovativeness with observable characteristics, but also unfolds further possible research directions to the future. A question to survey is if the customer portfolio’s distribution regarding innovativeness is different at non-innovative and innovative companies. It also worth further investigation, if the impact of the customer-portfolio’s value to the company performance indicators differ in the life-cycle of an organization or what type of marketing innovations the innovator’s prefer. By using this framework, management researchers could also get closer to the question whether marketing innovation from a company’s profit perspectives is a right call on the long term or not.

REFERENCES

Bass, F. M. (1969), A New Product Growth Model for Consumer Durables, *Management Science*, 15(1): 215–227
 Baumgartner, H. and Steenkamp, J-B. E. M. (1996), Exploratory Consumer Buying Behavior: Conceptualization and Measurement, *International Journal of Research in Marketing*, 13(2): 121–137
 Fromkin, H. L. (1968), Affective and Valuational Consequences of Self-Perceived Uniqueness Deprivation, Unpublished doctoral dissertation, The Ohio State University, 1968, In Roehrich, 2004
 Goldsmith, R. E. and Hofacker, C. F. (1991), Measuring Consumer Innovativeness, *Journal of the Academy of Marketing Science*, 19(3): 209–222
 Goldsmith, R. E. and Nugent, N. (1984), Innovativeness and Cognitive Complexity: a Second Look, *Psychological Reports*, 55: 431–438
 Gurvinder, S. S. and Nargundkar, R. (2005), Market Orientation, Marketing Innovation as Performance Drivers: Extending the Para-

digm, *Journal of Global Marketing*, 19: 27–44

Hauser, J., Tellis, G. J. and Griffin, A. (2006), Research on innovation: A review and agenda for marketing science, *Marketing Science*, 25(6): 687–717

Hebb, D. D. (1955), Drives and the C.N.S. (central nervous system), *Psychological Review*, 62: 243–254

Hirschman, E. C. (1980), Innovativeness, Novelty Seeking and Consumer Creativity, *Journal of Consumer Research*, 7: 283–295

Hurt, H. T., Joseph, K. and Cook, C. (1977), Scales for The Measurement of Innovativeness, *Human Communication Research*, 4(1): 58–65

Kirton, M. (1976), Adaptors and Innovators: a Description and Measure, *Journal of Applied Psychology*, 61(5): 622–629

Leavitt, C. and Walton, J. (1975), Development of a Scale for Innovativeness, In: Schlinger, M.J. (Ed.), *Advances in Consumer Research*, Association for Consumer Research, 545–554

Le Louarn, P. (1997), La Tendence a' Innover des Consommateurs: Analyse conceptuelle et Proposition d'une e'chelle de Mesure, *Recherche et Applications en Marketing*, 12(1): 3–20

Leuba, C. (1955), Toward Some Integration of Learning Theories: the Concept of Optimal Stimulation, *Psychological Reports*, 1: 27–33

Midgley, D. F. and Dowling, G. R. (1978), Innovativeness: The Concept and Its Measurement, *Journal of Consumer Research*, 4(4): 229–242

Pagani, M. (2007), A Vicarious Innovativeness Scale for 3G Mobile Services: Integrating the Domain Specific Innovativeness Scale with Psychological and Rational Indicators, *Technology Analysis & Strategic Management*, 19(6): 709–728

Pearson, P. H. (1970), Relationships between Global and Specific Measures of Novelty Seeking, *Journal of Consulting and Clinical Psychology*, 34: 199–204

Raju, P. S. (1980), Optimum Stimulation Level: Its Relationship to Personality, Demographics and Exploratory Behavior, *Journal of Consumer Research*, 7: 272–282

Roehrich, G. (1995), Innovativite's he'doniste et sociale: proposition d'une e'chelle de mesure, *Recherche et Applications en Marketing*, 9(2): 19–41

Roehrich, G. (2004), Consumer Innovativeness: Concepts and Measurements, *Journal of Business Research*, 57(6): 671–677

Rogers, E. M. (1962), *Diffusion of Innovations*, New York: The Free Press

Tellis, G. J., Yin, E. and Bell, S. (2004), Global Consumer Innovativeness: Country Differences and Individual Commonalities, Working Paper, University of Southern California, Los Angeles, CA.

Van den Bulte, C. and Stremersch, S. (2004), Social Contagion and Income Heterogeneity in New Product Diffusion: a Meta-Analytic Test, *Marketing Science*, 23(4): 530–544

Venkatesan, M. (1973), Cognitive Consistency and Novelty Seeking, In: Ward, S., Robertson, T. S. (Eds.), *Consumer Behavior—Theoretical Sources*, Englewood Cliffs, NJ: Prentice Hall, 355–384

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GfK Growth from Knowledge

Price Performance Planner – A sikeres ártervező

- Tudja Ön, hogy mi az árváltozások várható hatása a márkája forgalmára?
- Szeretné megérteni, hogy mekkora az eladási potenciál a különböző árszintek esetében?
- Kíváncsi rá, hogy vajon milyen hatással lesz az árváltozás a konkurens márkákra?
- Szeretné előre modellezni, hogy milyen forgalomváltozást eredményez a márká árváltozása egy-egy adott kereskedő saját forgalmában?

A sikeres marketing alapvető eleme a megfelelő árazási stratégia kialakítása. Ebben segít a GfK új szolgáltatása, a különböző árazási szinteken várható forgalmat modellező **Price Performance Planner**.

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