Abstracts

Abstracts Editor: Merle Crawford, The University of Michigan

The driving essence of *The Journal of Product Innovation Management* is multidisciplinarity—the merging of ideas from many different disciplines and fields of study to comprise the new one of Product Innovation Management. Articles in this journal are selected with an eye toward how they help bridge the disciplines gap. The abstracts are selected similarly, their sources lying in many different technical fields such as engineering and the sciences, plus strategic management, marketing, law, human resources, psychology, design, packaging, and scores more.

The abstracts are written to highlight the substance of each article as it relates to product innovation. The presumption is that most readers will never see the original articles, many of which contain material on other topics. The citations are arranged in a non-conventional format, so that the subjects of the articles stand out.

The Editors

Publications Being Abstracted

Academy of Management J.
Academy of Management R.
Across the Board
Business Horizons
Business Marketing
Business Quarterly
Business Week
California Management R.
Columbia J. of World Business
Creativity and Innovation Management
Daedalus
Design
Design Management J.
Design Studies
Direct Marketing
European J. of Marketing
Food Drug and Cosmetic Law R.
Forbes
Fortune
Futurist
Harvard Business Review
IDEA
IEEE Trans. on Engineering Mgmt.
Industrial Management
Industrial Mgmt. & Data Systems
Industrial Marketing Management
Innovation
Intellectual Property J.
International Design
International Management
International Marketing R.
Inter. J. of Research in Marketing
J. of Advertising Research
J. of Applied Psychology
J. of Business
J. of Bus. & Industrial Marketing
J. of Business Research
J. of Business Strategy
J. of Business Venturing
J. of Consumer Marketing
J. of Consumer Research

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J. of Creative Behavior
J. of Eng. and Technology Mgmt.
J. of General Management
J. of Management Studies
J. of Marketing
J. of Marketing Management
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J. of Market Research Society
J. of Political Economy
J. of Product and Brand Management
J. of Products Liability
J. of Public Policy and Marketing
J. of Services Marketing
Long Range Planning
Management Science
Marketing Intel. and Planning
Marketing Science
McKinsey Quarterly
Planning Review
Prism
Project Management J.
R&D Management
Research and Development
Research Policy
Research Technology Management
Sales & Marketing Management
SAM Advanced Management J.
Sloan Management Review
Strategic Management J.
Tech. Fore. & Social Change
Technology in Society
Technology Review
Technovation
Wall Street Journal

plus several non-English language publications and an occasional scanning of about forty less directly applicable publications.

Regular members of the abstracting staff are the following (the author of any abstract can be determined by the initials given at the end of the abstract citation, unless the abstract was written by the Abstracts Editor):

William J. Altier, Princeton Associates Inc.
Geoffrey P. Lantos, Stonehill College
Albert L. Page, University of Illinois-Chicago
Richard K. Robinson, Marquette University
Hans J. Thamhain, Bentley College
Dharmendra T. Verma, Bentley College

A Value-based Orientation to New Product Planning, Tridib Mazumbdar, *Journal of Consumer Marketing* (1993, vol. 10, no. 3), pp. 28–41 (GPL)

The article's objective is to offer a framework that can assist managers to carry out new product activities with an explicit focus on customer value perceptions. The framework is built on the concept of "perceived value," defined as the degree to which a potential adopter perceives that the benefits of a new product exceed the sacrifices associated with its adoption and consumption. Today's value-conscious customers are neither impressed by the "best" product nor are they persuaded by the "lowest" price *alone*. This realization has drawn the attention of designers, engineers, and technicians to "value engineering" that focuses on offering need-satisfying attributes of a product at the minimum cost to the customer.

Evaluations of perceived value are made to a reference product, the customer's next-best alternative to the new item. Consumers will sometimes use one reference product to evaluate one set of attributes and a different one for other attributes.

Two types of factors determine their benefit perceptions. First, *intrinsic product attributes* are need-satisfying properties such as superior technology, quality, design, or workmanship. The benefits of these depend on the degree to which they are *observable* (observability) or can be experienced by *trial* (trialability). When new product benefits come primarily from search attributes (learned from visual examination of the product or from external sources of product information) it is critical that these attributes be clearly observable to consumers.

Second, *extrinsic cues* are used when the item's value can be determined only after a long period of usage. The needed information is not physically related to the new product but is nonetheless used by consumers to predict performance (e.g., reputation of the firm as an innovator or the brand name). Extrinsic cues are relied on when there is no opportunity for trial or the observation is difficult (consumers lack product knowledge, and perceived risks are high.)

The other half of the value decision, *sacrifice*, comes from price, cost of learning, and cost of replacement. The new product's price is really the expected *future* price of the new product. The cost of learning how to use the new product is a function of (1) the technical complexity associated with using it and (2) the incompatibility between the new product and current beliefs, values, and consumption norms. The

cost of replacement includes financial, emotional, and social costs of giving up old possessions. Knowledgeable consumers are usually quicker to assess new product benefits. Consumers with a favorable attitude toward risk place less emphasis on possible sacrifices.

Based on the relationship between consumer perceptions of benefits and those of sacrifices, the author proposes a two-by-two matrix of strategic situations.

First is the *high-benefits–high-sacrifice* product (e.g., Gillette Sensor). Second is the *high-benefits–low-sacrifice* product (the AT&T Universal card that promised unparalleled service quality with no annual fee for a lifetime). Third is the *low-benefits–low-sacrifice* product (Packard-Bell's inexpensive PCs loaded with popular software). And fourth is the *high-sacrifice–low-benefits* product (the electric car, except for environmentally sensitive consumers).

For each of these products, the author offers some favoring conditions. For example, the extremely easy-to-sell second category product is offered only when, for example, a close-follower might be expected to enter with a higher-value item soon, there is built-in stability in the market that requires intense stimulation to make customers change, or the buyer is a government unit. The third situation (the Packard Bell item) fits where there is little product differentiation in the market, where customers see few intrinsic cues, or they are very price-sensitive. The fourth situation (low in benefits but high in sacrifice) calls for action to change one or the other, such as further product redesign or a special introduction price.

All four of these strategies can be used in any one market, by segmenting it. Strategists are urged to study how consumers use products in the subject category, how current products are replaced, and whether consumers are forward-looking (e.g., in technology-intensive industries).

Concurrent Project Management: A Tool for Technology Transfer, R&D-to-Market, Terrance M. Skelton and Hans J. Thamhain, *Project Management Journal* (December 1993), pp. 41–48

The pressures on managers to bring new products to market faster, without compromising quality and cost, led the current authors to ask some of these managers about their problems and what conditions they feel are necessary to the task. This mail/personal interview study of 183 projects (via interviews with 235 engineering professionals) led to two sets of findings.

First, the participants cited twelve key requirements for effective technology transfer, given here in order of their importance as seen by the managers.

- *Early assessment of feasibility of work in process.* Every function involved in a development should regularly assess feasibilities and should quickly communicate difficulties. This is commonly not done.
- *Senior management support and leadership.* Commitments by senior functional managements will reduce problems of shifting priorities, influence working climates, and enhance cross-functional communication.
- *Project leadership.* This includes providing clarity of project mission, techniques that enhance cross-functional openness, and management styles that foster personal motivation and project enthusiasm.
- *Early involvement in product planning.* This essentially means to have the cross-functional team in operation from the beginning, even before idea generation.
- *Market and customer inputs.* Continuous customer-watching will enhance the flow of good suggestions from customers, both through marketing and as feedback to R&D/engineering.
- *Cross-functional interface personnel defined.* Not everyone can serve in cross-functional situations, and even those who can will need training in operating methods that permit what they want to do. For example, they need interface maps and regular meetings.
- *Working closely with purchasing, suppliers, and subcontractors.* Outsiders must be in the loop, especially when their inputs are components and subsystems that need to be integrated into the new product.
- *Advanced design information.* In situations where the team is not appointed at the start, provisions should be made for design personnel to share their progress with people waiting down the line.
- *Downstream process information.* As with the previous point, those building process capability should not proceed without keeping others informed.