AN EXPLORATORY INVESTIGATION OF NEW PRODUCT ADOPTION DECISION CRITERIA REPORTED BY NON-FOOD RETAIL CHAIN BUYERS

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ABSTRACT

How can the small, unknown supplier break through the central buying unit of a major retail chain organization? Despite what would appear to be an insurmountable barrier, this exploratory investigation offers hope. Small suppliers, using the right marketing strategy, can win over the biggest chains as customers.

The large retail chain is a powerful force in the marketing of goods and services to the consumer. If a manufacturer of consumer goods is to achieve success with his products, it is often essential that these items be purchased for resale by large retail chain organizations, such as Sears, K-Mart and Tandy Corporation. The ultimate success of a new consumer product may depend on its initial acceptance by large retail chains. Chain stores typically use central buying units to screen new products (Gordon 1961, p. 3). "While buying committees play a strategic role in providing market exposure for a new product, a manufacturer's path to this decision-making body is indirect and clouded with uncertainty (Hutt 1979, p. 88)."

This research will attempt to identify those criteria used by large retail chains when deciding which of the many new products offered to them each year by manufacturers they will purchase for resale in their chain. Knowledge of these decision criteria would be very useful to marketers in firms producing new products and attempting to win acceptance by large retail chains.

Methodology

A literature search gave little comprehensive insight concerning the issue. No enumeration of potential decision criteria used in the non-food industry was found, although a study by Hileman and Rosenstein (1961) listed criteria used in the food industry, and Gordon (1961) indicated several questions that supermarket buying committees must answer before deciding the fate of a new product. Several studies, also in the food industry, have been conducted more recently. Borden (1968) conducted a small exploratory study of certain aspects of the introduction of new products to the supermarket trade by food manufacturers and processors. In a series of case studies he looked at the elements in the acceptance or rejection of new grocery products by supermarkets. The study found that the elements which were relevant in the new grocery product adoption decision were: (1) the product proposition (consisting of the product itself, and the complete marketing plan as it relates to the consumers and to the trade), (2) sales communication, and (3) trade buying behavior, criteria, and attitude.

In a survey conducted by Doyle and Weinburg (1973), the supermarket buyer's decision was found to be generally based upon rating eight characteristics. Alford and Mason (1975) found the two most important general criteria by which new grocery products are evaluated are uniqueness of the product, and advertising support.

Heeler et al. (1973) modelled the supermarket product choice process to reduce management appraisal time and obtain a greater understanding of the variables and decision rules used. Montgomery (1975), building on Heeler's work, explored the relationship between 18 potentially important variables and a supermarket buyer's decision to accept or reject a new product, using multiple discriminant analysis and a hierarchical threshold model, termed a "gatekeeper" analysis.

Because of the dearth of criteria reported in the literature for the non-food chain industry, the authors conducted personal interviews with non-food buyers to learn which criteria they use. These were compared with the grocery industry criteria, and a set of 33 criteria was formulated for this study of non-food chain store buying practices.

The study reported here is an attempt to address the void in the literature relating to the non-food industry. It is an exploratory investigation which generates a list of criteria which buyers in a diverse set of non-food retail chains report as important considerations in evaluating new products offered to them.

This study identified the subjects to be examined as members of the CBUs of retail corporations operating in non-food areas. Examples of respondents to this study include Firestone, K-Mart, Sears, Shoppers Drug Mart and Woolworths.

Building on the criteria which have been reported for the supermarket industry, personal interviews with purchasing executives of Sears, Canadian Tire Corporation, the T. Eaton Co. Ltd. were used to identify non-food new product decision criteria. These interviews not only generated numerous decision criteria containing many items not mentioned in the grocery industry literature, but also provided the authors with fairly detailed interpretations of specific factors. It should be

TABLE 1
Number of Stores in Chain

Number of Stores	Respondents	Percent
5 - 9	24	9
10 - 19	23	9
20 - 29	37	14
30 - 49	23	9
50 - 99	59	22
100 - 199	50	19
200 - 399	29	11
400+	18	7
Totals	263	100%

noted that these interpretations frequently were different from the meaning of the criteria which had been mentioned in the Hileman and Rosenstein paper.

A three-page, self-administered questionnaire was developed and pre-tested through repeat personal interviews with the buying executives mentioned above.

Respondents were identified as follows: First, non-food chain stores with five or more geographic locations were selected using the Directory of Retail Chains in Canada (1982). There were 270 chains in the population. Then each firm was contacted by mail and was asked to submit a list of its various product categories or classes, each group of which was the responsibility of a principal buyer. Names and addresses of these principal buyers were requested, and follow-up letters were used to ensure maximum participation. In the cases of the largest chains, this technique was supplemented by telephone calls and personal visits. One hundred and forty-four firms agreed to participate. The response rate to this initial request to participate in the study was 53%. A total of 506 names was generated.

The research questionnaire was mailed to the 506 buyers, with a second wave mailed a month later. Two hundred and seventy-two usable questionnaires were returned, providing a 54% rate of response from principal buyers within these firms. It should be noted that the results of the survey presented here reflect self-reports by the chain store buyers, and not determining behaviors.

The type of non-food chains was quite varied. Nevertheless, more than 80% of respondents came from either department, hardware, automotive, clothing, drug or shoe chain stores. Half of the respondents reported sales in excess of $75 million. Although 21% of the respondents had greater than 20 years of experience in the buying function, one-quarter of the buyers had been buying for five years or less. The number of new items adopted by an individual buyer during the preceding year was considered to be an indication of his relative new product adoption activity. At the "heavy" end, 30% of the respondents purchased 100 or more new items per year, while the "lightest" 28% purchased 10 or fewer new items per year. In geographic coverage of the chain organizations, nearly one-fifth of the respondents' operations were restricted to one province, while approximately two-fifths were nationwide in scope. The most-represented type of product line was clothing (36%), followed by supplies and furnishings for the home (19%) and for renovation (17%). Twenty-nine percent of the respondents worked in chains employing five or fewer buyers, while 26% worked in companies with more than 50 buyers. Eighteen percent of the respondents were less than 30 years of age, and only 14% were older than 50. All but four of the respondents had completed high school, while 62% had completed a higher level of education. The number of stores in the responding chains is shown in Table 1.

Criteria

The list of 33 decision criteria which had been developed and revised according to personal inter-

views with purchasing executives was organized under seven categories. Respondents rated the 33 criteria on a five-point Likert-type scale according to their importance in assessing whether or not to adopt a new product (5 represented most important, and 1 was unimportant). The seven categories are listed in sequence of their mean weighted importance to respondents in Table 2. Criteria were weighted by summing the five point ratings, across all the respondents. Those who did not respond to a particular question were excluded from the calculation of the mean. It can be seen that the most salient criteria, in order of importance are:

1st   Expected profit contribution
2nd   Supplier's ability to fill repeat orders quickly
3rd   Product quality
4th   Retailer or dealer markup
5th   Product meets government regulations
6th   Competitive price
7th   Supplier's known track record
8th   Manufacturer's initial supply capabilities
9th   Potential market volume
10th Product fits new trends in market

These choice criteria were commonly held no matter what chain store size, experience, age or education of the buyer, or type of chain. One way ANOVAs were found insignificant at the 0.10 level.

Despite the fact that the choice criteria were common to respondents across the demographics, follow-up personal interviews indicated that there were additional criteria (not initially investigated in the study) which were considered relevant. Those most frequently mentioned are listed below in order of importance. They cannot be compared in relative rank to the other 33 criteria because all respondents did not have the opportunity to evaluate them.

1. Exclusivity – the desire of the buyer that his chain be the only outlet in his trading area to handle the new product.

2. Physical Distribution Considerations – terms of purchase vs. SKUs (stock-keeping units), transport mode vs. freight rates, rebates, etc.

3. Image – the ability of the new product to be congruent with the image projected by the retail chain and the types of products it already carries.

4. Trustworthiness – the perceived honesty and reliability of the supplier.

These additional four factors may have an impact on the ranking of importance of choice criteria reported here, and should be investigated in future research.

Dimensions Related to Degree of adoption

Several hypothesized relationships related to the number of new products adopted in a year by a buyer were tested at the 10% level using chi-square analysis. The 10% level was selected because of the exploratory nature of the study.

Therefore, it would provide a better insight into the future development of a criteria model without inadvertently discarding variables which might be important for future model building.

It should be noted here that exporatory studies generally do not involve the testing of hypotheses. However, researchers usually have notions about what kind of relationships might exist (even though they have not been formally articulated). Since the literature provided no theoretical linkages, the authors based their notions on the personal interviews that had been conducted with CBU decision makers in non food chains, and stated them more formally as follows:

1. Buyers in chains with a large number of people in the CBU (6 or more members in the CBU) will adopt a proportionately larger number of new items than buyers in chains with a small CBU (5 or fewer members in the CBU).

2. Buyers in older firms (31 years or more in existence) will adopt proportionately more new items per year than buyers in younger firms (less than 31 years in existence).

3. Buyers in chains with operations in only one province will adopt proportionately fewer new items per year than those in chains which operate nationwide.

4. Buyers in large firms (sales $100 million or more) will buy proportionately more new items per year than will buyers in small firms (sales less than $100 million).

5. Older buyers (32 years of age and older) will adopt proportionately more new items per year than will younger buyers (less than 32 years of age).

The hypothesized relationships were found to be significant at the 10 per cent level, with moderately strong predictive ability (see Table 3). The lambda coefficients ranged from a low of 0.09 to 0.20. It was found that in chain stores having a larger number of people responsible for buying (six or more buyers), individual buyers purchased a relatively larger number of new items. Buyers in longer established firms were found to adopt proportionately more new items than those in companies 30 years or less in existence. Chain buyers in stores operating in only one province were found to adopt proportionately fewer new items than their counterparts in companies with operations in several provinces, nationwide, or operating internationally. Buyers in firms whose annual sales volumes exceeded $100 million adopted relatively more new items than those in smaller organizations. Buyers older than 32 years of age were found to adopt proportionately more new items than younger buyers.

Some possible ad hoc explanations of these findings would include: a) Larger firms are more capable of absorbing the potential losses implied by taking risks with new products. b) Experienced buyers are more familiar with their markets, and with the track records of previous adoptions. Thus they are more confident in screening new products and feel less uncertainty. c) In larger firms, there is greater specializa-

tion according to product category. Thus the buyer has greater expertise in his specialized group of products d) Buyers in chains with geographically diverse operations are faced with a mosaic of customer needs and tastes, and hence must adopt a wider range of new products to serve their markets adequately.

TABLE 2
Criteria Salience

Criterion
Weighted Score
A. PROFIT x = 460

1. Expected profit contribution 469
2. Retailer or dealer markup 450

B. SUPPLIER x = 403

3. Ability to fill repeat orders
    quickly 459
4. Supplier's known track record 436
5. Initial supply capabilities 431
6. Financial capabilities 384
7. Well-known brand name 378
8. Single source wide product range 332

C. LEGAL CONSIDERATION x = 402

9. Meets government regulations 447
10. Potential liability of retailer
     concerning the new product 411
11. New product raises questions
     concerning warranty on customer's
     other products 349

D. TIMING CONSIDERATIONS x = 391

12. Fit with new trends in market 426
13. Product introduction timing 415
14. Economic conditions 371
15. Timing of supplier's sales calls 353

E. PRODUCT/MARKET CONSIDERATIONS x = 386

16. Quality 453
17. Competitive Price 438
18. Potential market volume 432
19. Fits gaps in retailer's line 392
20. Favorable test market results 376
21. Life cycle considerations 363
22. Product range 341
23. Evidence of another major retailer's
     purchase of product 293

F. PRODUCT UNIQUENESS x 377
24. Distinctive styling 392
25. Performs some functins better than
     current products 388
26. Well-known brand name 381
27. New features built into the product 380
28. Function not previously available 370
29. New combination of functions 351

G. PROMOTION x = 337

30. Advertising support by manufacturer
     (supplier) 410
31. Package attributes 355
32. In-store point of sale promotional
     material provided by supplier 318
33. Manufacturer's rebates to consumer 265

These relationships would suggest that the individual who wishes to introduce a new non-food product to a retail chain organization might improve his probability of obtaining adoption if he were to pursue a strategy of contacting an older buyer, who works in a chain incorporated more than 30 years ago, which is operating in more than one province, which has a central buying unit consisting of six or more buyers and whose dollar sales volume is larger that $100 million. Such a strategy would appear to have a better chance of success and thus, where possible, should be initiated before approaching other types of buyers and chains.

The authors speculate that the introduction of a new product in the United States would be enhanced by using the same strategy. The assumption is that there would be little difference between CBU purchasing behavior in Canada and in the United States, as a similar North American corporate environment is shared. A further assumption is that the factors which tend to generate light adoption by buyers in a single province chain operation would tend to foster greater restraint in adoption in a retail chain whose operations were limited to a single state.

The three most important criteria in overall ranking by respondents - expected profit contribution, supplier's ability to re-order quickly, and product quality - were tested, using chi-square to identify whether they were considered to be "most important" significantly more often by respondents in larger firms (more than $100 million in sales volume) than in smaller chains (less than $100 million). No difference could be found between large and small firms on the first ranked criterion (expected profit contribution). However, large firms did respond "most important" more frequently than small firms on the second ranked "ability to fill repeat orders quickly" (chi-square = 2.77, significance = .096) and the third ranked "product quality" (3.39, .066). Since larger chains tend to be relatively heavier adopters, the prospective supplier trying to introduce a new product should attempt to meet or exceed the chain's expectations concerning these criteria.

Industry Perceptions of Criteria

The authors hypothesized that there may be differences between different industries on the importance of the various new product adoption decision criteria. From the total array of respondents, six industries were selected. Using t-tests on the industry mean values of the 33 decision variables, it was found that the greatest difference in perception between industry groups of CBUs occurred between hardware chain CBUs and shoe chain CBUs. Between all of the paired groups there were differences in importance on a minimum of three decision criteria. Interestingly, the industries with the most agreement on importance of the decision were the hardware CBUs and the stationery CBUs.

A frequency count of significant differences in importance of the decision criteria between combinations of pairs of the six industries indicated that difference in importance rating is greatest on the criterion "the single source supplier offering a wide product range." Five of the 33

criteria generated no significant difference in the combinations of matched importance rating. In other words there was unanimous agreement on the relative importance of: supplier's track record, supplier's purchase of product, life cycle considerations, and timing of the supplier's sales calls.

It should be noted that the first three criteria in overall ranking (expected profit contribution, ability to fill repeat orders quickly, quality) were viewed differently between the selected industries a total of only five times. In other words, there was fairly consistent agreement on their relative importance. Thus, as long as these prime criteria are satisfied first, then the approach of emphasizing those criteria identified as differentially important between industries is of value. However, the prime importance of the top ranking criteria must not be neglected. Consequently, although one can come up with a general overall ranking of criteria importance and this is a useful guide in preparing a marketing strategy for introduction of new products to CBUs, it is nevertheless worthwile to recognize that various market segments may evaluate new offerings differently. Therefore, for example, the firm with a new non-food product which could be sold through hardware stores and department stores (as many products can) should be aware of the need to adjust its strategy when approaching these two different types of chains. The reason for this can be seen from the matrix in Table 5. The CBU decision criteria exhibit substantial differences in their importance.

Conclusion

It would appear that the small, relatively unkown supplier has a better chance of having his new product adopted by one of the larger chain operations since they appear to be more innovative in their new product selection than smaller chains.

It is interesting to note that a number of criteria which would be extremely difficult for the small, relatively unkown supplier to overcome were not found to rank high among the choice criteria. Such difficult-to-fulfill criteria might include "well-known brand name", "single-source supplier of a wide product range", "evidence of another major retailer's purchase", and "advertising support provided by supplier." Thus, an important conclusion of this study is that the difficulty for a small, relatively unknown supplier to penetrate the CBU of a major retail chain organization is less than originally anticipated by the authors and, indeed, less than was indicated by personal interviews with purchasing executives during the authors' preliminary investigation of the topic.

Consequently, the results of this research provide an optimistic outlook for the smaller potential supplier to large retail chains. To the extent that such a supplier is able to fulfill the expectations of CBUs regarding the most highly ranked decision criteria (expected profit contribution, ability to refill orders quickly, product quality, etc.) his success of becoming an "in" supplier, using the terminology of Robinson et al. (1967), will be similar to that of a larger, better known potential supplier.

TABLE 3

Relationships to Degree of New Product Adoption

Variable	x	df	Significance	Lambda
Number in Central Buying Unit	3.50	1	.061	.137
Age of Firm	3.01	1	.083	.200
Geographic Coverage	8.27	1	.004	.101
Firm's $ Sales Volume	5.20	1	.023	.088
Respondent's Age	5.08	1	.015	.162

TABLE 4
Number of Significant Differences Between Chain Types

	Stationery	Drugs	Clothing	Shoes	Hardware	Dept. Store
Stationery	X					
Drugs	6	X				
Clothing	5	7	X			
Shoes	4	9	7	X		
Hardware	3	5	11	15	X	
Dept. Store	5	4	8	7	10	X

Frequency of Occurrence of Significant Difference Between Pairs of Chain Types
(Reflected in Matrix above)

Criterion No.	Frequency	Criterion No.	Frequency	Criterion No.	Frequency
1	2	12	5	23	0
2	3	13	1	24	4
3	2	14	1	25	3
4	0	15	0	26	1
5	0	16	1	27	8
6	1	17	3	28	4
7	5	18	5	29	4
8	9	19	2	30	5
9	6	20	4	31	7
10	6	21	0	32	5
11	4	22	1	33	2

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