

ADOPTION PROCESS AND INNOVATIVENESS IN INDIAN CONTEXT

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ABSTRACT:

An attempt is made to find out the adoption process of innovation. It provides scope for the evaluation of individual interest in innovativeness. Different variables of innovativeness like personal variables, product variables and communication flow are thoroughly examined. The analysis is carried out to evaluate different stages involved in the adoption of a new product. The individual of innovators and non-innovators in innovativeness are also examined.

KEY WORDS: Innovators, Non – innovators, Adoption process, Innovativeness, Communication variables

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INTRODUCTION:

The consumers may pass through various mental processes before deciding to adopt a new product. They may move to different stages like no awareness stage, awareness stage, interest stage, evaluation stage, trial stage and finally adoption stage. These stages are very similar to the 'buying decision processes. When the product is an innovation, the adoption process is actually a special case of buying decision making. Rogers and Shoemakers call it as the "innovation decision process"⁽¹⁾. It should be observed that any innovation may be rejected at any stage of the adoption process. This adoption stage suggests that the new product marketer should think how to facilitate consumer transition through these stages.

ANALYSIS & DISCUSSION:

Stages in Adoption

Marketers do not promote simply to inform, educate and entertain; they communicate to facilitate satisfying exchanges. In the long run, such promotion is to influence and encourage the buyers to adopt or accept new goods, services and ideas. The ultimate effectiveness of promotion is determined by the degree to which it affects product adoption among potential buyers. One should not view product adoption as a one-step process. It is the mental process through which an individual passes from first knowledge of an ovation to a decision to adopt or reject and to confirmation of this decision⁽²⁾. The acceptance of a product involves many steps. Although there are several ways to look at the product adoption process, one common approach is to view it as consisting of five stages: awareness, interest, evaluation, trial and adoption⁽³⁾. Everett M. Rogers has briefly described these stages. The following is based largely on his descriptions.

At the *awareness stage* an individual is exposed to the innovation but lacks complete information about it. The awareness stage is often entered by accident rather than as a purposive effort. However, it may require initiative of an individual to enter even at this stage, due to the process of selective perceptions. According to Rogers: "Perhaps one is faced with a chicken-and-egg type of question- Does a need precede

awareness of an innovation or does awareness of a new idea create a need for that innovation? The available research studies do not yet provide a clear answer to this question, but tentative evidence suggests the latter is more common⁽⁴⁾.

At the interest stage the individual becomes interested in the new product and seeks additional information about it. He has generally a favorable impression of the object or idea, but has not yet been able to judge its suitability for his particular purpose. His psychological involvement with the innovation is greater than at the awareness stage and his information seeking is definitely purposive. This stage may also be referred to as the information or knowledge stage.

During the *evaluation stage* the individual attempts to assess what impact will the adoption of innovation have on his present situation or the situation he expects to be in at some future time. This stage usually involves a mental trial in which the advantages of adoption are weighed against the disadvantages. This stage is one of the most difficult and people who pass through it sometimes have difficulty in reporting what actually goes on. Since uncertainty certainty exists and the decision to move forward towards adoption or discontinue evaluation must be made soon. This stage often includes a search for additional information, most likely from personal sources, such as friends and salesman. This stage is also referred to as the application, acceptance, and evaluation–application–decision or conviction stage.

In the *trial stage* an innovation is used on a small scale to determine its suitability. Most persons will not adopt an innovation without trying it first on a probationary basis. Ryan and Gross found that however clearly the advantages of hybrid corn had been demonstrated by community experience most farmers insisted upon personal experimentation before they would adopt innovation completely⁽⁵⁾. Rogers also points out that the trial stage is especially critical because there is a chance that the innovation will be rejected by mistake, either because suitable trial conditions are not established and maintained or because the results of the trial are misinterpreted.

At the *adoption stage* an individual fully embraces the innovation, using it permanently and exclusively in the application for which it is especially suited.

In this study, based on the definition of new product, nine products are selected. Apart from the above mentioned five stages, the researcher includes one more stage as

'unawareness' stage. The unaware category is comprised of persons who are considered potential buyers of the new product but who are not aware of its existence.

These six stages were segmented into three groups. First group consists of unawareness stage. Second group includes awareness, interest and evaluation stage. Last group consists of trial and adoption stage. Table 2.1 shows the adoption process of the respondents.

TABLE 1 - NUMBER AND PERCENTAGE OF RESPONDENTS IN EACH STAGE OF ADOPTION PROCESS

Group	Stage	Statements	No. of Respondents	Percentage
I	A	Totally not aware of the availability of the new products in the market	0	0
II	B	Aware of the new product and lacks information about them.	9	1.7
	C	Interested to buy and seek additional information about them.	105	20.1
	D	Evaluating the possible merits and demerits of the new products.	71	13.5
III	E	Purchased the new products on small-scale in order to determine its utility.	140	26.7
	F	Decided to continue the new products.	199	38.0
		Total	524	100.0

From table 1, it can be observed that there is no one in the unawareness stage. That means all the respondents are aware of the new products, being introduced into the market. Respondents in the second and third group termed as non-innovators and innovators respectively. Among the sample respondents, 185 respondents are non-innovators and 339 are innovators. Of the 185 sample non-innovators, 1.7 percent is in the awareness stage, 20.1 percent is in the interest stage and followed by 13.5 percent in the evaluation stage.

With regard to innovators, it may be noted that 26.7 percent of the respondents purchased the new products on a small scale to determine its utility in their own situation. After the trial use of the new product, 38 percent of the respondents have

decided to continue the full use of the innovation.

The significance of all this to the marketer is that people seek and are susceptible to different types of information, depending on the stage of adoption they are in. If the information received at any stage prior to adoption is less than convincing, rejection may occur. And if enough people reject the innovation, it will fail.

Furthermore, the various stages may consume considerable time depending on the nature of the innovation. It is essential that the marketer gauge the time requirement accurately, otherwise he may withdraw the item just before people are already to adopt it. It is likely, also that many potentially successful products and services fail because those responsible for testing them misjudge the time required for all stages to be traversed and funds run out before an adequate revenue stream materializes.

INNOVATIVENESS:

Innovativeness is the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than the other member of a social system⁽⁶⁾. Consumer innovativeness is the most frequently researched concept in consumer behavior. Midgley and Dowling have provided an excellent summary of the issue involved in the conceptual definition and measurement of consumer innovativeness. One outcome of their thoughtful discussion has led to the conclusion that "innovativeness is the degree to which an individual makes innovation decisions independently of the communicated experience of others⁽⁷⁾."

Marketers are strongly motivated to determine what variables are associated with innovativeness. This is based upon a persistent belief that innovators are different in important ways from non-innovators or late adopters⁽⁸⁾. With the knowledge of such differences, it may be possible to design new products that are compatible with variables leading to innovativeness or to direct other marketing efforts towards potential innovators. There are three primary groups of variables that are examined in connection with innovativeness. These are consumer characteristics, product

characteristics and social relations within the potential market.

The Diffusion Documents Center at Michigan State University has compiled findings based upon an exhaustive search of the diffusion literature. Each empirical study is placed on punch cards so that cross tabulations can be accomplished readily. In a compilation of 4197 empirical findings, it was found that 2486 related to the problem of determining independent variables associated with innovativeness. The following section of this chapter relies heavily on findings from this compilation⁽⁹⁾.

Some people will adopt an innovation soon after it is introduced. Others will delay before accepting a new product and still others may never adopt it. Based on the adoption process, this study has classified the respondents into two groups, innovators and non-innovators. It is assumed that non-innovators are potential buyers of new products but they do not take the buying decisions immediately.

CONSUMER CHARACTERISTICS ASSOCIATED WITH INNOVATIVENESS:

In the previous chapter it is found that the innovators are more venturesome, more socially integrated, more socially mobile, more privileged, more interest polymorphic, more status concerned and less cosmopolitan outlook than non innovators. Other personal variables most often associated with innovativeness are age, education, income and social status. These variables are elaborately discussed in the forthcoming pages.

TABLE 2 - BREAKDOWN OF RESPONDENTS BY PERSONAL VARIABLES

Variables	Variables	No. of respondents	
		Innovators	Non- innovators
Age	Below 35 years	240(70.8)	26(14.2)
	36-45 years	72(21.2)	135(72.9)
	Above 45 years	27(8.0)	24(12.9)
Education	School level & Below	53(15.6)	128(69.2)
	Graduate	90(26.5)	21(11.3)
	Post graduate	102(30.2)	16(8.6)
	Professional	94(27.7)	20(10.9)

Occupation	Professional	102(30.1)	11(5.9)
	Businessman	50(14.8)	37(20.0)
	Govt. employee	41(12.0)	101(54.6)
	Private employee	95(28.0)	15(8.1)
	House wife	51(15.1)	21(11.4)
Family Income	Below Rs.5000	31(9.2)	122(65.9)
	Rs.5001-10000	208(61.3)	35(18.9)
	Rs.10001-15000	58(17.1)	19(10.3)
	Above Rs.15000	42(12.4)	9(4.9)

(Percentage are given in parenthesis)

Table 2, clearly indicates personal variables associated with innovativeness. On the basis of age, respondents were classified into three groups, such as below 35 years, 36-45 years and above 45 years. Results show that 70.8 percent of innovators belong to below 35 years' age group, whereas only 14.2 percent of non-innovators belong to this group. Based on these results, it can be concluded that the early adopters of the new products tend to be less than 35 years old.

It is found that innovators on average have a significantly higher educational qualification. It should be noted that 84.4 percent of the innovators are above the school level qualification. In case of non-innovators only 30.8 percent are grouped into graduates, post-graduates and professionals and the remaining non innovators are at school level and below school level qualification. This helps to confirm the results as that education is found to be higher for innovators than for non-innovators.

Occupation of the respondents is considered as important personal variables of innovativeness as it is most acceptable variable for measuring the status of an individual. Five occupational titles have been used in this study, such as professional, businessman, government employee, private employee and housewife. A look at the table 5.2 reveals that majority of the innovators had a significantly higher occupation. Of the innovators more than 30 percent consists of professionals, followed by the individual working in a private concern, housewife, businessman and government employee comprising 28.0 percent, 15.1 percent, 14.8 percent and 12.1 percent respectively. In case of non-

innovators, it is found more than 50 percent consisting of the persons working in public sectors only. It should be noted that only 5.9 percent were professionals. Of the remaining, businessmen constituted 20 percent, housewives 11.4 percent and private employee 8.1 percent. In occupational level, it was found that innovators on average had considerably higher status than non - innovators.

The last but most frequently tested variable is income of the respondent. Table 2 presents that the majority of the sample innovators belong to the income group of Rs. 5001 - Rs.10, 000, 17.1 percent belong to Rs. 10001 - 15000 group and 12.4 percent constitutes above Rs.15001 group. The group (Below Rs.5000) consists of only 9.2 percent. In the case of non-innovators majority of them belong to the income group of below Rs.5000. Therefore, it should be concluded that the consumers with higher income are most likely to be among the earliest adopters of innovations than non-innovators whose income is less than Rs.5000.

PRODUCT CHARACTERISTICS ASSOCIATED WITH INNOVATIVENESS:

The acceptance of a new product by innovators is determined by the characteristics of the product itself. It is more correct to say that the product's acceptance is determined by what consumers perceive the product to be. Diffusion research indicates a number of product characteristics associated with the early adoption of the product. Some product characteristics that influence the rate of adoption have been identified. Such characteristics have relative advantage, compatibility, complexity, observability and trialability or divisibility of an innovation.

COMMUNICATION VARIABLES ASSOCIATED WITH INNOVATIVENESS:

The relations between a consumer and other members 'and objects of a social system influence the rate of adoption of new products. Intensive contact with the mass media and commercial change agents tend to produce individuals who accept

innovations more readily than others. The various findings also indicate that different media play varying roles in the adoption process for both innovators and non-innovators. The agricultural tradition notes that mass media are of most importance at the awareness and interest stage while government agencies rank second and neighbors' and friends rank third. By the evaluation, trial and adoption stages, neighbors and friends are of most importance with government agencies still in second place and mass media now ranking third⁽¹⁰⁾. This is illustrated in Table 3.

TABLE 3 - THE ADOPTION PROCESS AND SOURCES OF INFORMATION

AWARENESS	INTEREST	EVALUATION	TRIAL	ADOPTION
Knows about it; lacks details	Develops interest, gathers general Information and facts	Mental trial, application to personal situations; can I do it?	Small-Scale, experimental use; how to do it!	Large-Scale continued use; satisfaction
Mass media; Radio, TV, Newspapers and Magazines	Mass media	Neighbors, Friends	Neighbors, Friends	Neighbors, Friends
Govt. Agencies	Govt. Agencies	Govt. Agencies	Govt. Agencies	Govt. Agencies
Neighbors, Friends	Neighbors, Friends	Neighbors, Friends	Neighbors, Friends	Neighbors, Friends
Salesmen, Dealers	salesmen, Dealers	Salesmen, Dealers	Salesmen, Dealers	Salesmen, Dealers

Source: The Diffusion process, Special report, # 18, Agricultural Extension Service, Iowa state College (Ames, 1957), p.4

Similarly, the suggestion of the doctor study is that, “--- the earliest sources of information, the salesmen or direct mail, serves an informational role primarily but is not regarded as a sufficient basis of action”⁽¹¹⁾. The majority of research on diffusion

indicates that communication from the mass media affect the adoption process most strongly at the awareness stage, the most important function being to inform the public of new products or ideas⁽¹²⁾.

The analysis of communication flow and results, as classified by communication channels are given below:

TABLE 4 - COMMUNICATION VARIABLES RELATED TO INNOVATIVENESS

VARIABLES	INNOVATORS	NON-INNOVATORS
Personal contact	42.5%	13.5%
Mass media exposure	40.4%	64.9%
Retail outlet source exposure	17.1%	21.6%
Opinion Leadership	46.1%	12.7%

Generally innovators are more in touch with mass media as a source of their innovative knowledge and that they in turn, become a source of innovative knowledge for other people. But in this study, the innovativeness is in fact much less exposed to mass media than non-innovators. For innovators, personal contact was dominant with mass media and retail outlet. For non-innovators, mass media is the most important, but only by a lead of 13.5% over personal contact and 21.6% over retail outlet sources.

It is found that the non-innovators attach more importance to mass media than turning to their personal contact exposure yet the picture is not significant. However, innovators are found to have an interaction with friends, relatives and neighbors. Analysis of innovator's opinion leadership exposure leads to the conclusion that the innovators influence others regarding innovativeness in general. Only 12.7 percent of non-innovators perceive themselves as opinion leaders. Perhaps such people also influence others not to adopt new products.

Other activities under the control of the marketing organizations have a significant impact on adoption. Sampling has been shown to be one of the most effective techniques for informing the consumers of a new product. Also, the research of Willett and Pennington on the nature of the salesman-customer problem-solving process is consonant with the view that the personal salesman plays a very important role in providing information to the consumer.⁽¹³⁾ Steffire and Barnett have advanced a technique called cognitive mapping to determine how consumers view a product category with the objective of determining how effective advertising should be developed for new products.⁽¹⁴⁾

CONCLUSION:

People progress through different stages while deciding to adopt or reject a product. Since adoption is a process, people must progress through the awareness, interest, and evaluation stages before proceeding to trial and adoption. The first part of this paper segregates the respondents into different stages of the adoption process. Respondents in the awareness, interest and evaluation stages are called non-innovators and in the trial and adoption stages are called innovators.

The next part of this paper described as 'innovativeness' is one of the most valuable functions of diffusion studies. It indicates that acceptance of a new idea does not come all at once in a social system. The idea is transmitted to a few innovators who must pass through various stages leading to adoption. After some innovators have adopted the product, others may follow, depending on the value of the innovation and the process of influence. In general, innovativeness is connected with three characteristics, such as personal characteristics, product characteristics and communication. This paper examined these three groups of variables in connection with innovativeness.

It is reasonable to assume that the age of the innovator is related to the specific product category in which he or she innovates; however, research suggests that innovators tend to be younger than non-innovators. Consumer innovators have more formal education, higher family income and are more likely to have higher

occupational status than later adopters or non-innovators.

A comparison of the media habits of innovators and non-innovators suggests that innovators have some what greater total exposure to personal sources than non-innovators. The study reveals that non-innovators have higher exposure to mass-media than innovators. The innovators tend to be more influential than non-innovators in regard to new products. Innovators perceive themselves as opinion leaders. It should be concluded that the acceptance of new products does not occur for 'one' reason or because of a 'single' influence. A variety of forces is necessary to stimulate adoption.

REFERENCES:

- Rogers, E.M. "New Product Adoption and Diffusion", *Journal of Consumer Research*, Vol.2 (March 1976), pp.290-301 and Shoemaker, Communication of Innovativeness : A cross – cultural Approach, New York : The Free Press, USA, 1971, p.18
- Everett, M.Rogers, **Diffusion of Innovation**, Glencoe, 1962, p.13
- Rogers, *Diffusion*, p.16.
- Everett M.Rogers and J.David Stanfield, "*Adoption and Diffusion of New Products: Emerging Generalisations and Hypotheses*" Paper presented at the Conf. on the Application of Sciences to Marketing Management, Purdue University (July 12-15, 1966).
- Ryan and Neal C.Gross, *Acceptance and Diffusion of Hybrid Seed Corn in Two Iowa Communities*. Research Bulletin 372, Iowa Agricultural Experiment Station, Ames, 1950
- Rogers, *Diffusion*, p.28.
- Midgley, David F. and Ghahame R.Dowling, "concept and its Measurement", **Journal of Consumer** (March 1978), pp. 229-242.
- William E.Eell, "Consumer Innovators: A Unique _ in Stephen A. Greyser (ed.), *Toward Scientific*, Marketing Assoc, 1963, pp.85-93.
- Everett M.Rogers and J.David Stanfield, "*Adoption and Diffusion of New Products: Emerging Generalisations and Hypotheses*", Paper presented at the Conf. on the Application of Sciences to Marketing Management, Purdue University (July 12-15. 1966)

- *The Diffusion Process*, Special Report # 18, Agricultural Service, Iowa State College Amen, 1957, p.5.
- Elihu Katz, “The Social Itinery of Technical Change: Two studies on the Diffusion of Innovation”, Human Organization, XX (Summer 1961), p.78
- Rogers, *Diffusion*, p.39.
- Ronald P.Willet and Allen L.Pennigton, “Customer and Salesman: The Anatomy of Choice and influence in a retail setting” – A research report – Harward Business Review, Vol.30, pp. 533-616.
- Volney Steffire, “Market Structure Studies : New Products for Old Market and New Markets (Foreign) for old products” , Journal of Advertising Research, Vol.8 (Dec.1998), pp. 13-18

