

Innovators Vs Laggards: Do they differ in the product adoption behavior? - An investigation in the Indian context

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Abstract

Personal computer market is undergoing a boom in the Indian sector. The burgeoning market potential for personal computers particularly in the household segment is attracting the increased attention among global players. However not all household customers adopt personal computers at the same point of time. Against this context, this paper attempts to investigate the difference in the adoption behavior of innovators and laggards. The study assumes the nature of explorative research design and is based on primary data collected through interviews scheduled from 108 respondents who have adopted personal computers at different periods of the time scale. The study findings highlight the need for adopter centered strategies in framing marketing strategies so as to enhance the diffusion of personal computers in the Indian context.

1. Introduction

A plethora of new products and services have been introduced in the Indian market. India is viewed as a favorable destination due to its market size as well as the rising number of middle income households whose spending pattern has shifted from necessities to luxuries.

However all new products introduced in the market are not successful. Among other things, the success or failure of a new product depends on the rate of adoption of the product. Again, all the consumers may not adopt new products introduced in the market at the same point of time. This may be due to various reasons which

may either be adopter centered, product centered or market centered. The success of a marketer depends on making the consumer adopt the product within a point of time scale; otherwise the new product may become obsolete. Rate of obsolescence of new product is alarming at present with innovations thronging the market to capture the mindspace and pocket space of consumers.

In this context, it becomes essential to frame customized marketing strategies based on the time scale of adoption by the adopters. This would enable marketers to enhance the rate of adoption of new products. This research study is undertaken in India, to explore the adoption behavior of personal computers. Nearly 6.5 million computers were sold in the year 2007 and a compound annual growth of 20% is expected in the next five years.

The input derived from the present study may enable marketers vying to enhance their market share in India to arrive at an adopter centered approach so as to enhance the adoption of personal computers.

This study is undertaken with the following objectives;

- To identify the demographic profile of innovators and laggards,
- To identify the key factors influencing innovators and laggards to adopt personal Computers,
- To explore the difference, if any, in the adoption behavior of innovators and laggards, and
- To provide recommendations based on these findings.

2. Literature review

Earlier research was reviewed from across the world starting from the 1960's. For this purpose ,leading international journals available in the

areas of Marketing Management, Marketing Research, Consumer Behavior, Consumer Psychology, Behavioral Science and the like has been reviewed. The following pages highlights the major themes reflected in the articles reviewed relating to the problem identified. Robertson (1967) suggests that new product success can be increased by understanding the behavior of consumer innovators and proposed a model of consumer innovators based on five factors viz., entire someness, social integration, cosmopolitaness, social mobility and privilegedness.

In an attempt to distinguish between innovators and non-innovators, Robertson hypothesized that innovators and non-innovators respond differently to the cognitive, affective and cognitive behavioral components. Findings show that, as regards the cognitive dimension, awareness and knowledge of the product did not distinguish between the innovator and non-innovator groups.

In an attempt to identify the consumer innovator, Boone (1970) undertook a study on the Community Antenna Television System(CATV). The study attempted to highlight the socio economic characteristics and the personality of the innovators.

Uhl, Andrus and Poulsen (1970) in their study attempted to identify the laggards with respect to new grocery products. The study hypothesized that certain characteristics are common between laggards and innovators. Findings show that families with laggard food buyers are found to have significantly lower income than families with innovator food buyers. A discriminant analysis describes the variable, and family size is the best discriminator between laggards and early adopters. The second most important variable is lifecycle. Age is the third most important variable followed by family income.

The general patterns in the diffusion of innovations and the impact of expectations of future innovations and situations on the timing of adoption of innovations were examined by Fareena (1987). The study enables us to make predictions about the diffusion process in new situations. Two high-tech consumer durable products, personal computers and video cameras/recorders are considered for developing the expectation model.

Mahajan, Muller and Srivastva (1990) in their study presented an analytical derivation needed to calculate the number and size of adopter categories. The study compares the adopter categories based on the Bass model with those based on normal distribution.

The diffusion of personal computers among professionals is examined to illustrate the connection between diffusion models and the profiles of adopter categories. Findings indicate that the adopter categories are significantly different overall from each other in age, education, household income and occupation. The findings also suggest that early adopters of personal computers tend to use them more often, use a greater amount of software and have higher expertise in their use. It is also found that early adopters of personal computers are more likely to read a large number of computer and business magazines and are more likely to examine advertisements related to personal computers. Furthermore it is discovered that early adopters are more likely to be involved in evaluation and in advising others about personal computers.

Fisher (1990) in his study examined the role of normative outcomes and their antecedents in new product adoption, attitude and intention formation. The study extended the Miniard and Cohen (1983) model of behavioral intentions by examining the effects of the perceived

consumption visibility and association of a new product with an aspirational group on personal and normative outcomes, overall attitude and intentions. The results indicate that social approval is an important determinant of attitude towards early adoption. They also highlight the perceived visibility and the degree to which a new product is associated with an aspirational group are significant antecedents to normative outcomes.

Venkatraman (1991) in her study isolates segments of consumers as cognitive and sensory innovators. For each segment, the study examined the effect on adoption. The products considered for the study were video cassette recorders (VCRs) and personal computers (PCs). Findings showed that cognitive and sensory innovators had a positive relationship with PC and VCR adoption.

Ghislaine (1992) investigated the possibility of different kinds of adopter categorization, to display different preference patterns regarding product features. The role of diffusion-related variables, namely a product's newness and the extent of interpersonal communication are assessed. The study made an attempt to show that the diffusion context can be used to elicit different 'best product' alternatives for different stages of the adoption curve. Prior to market introduction it can help to predict time-dependent changes that are to be made to the product's features to make the adoption occur.

In a cross-national study Razzaque (1994) explored the nation-specific influences on computer adoption within the home environment. The study investigated the participation of family members in the use of home computers, pattern of their usage and their level of satisfaction. Results indicated significant differences between various categories of adopters within a given nation as

well as between nations. Further the study demonstrates that different categories of adopters and non-adopters within a country possess different characteristics and are attracted by various product attributes.

Mahajan and Muller (1998) examined older adults' attitude towards personal computers in general, as well as towards the possible roles the personal computers may play in their lives. The findings indicated that mature adults appear to be receptive to select forms of computer-based lifestyle assistance.

Mahajan and Muller (1998) in their article investigated analytically the markets and the competitive conditions where it is optimal for firms to focus relatively more on the majority than on innovators. Results suggest that if the intensity of influence of the innovators on the majority does not decrease, as more consumers adopt the product, despite the small size of the innovator group, it is always optimal for a firm to allocate relatively more of its marketing efforts and resources to the innovators than to the majority.

Martinez, Polo and Flavian (1998) in their study on the adoption of various consumer durables focused on differentiating the behavior of the different adopter categories. With reference to the acceptance process for new consumer durables, the demographic and socio-economic characteristics of individual in each adopter category are used to differentiate between their behavioral patterns.

Pereira (2002) in her study introduced an adopter-centered, process-oriented model to explore the behavioral process related to technology adoption. The approach allows the exploration of the sub processes that affect the perceptions and attitudes. It provides the opportunity for a much richer understanding of how adoption occurs and how it can be

influenced. This model describes the evolution of the adopter's mental framework and the antecedents and products of those frameworks.

Saaksjarvi (2004) in her thesis examined consumer evaluation of hybrid innovations. Findings showed that consumers evaluate hybrid innovation differently than regular products. Findings also indicated that alongside product categorization, product newness, net benefits, complexity, and consumer motivation all affect the way how hybrid products are evaluated. The above mentioned studies show that adoption behavior related research has been carried out from the 1960's onwards. However studies relating to adoption behavior in general as well as the research studies analyzing the difference in the adoption behavior of innovators and laggards is scarce in the Indian context. Hence this is identified as the research gap leading to the conduct of the present study.

3. Methodology

The study assumes the characteristics of both exploratory research design and is based mainly on primary data collected through specially designed interview schedule. The interview schedule is pretested. Convenient sampling method is adopted and the sample size constitutes 108 respondents. The study is conducted at the Coimbatore district in Tamilnadu, India. The statistical tools used include descriptive analysis, mean score, t-test and factor analysis.

4. Discussion

This section deals with the analysis of data collected through Interview schedule. The respondents constitute 24 innovators and 84 laggards. Attempt is made to explore the demographic profile of the innovators and laggards in terms of gender, age, education, income, occupational status, family size, number of earning members and place of origin. Findings are presented below.

Table No.1. Demographic profile of the adopters of Personal Computers

Variables	Innovators		Laggards	
	Number	%	Number	%
Gender				
Male	20	83.3	65	77.4
Female	4	16.7	19	22.6
Age				
Less than 25 years	1	4.2	9	10.7
26-35 years	3	12.5	23	27.4
36-45 years	9	37.5	15	17.9
46-55 years	8	33.3	32	38.1
Above 56 years	3	12.5	5	6.0
Education				
Informal education	-	-	2	2.4
School Level	2	8.3	15	17.9
Graduation Level	11	45.8	39	46.4
Post Graduation Level	5	20.8	14	16.7
Profession qualification	5	20.8	11	13.1
Others	1	4.2	3	3.7
Monthly Income				
Less than 5,000	1	4.2	1	1.2
5,001-10,000	3	12.5	20	23.8
10,001-15,000	5	20.8	22	26.2
15,001-20,000	7	29.2	20	23.8
Above 20,000	8	33.3	21	25.0
Nature of occupation				
Agriculture	-	-	2	2.4
Business	13	54.2	39	46.4
Employed	9	37.5	35	41.7
Profession	2	8.3	4	4.8
Others	-	-	4	4.8
Family size				
Two	1	4.2	3	3.6
Three	4	16.7	13	15.5
Four	11	45.8	42	50.0
Above Four	8	33.3	26	31.0
Number of earning members				
One	14	56.3	32	51.2
Two	6	25.0	9	38.1
Three	4	16.7		10.7
		43		
Place of origin				
Urban	11	45.8	27	32.1
Semi-urban	11	45.8	48	57.1
Rural	2	8.3	9	10

Categorizing the PC adopters as innovators and laggards reveals that majority of the innovators belong to the age group of 36 to 45 years whereas in case of laggards majority of them belong to the age group of 46 to 55 years. Income profile of the innovators reveals that most of them earn above Rs. 20,000 per month whereas in case of laggards most of them earn between Rs.10,001 to 15,000 per month. Analyzing the place of origin of innovators and laggards reveals that in the case of the innovators category an equal percentage originate from urban and semi-urban areas whereas majority of the laggards originate from semi-urban area.

5. Adoption behavior

Adoption of a product may not be taking place during the same point of time. The adopters fall into different zone of the time scale. The adoption of personal computers started in the year 1995 in the study area. This has been ascertained and confirmed by interaction with various agencies involved in marketing of the products viz., manufacturers, middlemen and prominent buyers belonging to the study area. Furthermore, based on the time scale ranging from 1995 to 2007, the adopters of the products are grouped into five categories viz. innovators, early adopters, early majority, late majority and laggards by assigning due consideration for the period at which the product is adopted. Accordingly those who have adopted the product between 1995 and 1997 fall in the category of "innovators" whereas those who adopt between 1998 and 2000 belong to "early adopters" category. "Early majority" includes the adopters of the product during 2001, while those who adopted the product between 2002 and 2004 forms the category of "late majority", the rest who adopted between 2005 and 2007 are considered to be "laggards". The above categorization is based on thirteen years life span, from the year of introduction of the personal computer (in the study area) to the year 2007. The "early majority" adopters were fixed at the mean year, 2001, and other categories are fixed before and after the mean year suitably. This approach is similar

to the approach practiced by product adoption behavior researchers across the world. Notable researchers include Rogers and others.

This research study concentrates on the investigating the adoption behavior of the innovators and laggards only. In order to explore this aspect an independent sample, the t-test is used. This technique is used to test whether there exist a significant difference between innovators and laggards, as regards the following select aspects of adoption behavior:

- Importance to information source
- Importance to media
- Role of adopter in information search
- Importance to product variables
- Importance to market variables
- Importance to personal variables
- Importance to method of evaluation
- Importance given to brand evaluation criteria
- Time gap between adoption decision and purchase
- Level of satisfaction.

In this context, the major hypothesis framed is given below:

5.1 Hypothesis: There is no significant difference in the adoption behavior of innovators and laggards. The major hypothesis is divided into several sub-hypotheses and the result is presented under various subheadings.

6. Importance to information sources

The importance given to information source is dependent on various variables. It is likely that the innovators and laggards may vary in respect of the importance given to different sources of information. In this context it is hypothesized as below:

6.1 Hypothesis: There is no significant difference between the innovators and laggards with regard to the level of importance given to the information source.

The above hypothesis is subjected to t-test and the results are tabulated below;

Table No.2
Importance attached to information source

Sources	Value	Significance
Advertisement	-1.315	.191
Show Rooms	.714	.477
Sales person	-.849	.398
Friends/Relatives/Neighbors	1.816	*.032
Family Members	.360	.719
Sales Letter	-1.534	.128
Owners of the product	-.237	.813
Others	-.032	.974

The above table shows that innovators and laggards differ significantly with respect to the information received from friends/relatives and neighbors. In all other cases the hypothesis is rejected.

7. Importance to media

Innovators and laggards may vary in terms of the importance given to media. A particular media may be given more importance by respondents belonging to one category whereas the same media may be given a moderate or least importance by other categories. In this context it is hypothesized that,

7.1 Hypothesis: There is no significant difference between innovators and laggards with regard to the importance attached to media.

The hypothesis is tested and results are given in the table below:

Table No.3
Importance to media

Media	T Value	Significance
Television	.236	.814
Outdoor Advt.	.910	.365
Print media	-1.244	.216
Others	.786	.43

Test results show that the hypothesis is accepted. Hence

it can be inferred that the innovators and laggards do not differ significantly with respect to the importance attached to the media.

8. Role in information search

Innovators and laggards may play different roles in the search for information viz., active, aggressive or passive. In this context it is hypothesized as below:

8.1 Hypothesis: There is no significant difference between innovators and laggards with regards to the role played in search of information.

The hypothesis is tested and results are given in the table below:

Table No.4 Role in information search

	T Value	Significance
Role in information search	-1.000	.317

From the above table it could be seen that the hypothesis is accepted leading to the conclusion that there exists no significant difference between the innovators and laggards as regards the role-played in search of information.

9. Importance to product variables

Importance attached to product variables may vary between the innovators and laggards. The product variables considered for the study are technical superiority, price, functional advantage, ease of operation, consistency, matching to need, complexity, trialability and observability. These variables might have been assigned differing importance in the adoption process by the innovator when compared to the laggard. This is in view of the fact that the adopter categories have different levels of exposure of the product under consideration. Furthermore the importance assigned to the variables goes in tune with the personality, attitude, demographics and other related aspects associated with the adopter concerned. On this account there is every likelihood of difference in the significance attached to product variables.

Against this context the following null hypothesis is formulated:

9.1 Hypothesis : There is no significant difference between innovators and laggards as regard the importance given to product variables.

The hypothesis is tested and results are given in the table below:

Table No.5 Importance to product variables

Variables	T Value	Significance
Technical superiority	.683	*.046
Price	1.515	.133
Functional advantage	-.038	*.036
Ease in operation	-1.023	.309
Consistency	.809	.420
Matching to need	.376	.708
Complexity	1.496	.138
Trialability	1.175	.242
Observability	-.976	.331

It can be inferred from the above table that the innovators and laggards differ in the level of importance attached to technical superiority and functional advantage. In all other cases the hypothesis is accepted.

10. Importance to market variables

The market variables considered for the study such as availability, corporate image, brand image, advertisement, sales person, competing products and special offers might have been assigned with differing levels of importance by adopters belonging to different categories. The category 'innovator' evaluates the product when it is new to the market, whereas laggards evaluate the product when it is more or less familiar in the market. Accordingly, innovators and laggards might assign significance to certain market variables, In this context it is hypothesized as below:

10.1 Hypothesis: There is no significant difference between innovators and laggards with regard to the importance attached to market variables.

The above hypothesis is tested and results are presented in table below:

Table No.6 Importance to market variables

Market variables	T Value	Significance Value
Availability	.340	.735
Corporate image	1.896	*.041
Brand image	.018	.986
Advertisement	1.769	*.032
Salesperson	.208	.836
Competing products	.111	.912
Special offers	.103	.918

From the above table it can be inferred that the innovators and laggards significantly differ in the level of importance attached to corporate image and advertisement. In the case of all other market variables there is no significant difference between the two categories of the adopters.

11. Importance to personal variables

On similar lines, the importance given to personal variables such as expected benefit from the personal computers, influence of family, personal belief and influence of others might vary between the innovators and laggards. In tune with this, it is hypothesized that:

11.1 Hypothesis: There is no significant difference between innovators and laggards with regard to the importance attached to personal variables.

The above hypothesis is tested and results are presented below.

Table No.7. Importance to personal variables

Personal variables	T Value	Significance Value
Expected benefit	4.84	*.030
Family	1.116	.267
Personal belief	1.331	.186
others	.231	.818

From the table it can be inferred that there is a significant difference between innovators and laggards as regards the expected benefit from the adoption of personal computer. In all other cases the hypothesis is accepted.

12. Importance to method of evaluation

Method of evaluation used in the decision regarding adoption may differ between innovators and laggards. A method of evaluation considered favorably by one category of adopter, may be perceived differently by another category of adopter. In this context it is hypothesized as below:

12.1 Hypothesis: There is no significant difference between innovators and laggards as regard the importance given to method of evaluation. The above hypothesis is tested and results are presented below:

Table No.8.
Importance to evaluation methods

Evaluation methods	T Value	Significance Value
Experts	.441	.660
Users of product	1.017	*.011
Sales person	1.557	.123
Self -trial	2.424	.03
Observation	.932	.354

Table 8 shows that the adopters and laggards significantly differ in the level of importance given to evaluation of the personal computers by gaining information from the users. In all the other cases of evaluation methods the innovators and laggards do not differ significantly.

13. Importance attached to brand evaluation criteria

The level of importance given to various criteria involved in brand selection may vary among innovators and laggards. Particular criteria may be perceived as more important by innovators whereas the same criteria may be perceived differently by

laggards. In this context it is hypothesized:
13.1 Hypothesis: There is no significant difference between innovators and laggards as regard the importance attached to brand evaluation criteria.

The above hypothesis is tested and results are presented in the table below:

Table No.9
Importance to brand evaluation criteria

Criteria	T Value	Significance Value
Technical features	1.311	.194
Price	2.477	*.014
Quality	-1.391	.167
Reputation	-1.254	.213
Guarantee	2.082	*.040
After sale service	1.603	.112
Brand image	-1.230	.222

Innovators and laggards differ significantly in the level of importance attached to the price and guarantee provided along with the purchase of personal computers. With regards to other criteria for brand evaluation, there is no significant difference in the level of importance attached to the two categories of adopters.

14. Time gap between adoption decision and purchase

Innovators and laggards may differ in their behavior regarding the time gap between the decision to adopt the product and actual purchase. Innovators may immediately purchase the product after the decision is taken, while laggards may take time. In this context it is hypothesized:

14.1 Hypothesis: There is no significant difference between innovators and laggards with regard to time gap between decision to adopt the product and actual purchase.

The above hypothesis is tested and results are presented in the following table.

Table No.10
Time gap between adoption decision and purchase

	T Value	Significance Value
Time gap	.045	.964

From the above table it could be seen that the hypothesis is accepted leading to the conclusion that there is no significant difference between the innovators and laggards with regard to time gap between decision to adopt and actual purchase of the product.

15. Level of satisfaction

Innovators and laggards may differ in the level of satisfaction attained from the adoption of personal computers. In this context it is hypothesized:

15.1 Hypothesis: There is no significant difference between the innovators and laggards with respect to the level of satisfaction regarding adoption of personal computers.

Table No.11 Level of satisfaction

Products	T Value	Significance Value
Level of satisfaction	.814	.41

The hypothesis is accepted leading to the conclusion that the innovators and laggards do not differ significantly with regard to the level of satisfaction derived from the adoption of personal computers.

16. Key factors influencing the adoption of personal computers

This study took into account a set of twenty variables viz., product related, market related and personal which might influence the adoption of personal computers. Response was obtained from the adopters of personal computers on a three point scale indicating the level of importance attached to each variable. The data obtained was subjected to factor analysis using principal

component analysis and varimax rotation. The rotated component matrix is presented below separately for both innovators and laggards.

Table 12. Key factors influencing the Innovators

Variables	Components	
	1	2
Observability	.797	.077
Advertisement	.692	-.230
Consistency with exiting Products	.691	-.277
Matching to need	.650	.350
Functional advantage	.622	.231
Technical superiority	.620	-.276
Competing products	.602	-.346
Influence of family	.525	-.031
Personal belief	.477	.022
Complexity	.407	.207
Price	.393	-.176
Sales person	.269	.108
Availability	-.166	-.058
Trailability	.596	.692
Brand image	.388	.599
Expected benefit	-.099	.568
Influence of others	-.096	-.516
Corporate image	-.175	.456
Special offers	-.032	.380
Easy of operation	.113	.366

From the above table it can be seen that innovators have identified observability, advertisement, consistency with the existing products, matching to need, functional advantage, technical superiority, competing products and trialability as key factors influencing the adoption of personal computers.

Table 12. Key factors influencing the Laggard

Variables	Components	
	1	2
Special offers	.660	-.166
Personal Belief	.597	.108
Price	.557	.117
Complexity	.521	-.144
Ease of operation	.513	.420
Trailability	.505	-.123
Competing products	.444	.017
pc-functional advt	.433	.294
Matching to need	.428	.044
Advertisement	.415	-.241
Influence of family	.256	.212
Consistency	.217	.080
Brand image	.209	.015
Technical superiority	.035	.659
Availability	.215	.567
Sales person	.101	.555
Corporate image	.222	.506

It can be inferred from the above table that laggards view special offers, personal belief, price, complexity, ease of operation, trailability, technical superiority, availability, sales personal and corporate image as the key factors influencing the adoption of personal computers.

17. Recommendations:

Following suggestions emanate from the study:

Analyzing the personal profile of the innovators and laggards reveals that there is a difference in the age group to which majority of the adopters belong. Majority of the innovators belong to the age group of 36 to 45 years whereas majority of the laggards belong to the age group of 46 to 55 years. Customization the marketing strategies relevant to the group specified can enhance the diffusion of the personal computers.

There is a significant difference in the level of

importance attached to the information to friends/relatives and neighbors. Findings also reveal that the innovators and laggards significantly differ in the level of importance attached to method of evaluation viz., information from the users of the personal computers. In tune with this word of mouth advertising can be suitably deployed to attract and convince the innovators and the laggards.

The level of importance attached to the product variables, including technical superiority, functional advantage, market variables, including corporate image and advertisement, and personal variables, including expected benefit; vary between the innovators and the laggards. This aspect should be kept in consideration while framing the communication strategies to reach consumers.

Key factors influencing the adoption of personal computers provide valid inputs which should be taken into consideration for framing suitable products and promotional strategies. This will lead to development of customized strategies to enhance the rate of adoption among the innovators and laggards.

Findings highlight that while evaluating the brands, innovators and laggards differ in the level of importance attached to the variables, i.e., price and guarantee. Accordingly, brand promotion strategies can focus on the these variable with varying level of importance to attract innovators and laggards.

18. Conclusion

The market for personal computers, particularly in the household segment is burgeoning on account of the increase in the number of middle income households, increased purchasing power of consumers, shift in the spending patterns towards luxuries etc. This is augmented by the increase in the number of telephone lines, broadband connections, reduction in the price of personal computers etc. Consequently competition to win over the PC market has intensified.

However considering the size of population in India, there is still a huge unexplored Market potential awaiting

to be explored. Against this scenario, understanding the difference in the pattern of adoption behavior of innovators and laggards would enable us to frame strategies to enhance the rate of adoption of personal computers. In this context this research paper has attempted to provide valuable insights for framing customized strategies to win over innovators and laggards.

References :

1. Ghislaine, C. (1992). "Assessing Consumer Preference in the Context of New Product Diffusion", Doctoral Dissertation, McGill University, Canada.
2. Martinez, E., et.al. (1998). "The Acceptance and Diffusion of New Consumer Durables: Difference Between First and Last Adopters", *Journal of Consumer Marketing*, Vol 15(4), pp.323-342.
3. Fisher, R.J. (1990), "The Role of Normative Outcomes and their Antecedents in New Product Adoption Attitude and Intention Formation", Doctoral Dissertation, University of Colorado At Boulder.
4. <http://economictimes.indiatimes.com>
5. Kenneth U. , (1970). "How are Laggards Different? An Empirical Inquiry", *Journal of Marketing Research*, Vol. VII, February, pp.51-54.
6. Louis, B.E. (1970). "The Search for the Consumer Innovator", *Journal of Business*, Vol. 43(2), pp. 135-40.
7. Saaksjarvi, M. (2004). "Consumer Evaluation of Hybrid Innovations", Publication of The Swedish School of Economics and Business Administrations, Helsingfors.
8. Venkatraman, M. (1991). "The Impact of Innovativeness and Innovation Type on Adoption", *Journal of Retailing*, Vol.67(1), Spring, pp.51-67.
9. Miniard, P. W., Cohen, J.E. (1983). Modeling Personal and Normative Influences on Behavior, *Journal of Consumer Research*, 10:2, 169–80.
11. Razzaque, M.A. (1994). "Adoption of Home Computers by Managerial Personnel: A Cross-National Study of Innovativeness", Doctoral Dissertation, University of New South Wales, Australia.
12. Pereira, R.E. (2002). "An Adopter-Centered Approach to Understanding Adoption of Innovations", *European Journal of Innovation Management*, Vol.25(1), pp.40-49.
13. Fareena, S. 1987, "Models of the Adoption and Diffusion of Innovations: Some Investigations and Extensions", Doctoral Dissertation, Columbia University.
14. Thomas Robertson S. 1967, "Consumer Innovators: The Key to New Product Success", *California Management Review*, Vol. 10(2), , pp.23-30.
15. Thomas Robertson S. 1967, "Purchase Sequence Responses: Innovators Vs Non-Innovators", *Journal of Advertising Research*, Vol. 8(1), pp.47-52.
16. Management Review, Vol. 10(2), , pp.23-30.
17. Thomas Robertson S. 1967, "Purchase Sequence Responses: Innovators Vs Non-Innovators", *Journal of Advertising Research*, Vol. 8(1), pp.47-52.
18. Troy A Festerrand, David B Meinert and Scott J Vitell, 1994, "Older Adults Attitudes Towards and Adoption of Personal Computers and Computer-based Lifestyle Assistance", *The Journal of Applied Business Research*, Vol.10(2), pp.13.
19. Troy A Festerrand, David B Meinert and Scott J Vitell, 1994, "Older Adults Attitudes Towards and Adoption of Personal Computers and Computer-based Lifestyle Assistance", *The Journal of Applied Business Research*, Vol.10(2), pp.13.
20. Uhl K., Andrus, R. and Poulsen L., 1970, How Are Laggards Different? An Empirical Inquiry, *Journal of Marketing Research*, Vol. 7, No. 1, pp. 51-54
21. Uhl K., Andrus, R. and Poulsen L., 1970, How Are Laggards Different? An Empirical Inquiry, *Journal of Marketing Research*, Vol. 7, No. 1, pp. 51-54
22. Vijay Mahajan , Eitan Muller and Rajendra K. Srivastava ,1990., "Determination of Adopter Categories by Using Innovation Diffusion Models", *Journal of Marketing Research*, Vol. XXVII, February, pp. 37-50.
23. Vijay Mahajan and Eitan Muller,1998, "When is it Worthwhile Targeting the Majority Instead of the Innovators in a New Product Launch?", *Journal of Marketing Research*, Vol. XXXV, pp.488- 495
24. February, pp. 37-50.
25. Vijay Mahajan and Eitan Muller,1998, "When is it Worthwhile Targeting the Majority Instead of the Innovators in a New Product Launch?", *Journal of Marketing Research*, Vol. XXXV, pp.488- 495
26. February, pp. 37-50.
27. Vijay Mahajan and Eitan Muller,1998, "When is it Worthwhile Targeting the Majority Instead of the Innovators in a New Product Launch?", *Journal of Marketing Research*, Vol. XXXV, pp.488- 495