

9

Diffusion of Innovation

Do not wait for the best idea, implement the better idea,
still better and the best will follow.

God grant me the serenity to accept the things I cannot change,
change the things I can, and the wisdom to know the difference.

This chapter gives an understanding of:

- *Diffusion and its process*
- *Types of innovation*
- *Classification of adopters*
- *Diffusion enhancement strategies*

Diffusion of Innovation

■ 9.1 Introduction

Diffusion is process by which a new product is accepted and spreads through a market. It is a group phenomenon, in which first an idea is perceived, then it spreads throughout the market, and then individuals and groups adopt the product.

Definition

Diffusion is a process by which the acceptance of an innovation/new product, a new idea, a new service, is spread by communication to members of a social system over a period of time.

■ 9.2 Innovation

An innovation is an idea, practice, or product, perceived to be new by an individual or a group. A product is said to be an innovation when it is perceived by the potential market as a change, and not by a technological change brought in it.

New products or new services have been classified as under:

Firm Oriented

If the product is new to the company, it is said to be new.

Product Oriented

It focusses on the features inherent in the product and the effect it has on the consumer's established usage pattern. This leads to three types of product innovation—continuous, dynamically continuous, discontinuous innovation.

Market Oriented

It stresses on how much exposure consumers have on the new product:

- (i) It can be new if purchased by a small percentage of customers in the market.
- (ii) It is new if it has been for a relatively short period in the market.

Consumer-oriented Items

It is based on the consumer’s perception of the product. If he judges it to be new. For example, the Polaroid camera can be considered as an innovation, because a whole lot of people who constitute the market, use it, and can get photographs in minutes. Microwave oven for example is an innovation. It does wonders for cooking and warming of foods. Similarly, mobile phones (cell phones) can be considered an innovation. Not only are they popular, but they were unthinkable a decade or two back. Innovation can be of various degrees. For instance, a microwave oven is more of an innovation than sugar-free cola. In innovation, behavioural changes take place. These behavioural changes can be small, modest, or large. The innovation can be continuous or, dynamically continuous or, discontinuous.

Continuous innovation

In this type of innovation, minor behavioural changes are required for adoption of the product, from ordinary cookware to Teflon-coated cookware, where minor behavioural changes are required. A modified product, *e.g.*, a new scuba watch, new car model or, low-fat yogurt, etc.

Dynamically continuous innovation

Communicator behavioural changes are required for the adoption of the product. Products in this category include compact disk players, cellular phones, erasable ink pen and disposable diapers.

TV has led to related innovation

Table 9.1 T.V. has led to related innovation

<i>Discontinuous innovation</i>	→ <i>Dynamically continuous innovation</i>	→ <i>Continuous innovation</i>
Black and white TV ↓ ↓ Video cassette recorder ↓ Video camera	→ Colour TV Portable pocket TV Stereo TV Giant screen TV Cable ready TV Picture in picture TV ↓ Video walkman	→ Remote control Various cabinet styles Instant on flat screen Electronic tuning Stereo sound

Discontinuous innovation

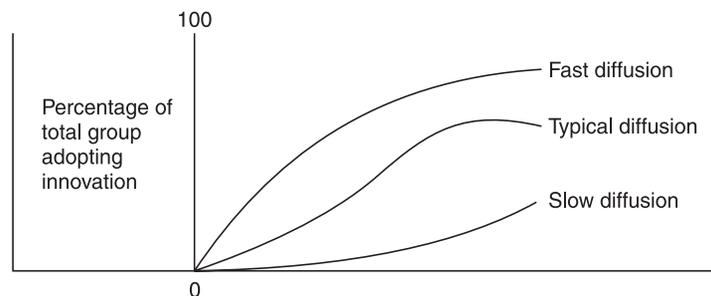
Here the adoption of the product requires major behavioural changes and the product is new, and requires high involvements of the user, along with extended decision-making, which consists of the following steps:

Table 9.2 Stages in adoption and decision-making

<i>Stages in adoption process</i>	<i>Steps in extended decision-making</i>
Awareness	Problem recognition
↓	↓
Interest	Information search
↓	↓
Evaluation	Alternative evaluation
↓	↓
Trial	Purchase
↓	↓
Adoption	Post-purchase evaluation

■ 9.3 Diffusion Process

Diffusion process is the manner in which innovations spread throughout the market. Spread refers to the purchase behaviour where a product is purchased with some continuing regularity. Spread of innovation can be of three types as shown in the Fig. 9.1.

**Fig. 9.1** Three types of innovation spread

The diffusion process follows a similar pattern, overtime, irrespective of the social group or innovation. *The typical diffusion* process shows a slow growth or adoption. It later rises rapidly, and then a period of slow growth is noticed. In *fast diffusion* process, the product clicks immediately. The spread of innovation is very quick. People patronise the product immediately, and later on there is again slow diffusion.

In *slow diffusion* process, the product takes a lot of time to diffuse or spread, and the consumer follows a pattern of adoption slowly by getting acquainted with the product.

These studies show that the products take a certain amount of time, from when it gets introduced to its saturation. The marketer therefore has to understand what determines the spread of innovation in a given market segment, and how do the early buying consumers differ from those of late purchasers.

The rate of *spread of innovation* depends on a number of factors listed below:

1. *Type of group*: Some groups who are young, affluent and highly educated, accept changes faster than the old, traditional and poor groups. This shows that the target market is an important determinant of the rate of diffusion.
2. *Perceived risk*: The more the risk associated with changing to new innovation, the slower is the rate of diffusion. The risk consists of the product not performing as expected, the risk of the consequences of change-over, and the risk of reverting back to the old product, if not satisfied with the innovative product.
3. *Type of decision*: An individual vs. a collective decision. Individual decisions head to faster diffusion than collective ones.
4. *Marketing effort*: This also affects the diffusion process. More aggressive marketing effort, consisting of high and continuous advertising expenditure, diffuses faster than otherwise.
5. *Trial*: The trial can be taken at low cost and low risk, the diffusion is faster. Some products can be borrowed, rented or, their trial can be taken at retail outlets. These products like medicines, and other low-priced items have faster diffusion.

These days even car outlets are giving free trials and rides to prospective customers to make their new models of cars diffuse faster.

6. *Fulfilment of felt need*: The faster a need is satisfied or fulfilled by a product, the greater is the rate of its diffusion.
7. *Compatibility*: The more the product is compatible with the beliefs, attitudes and values of the individual or group the faster the diffusion—vegetables soup for vegetarians, ordinary microwave, no roasting.

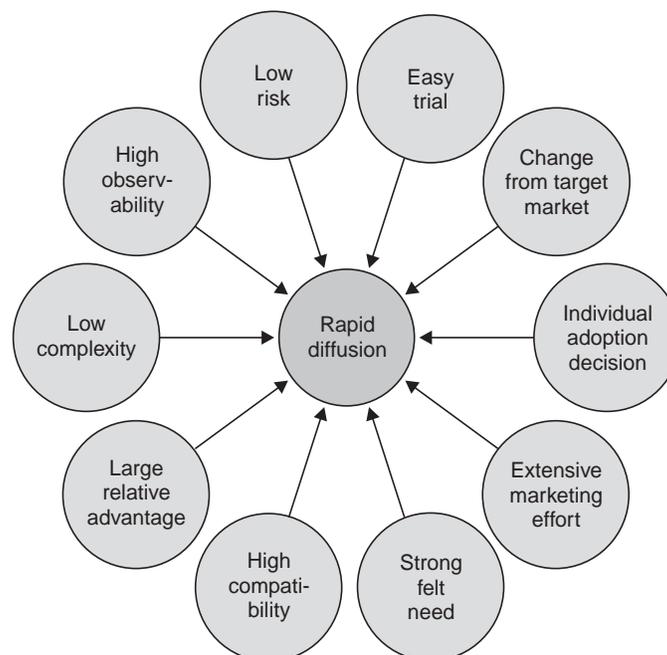


Fig. 9.2 Rapid rate of diffusion

8. *Relevant advantage*: The advantage could be of price, quality, ease of handling product quality. To have quick diffusion, the product must offer either a price advantage or a performance advantage. Washing machine is expensive, but a labour saving device.
9. *Complexity*: If the product is complex (difficult to understand and use) the diffusion is slower. The product may be complex but it must be easy to understand. Complexity may be because of many attributes (attributes complexity which are difficult to understand). The other complexity may be trade off complexity. The trade off takes place between cost of purchase and economy. Convenience vs. space or speed of cooking vs. quality of cooking, as in microwave ovens.
10. *Observability*: The more easily the positive effects of the products can be observed, the more discussion takes place and faster the diffusion process, e.g., cell phones.

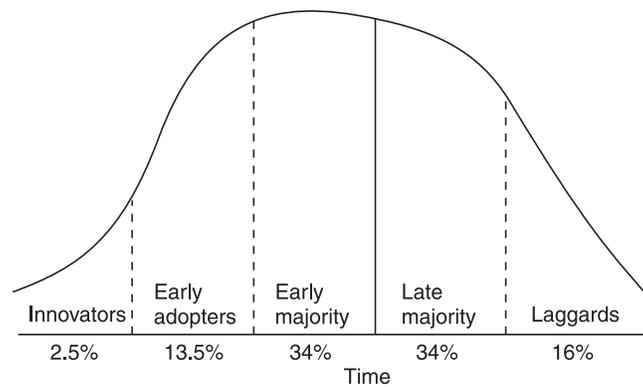


Fig. 9.3 Slow diffusion

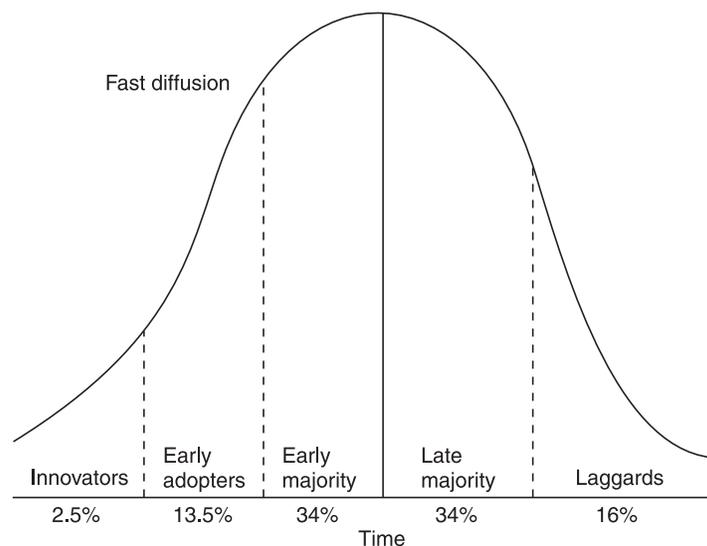


Fig. 9.4 Fast diffusion

Classification of Adopters

Adopters can be classified into five groups based on the time when they adopt:

Innovators: The first 2.5 per cent to adopt innovation.

Early adopters: The next 13.5 per cent to adopt.

Early majority. The next 34 per cent to adopt.

Late majority: The next 34 per cent to adopt.

Laggards: The final 16 per cent to adopt.

Innovators (2.5%)

Innovators are venture some risk takers. They are younger, more educated and socially mobile. They have the capacity to absorb risk associated with the new product. They are cosmopolitan in outlook, are aware and make use of commercial media, and eager to learn about new products, are progressive, ready to use new products.

Early adopters (13.5%)

They take a calculated risk before investing and using new innovations. They are opinion leaders and provide information to groups, but they are also concerned about failure. Therefore, they weigh advantages and disadvantages of the product before plunging in for a purchase.

Early majority (34%)

They tend to be more continuous and use the product after the innovators and early adopters seem to be satisfied with it. They are elders, well educated and less socially mobile. They rely heavily on inter-personal source of information. They constitute 34 per cent of the consumers.

Late majority (34%)

They are doubtful and sceptical about the innovation of new products. They tend to use the product not so much because of innovation, but because of other pressures—non-availability of the product and social pressures. They have less social status, and are less socially mobile than previous group. They are average in age, education, social status, income. They make little use of media (Magazine etc.). They rely heavily on informal sources of information.

Laggards (16% of a Market)

They are more traditional. They possess limited social interaction and are oriented to the past. They adopt the innovations with great reluctance. They have the least education, lowest social status and income. They possess no opinion leadership and are in touch with other laggards and do not subscribe to many magazines.

Market strategy related to diffusion

There are differences in the early purchasers or innovators and late purchasers (Laggards). The strategy for the target market adopted, is a “moving target market” approach. First the general target market is selected, and then the focus shifts to innovators, early adopters, early majority, late majority and laggards. This takes place as the product keeps getting acceptance from the consumers. There is then a change in the media and advertising themes for different target groups.

Diffusion enhancement strategies

The idea is to find out the diffusion inhibitors and to eliminate them for the enhancement of diffusion. For this, the diffusion determinants are analysed, and diffusion strategies framed, as given in Table 9.3.

Table 9.3

<i>Diffusion determinant</i>	<i>Diffusion inhibitor</i>	<i>Diffusion enhancement strategies</i>
1. Type of group	Conservative traditional	Try other markets, modern and consumer.
2. Perceived risk	High	Give guarantees, reduce risk by endorsing with credible sources.
3. Type of decision	Group decisions	Choose media to reach all deciders and provide conflict reduction themes.
4. Marketing effort	Limited	Extensive and aggressive marketing effort.
5. Trial	Difficult	Distribute free samples to early adopters. Use high service outlets.
6. Fulfilment of felt need	Weak	Show importance of benefits, use extensive advertising.
7. Compatibility	Conflict	Stress attributes consistent with values and norms.
8. Relevant advantage	Low	Lower the price—redesign the product.
9. Complexity	High	Use extensive marketing effort. Use skilled sales force. Use demonstration of product.
10. Observability	Low	Expose the product more through promotion and advertising.

These diffusion inhibitors have to be analysed, and strategies formulated accordingly.

Adoption and Diffusion Through Marketing Strategy

Marketeers have been trying to influence consumers to adopt new innovations. This is done through free samples and price promotions. Advertising is done extensively when the results are not found positive by distribution of free samples and promotions. Sometimes price promotions and free samples are backed by advertising techniques. Sometimes change agents are used to overcome resistance to adoption. For medical products, hospitals, clinics and physicians of repute are used as change agents.

Rate of Diffusion. The rate of diffusion can be low or high. Marketeers have 2 options that can influence the rate of diffusion.

Skimming Strategy. This strategy used for major innovations and when the product is in great demand. Prices are set high and it has slow rate of diffusion. The strategy aims at skimming the cream of the market *i.e.*, to take advantage and get the profits in abundance. The segment is small and specific. The segment is price insensitive. It has its own lifestyles and demographic characteristics, awareness and information advertising is used in this case. The distribution is done from selective outlets.

Penetration Strategy. In this, there is rapid and widespread diffusion as the product is of low value and is within the reach of many. The product is sold to a General Market by an intensive campaign. The distribution is extensive and the product used is general. It is used in new products which are not major innovations like cold drink, health drinks, coffee etc. The advertising is widespread and other means of promotion are also used.

The distribution is extensive and covering as many outlets as possible. The price is low and the product is available. The strategy keeps changing with its position on the diffusion curve. All electronic products of major innovation start with the skimming strategy and gradually move down to penetration strategy. The price of computers, television sets, microwave ovens etc., start with a high price and as the product is adopted and many more competitors come in the skimming strategy is changed to penetration strategies. Some products start with a penetration strategy and raise their prices with the widespread acceptance of the product in the market.

Table 9.4 Marketing strategies and rate of diffusion

<i>Rate of diffusion</i>	<i>Slow</i>	<i>Fast</i>
Marketing Strategy	Skimming	Penetration
Price	High	Low
Market Segmentation	Target market is specific and small lifestyles and demographics are considered	Target market is large difficult to specify by lifestyles and demographics
Promotion	Information and Advertising backed by personal selling and sales promotion	Repetitive advertising use of imagery and symbols
Distribution	Selection through prominent stores	Intensive very large number of outlets
Product	Discontinuous	Continuous
Characteristics	Innovations	Innovation

Questions

1. Explain innovation and diffusion. Discuss the stages in the adoption process.
2. What are various types of diffusion? List and explain the factors that are responsible for the spread of innovation.
3. What are the classification of adopters? Illustrate and explain with the help of a diagram.
4. What market strategy must be adopted for the spread of innovation or diffusion enhancement?