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## **DIFFUSION THEORY AS A MARKETING THEORY**

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### **Abstract**

Described as a communications theory, the diffusion of innovations theory describes the pattern and speed at which innovative ideas, practices, or products spread through a population. The functions and processes of the diffusion model, however, appear to fit better as a business model; more specifically, a marketing model. The main players in the theory are innovators, early adopters, early majority, late majority, and laggards. The model helps a business to understand how a buyer adopts and engages with new products or technologies over time. Companies will use it when launching a new product or service, adapting one, or introducing an existing product into a new market. To that end, this paper explores how diffusion and adoption might better apply as a marketing theory.

### **Keywords**

Diffusion, Adoption, Communications Theory, Marketing Theory, Innovations, Attributes

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Diffusion of innovation theory, developed by Everett Rogers (2003), explains how new ideas and technologies spread through societies and cultures. The theory focuses on the adoption process of a new innovation or idea, and it proposes that adoption occurs in stages among individuals and groups. According to Rogers, the adoption process involves five stages: awareness, interest, evaluation, trial, and adoption.

Rogers (2003) also identified five categories of adopters based on their level of readiness to try out new ideas or technologies: innovators, early adopters, early majority, late majority, and laggards. These categories help to explain the diffusion process and how it varies across different groups in society.

The diffusion of innovation theory is traditionally considered a social science theory that seeks to explain how new ideas and technologies become adopted and diffused through society. Rogers's (2003) diffusion and adoption theory is often considered a communication theory because it focuses on how new ideas, innovations, and technologies spread through a social system, which involves the exchange of information and communication among individuals and groups.

Rogers's (2003) theory emphasizes the role of communication channels and networks in the diffusion of innovations. According to Rogers, individuals who adopt an innovation are often influenced by their social networks, which can include opinion leaders, early adopters, and other members of their community. The theory also suggests that communication efforts can be used to speed up the diffusion process and increase adoption rates. Communication strategies such as marketing campaigns, mass media campaigns, interpersonal communication, and community engagement can help to create awareness, generate interest, and facilitate the adoption of new ideas and technologies.

Overall, Rogers's diffusion and adoption theory is a useful framework for understanding how communication influences the adoption of innovations and how communication can be leveraged to promote the diffusion of new ideas and technologies.

### **Background of Diffusion of Innovations**

Designated as a communications model, the diffusion of innovations theory describes the pattern and speed at which innovative ideas, practices, or products spread through a population. The main players in the theory are innovators, early adopters, early majority, late majority, and laggards. The model helps a business to understand how a buyer adopts and engages with new products or technologies over time. Companies will use it when launching a new product or service, adapting a product or service, or introducing an existing product into a new market. The functions of the diffusion model might fit better as a business model—more specifically, a marketing model.

Diffusion and adoption theory are social science concepts that study how new ideas, products, or behaviors (innovations) spread within a population over time. The diffusion of innovation refers to the process by which an innovation is communicated through certain channels over time among the members of a social system. Adoption refers to the process by which an individual adopts an innovation and makes it a part of their regular behavior. Diffusion theory was first introduced by Everett Rogers in his 1962 book *Diffusion of Innovations*, where he identified five key elements that influence the diffusion process: the innovation itself, the communication channels, the time it takes for diffusion, the social system, and the adopter categories.

Adoption theory, on the other hand, is concerned with understanding why and how individuals adopt or reject new ideas or products. The theory of adoption focuses on individual behavior and the decision-making process that precedes the adoption of an innovation. The theory identifies five categories of adopters, based on their speed of adoption: innovators, early adopters, early majority, late majority, and laggards. Both diffusion and adoption theories have been applied in a wide range of fields, including marketing, sociology, psychology, and management, to help organizations understand and predict the spread of new ideas and products.

### **The Diffusion and Adoption Process**

According to the social interaction model, as formulated by Rogers (2003), diffusion is the process by which innovations spread to the members of a social system. In other words, diffusion is the spread of a new idea from its source to its ultimate users. The diffusion process involves four key elements: (1) the innovation, (2) its communication through certain channels, (3) over time, (4) among the members of a social system.

An innovation is an idea, practice, or object that is perceived as new by an individual. Innovation does not always mean new knowledge. An innovation can have existed for some time without an individual having developed a favorable or unfavorable attitude about it. "New" means that an innovation has not been adopted or incorporated by an individual or social system.

Communication refers to the process by which messages are transferred from a source to a receiver, usually with the intention of modifying the receiver's behavior. The communication channels are the means by which a message gets from a source to a receiver. Time refers to three distinctly different time frames: (1) the time required in the decision-making process when an individual or group determines whether to adopt or reject an innovation, (2) the time required to adopt the innovation within a social system (rate of adoption), and (3) the innovativeness of an individual as compared with other members of his or her social system.

The rate of adoption is the relative speed with which members of a social system adopt an innovation, usually measured by the length of time required for some percentage of the members to adopt. Innovativeness is the degree to which an individual is earlier in adopting an innovation than other members of his or her social system.

### **The Innovation-Decision Process**

The Innovation-Decision Process is the process through which an individual (or other decision-making unit) passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision. (Rogers, 2003, p. 163)

This process consists of a series of actions and choices over time through which an individual or an organization evaluates a new idea and decides whether or not to incorporate the new idea into ongoing practice. Diffusion researchers have recognized for a long time that an individual's decision about an innovation is not an instantaneous act. It is a process that occurs over time and consists of a series of actions.

The innovation-decision process model consists of five stages, and follows the processes involved in marketing a new product or service:

1. Knowledge occurs when an individual (or other decision-making unit) is exposed to the innovation's existence and gains some understanding of how it functions.
2. Persuasion occurs when an individual (or other decision-making unit) forms a favorable or unfavorable attitude toward the innovation. During the persuasion stage in the innovation-decision process, the individual forms a favorable or unfavorable attitude toward the innovation. The mental activity that occurs at the knowledge stage is primarily cognitive (or knowing). However, the main type of mental activity at the persuasion stage is affective (or feeling).

At the persuasion stage, the individual becomes more psychologically involved with the innovation. He or she actively seeks information about the new idea. Selective perception is important at this stage because it is at the persuasion stage that a general perception of the innovation is developed. The perceived attributes of an innovation (relative advantage, compatibility, complexity) are especially important at this stage.

At the persuasion stage, an individual typically asks, "What are the innovation's consequences? What will its advantages and disadvantages be in my situation?" The main outcome of the persuasion stage in the decision process is either a favorable or unfavorable attitude toward the innovation.

3. Decision occurs when an individual (or other decision-making unit) engages in activities that lead to a choice to adopt or reject the innovation.
4. Implementation occurs when an individual (or other decision-making unit) puts an innovation into use.
5. Confirmation occurs when an individual (or other decision-making unit) seeks reinforcement of an innovation-decision already made, but he or she may reverse the previous decision if exposed to conflicting messages about the innovation.

### Characteristics of Innovations

Rogers (2003) proposed that innovations can be described using a comprehensive set of characteristics that are "mutually exclusive and universally relevant" (p. 211). The five characteristics (the word attributes is used interchangeably with characteristics) are (1) relative advantage, (2) compatibility, (3) complexity, (4) trialability, and (5) observability (p. 211).

These characteristics of innovations, as perceived by individuals, help to explain their different rates of adoption (Rogers, 2003, p. 11). In general, innovations that are perceived by receivers as having greater relative advantage, compatibility, trialability, observability, and less complexity will be adopted more rapidly than other innovations. If a small business incubator is an innovation, then it must be perceived as possessing these five characteristics. Past research indicates that these qualities are the most important characteristics of innovations in explaining rates of adoption (Rogers, 2003).

*Relative Advantage* is the degree to which an innovation is perceived as better than the idea it supersedes. It can be measured in economic terms, but social-prestige factors, convenience, and satisfaction are also often important components. It can also be measured by the degree of economic profitability, low initial cost, a decrease in discomfort, savings in time and effort, and the immediacy of the reward. The innovation may not have a great deal of objective advantage, but what is more important is whether an individual perceives the innovation as advantageous.

Rogers (2003) often refers to the diffusion of an innovation as an uncertainty-reduction process. As individuals move through the innovation-decision process, they gather information to decrease their uncertainty about an innovation's relative advantage. Diffusion scholars have found relative advantage to be a strong predictor of an innovation's adoption rate. Prior research findings lead to the following generalization about relative advantage: "The relative advantage of an innovation, as perceived by members of a social system, is positively related to its rate of adoption" (Rogers, 2003, p. 233).

*Compatibility* is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters. An innovation that is more compatible with the potential adopter's values, beliefs, ideas, or needs will be less uncertain.

An innovation may be compatible with previously adopted ideas and this may speed up or retard its rate of adoption (Rogers, 2003, p. 224). Compatibility of an innovation can be related to how well it meets an adopter's needs. Often an innovation will fulfill specific adopter needs. Potential adopters may not recognize that they need an innovation until they become aware of the innovation and its consequences. An innovation that is not compatible with the prevailing values and norms of a social system will not be adopted as rapidly as an innovation that is compatible. Additional evidence has supported the following generalization on compatibility: "The compatibility of an innovation, as perceived by members of a social system, is positively related to its rate of adoption" (Rogers, 2003, p. 249).

*Complexity* is the degree to which an innovation is perceived as difficult to understand and use. All new ideas can be placed on a complexity-simplicity continuum because some innovations are clear in their meaning to potential adopters while others are not. Although Rogers (2003) indicates that the research evidence is not conclusive, the following generalization is still suggested: "The complexity of an innovation, as perceived by members of a social system, is negatively related to its rate of adoption" (p. 257).

*Trialability* is the degree to which an innovation may be experimented with on a limited basis. An innovation that can be tried in some way will be less uncertain for the adopter. In fact, ideas that can be tried in short segments or installments are often adopted more quickly than those that require a full-scale experiment. Early innovation adopters perceive trialability as being more important than do later adopters. Early adopters have no precedent to follow when they accept an innovation. However, later adopters are surrounded by others who have already adopted the innovation. Again, lacking conclusive evidence, Rogers (2003) suggests the following generalization: The trialability of an innovation, as perceived by members of a social system is positively related to its rate of adoption.

*Observability* is the degree to which the results of an innovation are visible to others. Some innovations can be easily communicated to others, while others are hard to describe. Therefore, Rogers (2003) presents the

following generalization: “The observability of an innovation, as perceived by members of a social system, is positively related to its rate of adoption” (p. 258).

Positioning diffusion and adoption as a marketing mode versus a communications model involves framing these concepts in terms of their strategic goals, tactics, and outcomes. Consequently, there are several ways that research could approach diffusion and adoption as a marketing model.

### Diffusion and Adoption as a Marketing Theory

Diffusion and adoption are not marketing theories per se, but they are important concepts in the field of marketing and related to the adoption and spread of new products, services, and ideas. Diffusion refers to the process by which a new product, service, or idea spreads through a population over time. It describes how a new innovation is adopted and used by different groups of people, including early adopters, early majority, late majority, and laggards. Adoption refers to the process by which an individual or organization becomes a user of a new product, service, or idea. It is often studied in the context of innovation diffusion and is used to understand how and why people adopt new products and services.

In marketing, diffusion and adoption concepts can be used to inform marketing strategies for introducing new products, services, or ideas to the market. For example, by understanding the diffusion of new innovations, companies can target early adopters and early majority, who are often more likely to adopt new products. This helps to build buzz and momentum for the new product.

Yes, diffusion and adoption are concepts within marketing theory. The theory of diffusion of innovation is concerned with the process by which new ideas, products, or technologies spread through a population or social system. This theory explains how and why some innovations are adopted more quickly than others and identifies different types of adopters with distinct characteristics and behaviors.

The adoption theory, on the other hand, explains how individuals or organizations decide to adopt a new product or service. This theory identifies several factors that influence the adoption decision, including the perceived benefits and costs of the innovation, social norms, and the individual’s or organization’s readiness to change.

Both diffusion and adoption theories are important tools for marketers who use them to understand how to introduce new products or services to the market and increase their adoption rates. By understanding the factors that influence adoption decisions and how ideas spread, marketers can develop effective strategies to promote new innovations and gain market share.

Innovation is a crucial aspect of marketing, and marketing principles are often used to guide the development and promotion of new products and services. There are some ways in which the attributes of innovations align with the principles of marketing:

1. **Relative advantage:** One of the key attributes of an innovation is its relative advantage, or how much better it is than existing products or services. Marketing principles emphasize the importance of communicating this advantage to potential customers through effective messaging and promotion (Rogers, 2003).
2. **Compatibility:** Another important attribute of an innovation is its compatibility with existing practices and technologies. Marketing principles suggest that innovations that are easy to adopt and integrate into existing workflows are more likely to be successful (Rogers, 2003).
3. **Complexity:** Innovations that are too complex or difficult to use may be less successful than those that are simple and intuitive. Marketing principles emphasize the importance of designing products and services that are easy to use and understand, and that meet the needs of users (Kotler et al., 2022).
4. **Trialability:** Innovations that can be tried out before purchase may be more successful than those that cannot. Marketing principles suggest that offering free trials or demos can help potential customers experience the benefits of an innovation and increase their likelihood of purchasing (Rogers, 2003).
5. **Observability:** Innovations that are visible to others and easy to evaluate may be more successful than those that are not. Marketing principles emphasize the importance of creating buzz and excitement around new products and services and using social proof to demonstrate their effectiveness (Kotler et al., 2022).

### Where Innovation Fits into Marketing

An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption (Rogers, 2003). Computer chips were an innovation which revolutionized the computer industry. The practice of boiling water in a remote South American village is an innovation which, when accepted (adopted), improved the health of village residents (Rogers, 2003). The innovation of participative management is an idea which led to the development of quality circles. The small business incubator is an innovation in the field of business and economic development.

Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 2003). Adoption is a decision to make full use of an innovation as the best course of action available. The opposite of adoption is rejection, which represents the decision not to adopt an innovation (Rogers, 2003).

It is clear that there are different kinds of innovations with varying degrees of diffusion and adoption. Rogers (2003) is quick to point out that one should not assume “that all innovations are equivalent units of analysis” (p. 15).

While it may take consumer innovations like blue jeans or pocket calculators only five or six years to reach widespread adoption in the United States, other new ideas such as the metric system or using seat belts in cars may require several decades to reach complete use. The characteristics of innovations, as perceived by individuals, help to explain their different rates of adoption. (Rogers, 2003, p. 14)

Innovations can be described by five characteristics: (1) relative advantage, (2) compatibility, (3) complexity, (4) trialability, and (5) observability (Rogers, 2003). An innovation is often developed through the process of putting a new idea in a form that will meet the needs of an audience or group that will ultimately adopt the innovation.

“Most innovations that have been investigated in diffusion research have been technological innovations, and so the term ‘technology’ is often used as a synonym for innovation” (Rogers, 2003, p. 138). Where innovations are objects, the diffusion research and literature has focused on those objects which possess a singularity about them (e.g., the computer chip).

As Rogers (2003) points out, “Not all innovations come from research and development, of course. They may instead arise from practice as certain practitioners seek new solutions to their needs/problems” (p. 143). For a large corporation, the incubator may hold the potential technology keys to future products, markets, and profits through research-oriented tenant businesses.

### ***Positioning Diffusion and Adoption as a Marketing Model***

Positioning diffusion and adoption as a marketing model involves understanding how products or innovations spread through a market and designing your marketing strategy accordingly. Here is a strategic approach to position diffusion and adoption as a marketing model:

1. **Strategic goals:** In the context of a marketing mode, the emphasis is on creating a demand for a new product, idea, or innovation. The goal is to drive consumer interest, generate excitement, and lead to sales or widespread adoption. The focus is on leveraging marketing principles to create a competitive advantage and maximize market share.
2. **Tactics:** Incorporate traditional marketing strategies such as segmentation, targeting, and positioning (STP) to identify and reach out to specific segments of the target audience that are most likely to adopt the innovation. Develop product positioning, branding, and messaging that highlight the unique benefits and value of the innovation. Utilize marketing channels like advertising, influencer marketing, social media, and content marketing to create awareness and generate interest.
3. **Metrics and outcomes:** Measure success by tracking metrics like sales revenue, market penetration, customer acquisition, and conversion rates. Success is defined by achieving high levels of adoption within the target market and gaining a competitive edge over competitors. The focus is on bottom-line results and financial success.

By strategically positioning diffusion and adoption as a marketing model, one can effectively navigate the stages of adoption, tailor their messaging, and optimize the marketing efforts to drive product or innovation adoption in the market.

### ***Positioning Diffusion and Adoption as a Communications Model***

Diffusion of innovation can be used as a communications model to understand and influence the process of innovation adoption within a target audience. This theory identifies different categories of adopters and their characteristics, which can inform communication strategies to promote the adoption of a new idea, product, or technology. Here is how diffusion and adoption can be positioned as a communications model:

1. **Strategic goals:** When positioned as a communications model, diffusion and adoption focus on disseminating information, influencing perceptions, and driving behavior change. The primary goal is to facilitate the spread of new ideas, knowledge, or practices throughout a target population.

2. **Tactics:** Utilize communication strategies such as storytelling, thought leadership, educational content, and advocacy campaigns to effectively convey the benefits, importance, and relevance of the innovation. Employ two-way communication channels to engage with the audience, address their concerns, and encourage feedback.
3. **Metrics and outcomes:** Measure success by monitoring metrics related to information dissemination, knowledge acquisition, and behavior change. This could include metrics like the reach and engagement of communication efforts, changes in awareness and understanding of the innovation, and the adoption rate over time. Success is defined by the extent to which the innovation becomes integrated into the target audience's practices or behaviors.

In summary, positioning diffusion and adoption as a communications model involves understanding the adopter categories, tailoring messages and timing, identifying influencers, using appropriate channels, and continuously adapting the strategy to effectively promote the adoption of an innovation within a target audience. This approach can enhance the chances of successful adoption and diffusion of new ideas, products, or technologies.

### ***Integration of Both Approaches***

It is important to note that the marketing and communication approaches are not mutually exclusive. They can be effectively integrated to achieve comprehensive diffusion and adoption strategies. For instance, marketing tactics can enhance the visibility and desirability of a product or service, while communication strategies can provide the necessary information and context to facilitate its adoption.

Whether positioning diffusion and adoption as a marketing model or a communications model, the key is to align the approach with the overall organizational goals, the nature of the innovation, and the characteristics of the target audience.

### **Future Research**

What types of research could be developed to evaluate diffusion and adoption as a marketing theory? Evaluating diffusion and adoption as a marketing theory requires a comprehensive research approach that encompasses various methods and perspectives. Diffusion of innovation theory, popularized by Rogers (2003), focuses on how new ideas, products, or technologies spread within a population. Here are some types of research that could be developed to evaluate diffusion and adoption as a marketing theory:

1. **Empirical studies:** Conduct quantitative studies to analyze the rate of adoption and diffusion of a specific innovation. Use surveys, interviews, and observational data to collect information about the adoption process, identifying factors that influence adoption rates such as perceived benefits, barriers, and social influence.
2. **Case studies:** Examine in depth real-world cases involving the adoption of specific innovations. This can provide insight into the dynamics of diffusion. Case studies allow researchers to explore context-specific factors, decision-making processes, and key stakeholders' roles in the adoption process.
3. **Longitudinal studies:** Track the adoption and diffusion of a particular innovation over an extended period. Longitudinal studies provide a nuanced understanding of how adoption rates change over time, helping to identify critical phases and potential barriers at different stages.
4. **Cross-cultural analysis:** Compare diffusion and adoption patterns across different cultural and geographical contexts. This type of research can reveal how cultural values, norms, and communication channels impact the adoption process.
5. **Network analysis:** Analyze social networks and their influence on the diffusion process. Network analysis helps identify opinion leaders, influencers, and communication pathways that accelerate or hinder adoption within a community.
6. **Qualitative research:** Employ qualitative methods like focus groups and in-depth interviews to provide insight into the reasons behind adoption decisions. These methods help researchers uncover participants' attitudes, perceptions, and emotional drivers related to the innovation.
7. **Experimental studies:** Design controlled experiments to evaluate the impact of specific marketing strategies on adoption rates. This could involve manipulating variables like communication channels, pricing strategies, or incentives to observe their effects on adoption behavior.
8. **Simulation models:** Develop computational models that simulate the diffusion process under various scenarios. Simulation allows researchers to explore hypothetical situations and study the effects of different variables on adoption rates.
9. **Economic analysis:** Evaluate the economic implications of adoption by analyzing factors such as return on investment, cost savings, and potential revenue generated from the adoption of an innovation.
10. **Meta-analysis:** Gather and analyze data from multiple existing studies to derive generalizable conclusions about the factors that affect diffusion and adoption across various contexts.

11. **Comparative studies:** Compare the diffusion and adoption of similar innovations within different industries to identify patterns, challenges, and success factors that transcend specific product categories.
12. **Behavioral analysis:** Investigate psychological and behavioral factors that influence individuals' decisions to adopt or resist innovations. This could involve exploring concepts like risk perception, cognitive biases, and decision-making processes.

### Summary

Overall, a comprehensive approach to evaluating diffusion and adoption as a marketing theory would involve a combination of these research methods to provide a comprehensive understanding of how new products and services (innovations) spread through populations and the factors that drive or inhibit their adoption. As Rogers (2003) stated in the preface of his book *Diffusion of Innovations*, "The challenge for diffusion scholars of the future is to move beyond the proven methods and models of the past, to recognize their shortcomings and limitations, and to broaden their conceptions of the diffusion of innovations" (p. xxi).

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