

The Digital Marketplace: Early Adopters Have Changed

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This study explores how the digital marketplace has altered diffusion of innovation in recent decades. Specifically, it is one of the few investigations addressing the manner in which Early Adopters have changed using time series data over the past 20 years concerning the adoption of products and services. This study examines the components of the Diffusion of Innovation Theory. It considers how each component has been influenced by technological advancements and specifically how Early Adopters have evolved. Simmons data from 1996, 2006 and 2016 is used to provide a deeper understanding of these developments.

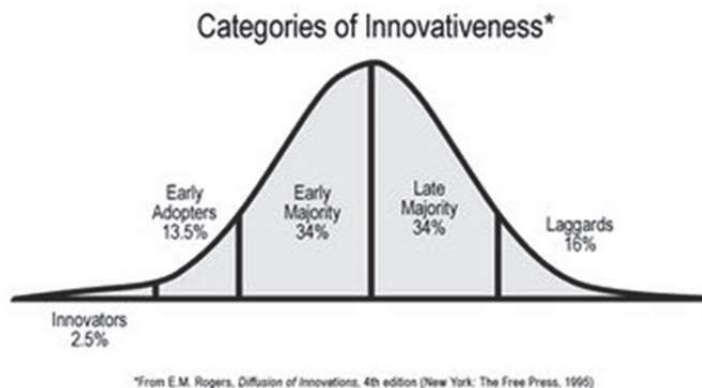
INTRODUCTION

The Diffusion of Innovation Theory was introduced in the early 1960s. It was developed to explain how a new product, service or idea is diffused and eventually adopted by a community or network. While the theory initiated in the study of communication, marketers were quick to apply the theory to understand the diffusion of new product offerings throughout social networks, ultimately impacting adoption speed and rates. This has become important to marketers and particularly retailers, both within academia and among marketing practitioners.

There are four key components of the Diffusion of Innovation that work together to contribute to the diffusion process: the innovation itself (occasionally referred to as “the news”), communication (how the news spreads), a social system (the network throughout which the news spreads) and time (speed of news spreading). These components work together determining the ultimate success or failure of an idea or new product spreading throughout a network impacting whether or not the innovation will be adopted (Rogers, 2010).

A highly important complementary framework of the Diffusion of Innovation Theory involves the people within the social system and their predisposed interest in trying new products. It is believed that people naturally fall into a normal distribution of consumer innovativeness, thus those more receptive to innovation will tend to become aware of innovation and adopt it earlier than others. Rogers proposed five categories including: Innovators, Early Adopters, Early Majority, Late Majority and Laggards (2010).

FIGURE 1



Early Adopters are very important to marketers as their acceptance and communication of a new idea or product establishes the diffusion momentum. The study of innovativeness has gained in interest in recent decades, whereby researchers have sought to understand how to identify and measure people that are naturally more interested in innovation and to understand how this inclination may vary by domain (Bagozzi & Foxall, 1995; Holak & Lehmann, 1990; Im, Bayus, & Mason, 2003; Labay & Kinnear, 1981; Roehrich, 2004; Latta, 2017).

Early Adopters play a vital role in the Diffusion of Innovation. Research indicates that Early Adopters are more likely to adopt more features associated with a new product or system compared to later adopters (Liu & Forsythe, 2011).

Early Adopters are more visionary and tend to consider how a product will provide new, different better benefits and value to people's lives (Moore, 2002). Early Adopters connect the Innovators' discoveries with the masses, influencing the speed in which diffusion occurs and minimizing risk for those less inclined to try new products by sharing their experiences.

Early Adopters like to gather information but once aware of a new product they are interested in, they are more likely to take a risk on it to establish their own subjective point of view. To them, the potential rewards of being ahead of the curve on new products, services, trends, information, etc. outweigh the potential risk of a product not measuring up to expectations (Rogers, 2010; Vishwanath & Barnett, 2011).

The purpose of this paper is to consider how our modern digital marketplace may be influencing the components of the Diffusion of Innovation Theory and as such changing the way in which Early Adopters have evolved in the shopping for and adoption of new products. We will consider how technological advancements have impacted the people involved in the diffusion of innovation with a focus on Early Adopters as they provide the connective tissue within the diffusion of new ideas between innovators and the masses.

What Has Evolved Since the Introduction of the Diffusion of Innovation Theory?

In the early 1990s, the worldwide web became available, with its most significant growth and adoption between 1994 -2000. Access speeds were slower during this time and technology was expensive. Broadband technology became widely available in 2004, and its related technology advancements improved speed and interactivity, changing how consumers engage with technology and each other. This advancement, coupled with the emergence of social media is often referred to as Web 2.0. Smart phones made their debut in 2005 followed soon thereafter by tablets, encouraging and increasing multi-screen use. These technological advancements have had an impact on how consumers communicate and receive information about new products and services.

Today, marketers have many more ways to reach consumers with information about their new products, even before products are launched. New product development can no longer be assumed to be

linear, as was the assumption of Bass's Prediction Model (1969). Further, the consumer journey is now much more complicated and complex (Corman, Trethewey, & Goodall, 2007).

Information now spreads at much faster speeds and can change course without notice based upon input from consumers, organizations and advocacy groups. Additionally, the consumer journey now incorporates many more touch points allowing for more interactive communication between consumers and manufacturers, as well as consumers with each other. While the foundational thinking behind the Diffusion of Innovation remains constant, the landscape in which it operates has certainly evolved.

By breaking the Diffusion of Innovation Theory down into its components: the innovation itself, communication, social system and time; we will examine how each has changed and potentially been impacted by these technological advancements. Within each component, we will consider the impact on Rogers' stages of innovation which include knowledge acquisition, persuasion, decision, implementation and confirmation.

Technology now provides a venue for consumers to seek information and make a purchase decision practically anywhere, anytime. Access to technology and information also plays a wider role in terms of how consumers use it to weigh potential risks and rewards of any innovation. The decision to consider, try and ultimately adopt an innovation is made through a cost-benefit analysis where the consumer weighs the risk of uncertainty against the potential upside that the innovation will provide by enhancing utility and adding value (Rogers, 2010). Thus, as we examine how our modern digital marketplace is impacting the components and stages of innovation, we must also consider its impact on how individuals assess risk and reward.

Impact of Technological Advancements on the Components of the Diffusion of Innovation Theory

The Innovation Itself

An innovation is defined by Rogers as 'an idea, practice or object that is perceived as being new by an individual or other unit of adoption'. Rogers cites five characteristics of innovation: relative advantage (vs current offerings/predecessors), compatibility (with needs, values and experiences of the adopter), complexity (degree of difficulty to use/understand), trialability (ability to experiment with the innovation) and observability (the degree in which the results of adopting an innovation can be seen).

An important element of this definition is the role of perception. To each member of the social network involved, perception of newness may vary. Most new products are variations of existing ones thus some consumers may perceive such products as being new or different, whereas other consumers may not. Consumer adoption will depend upon each individual's perception of uniqueness and whether consumers believe the new product offers any relative advantage versus current offerings.

Information seeking is easier than ever in today's digital environment. Consumers are now able to search and compare products on their phones at shelf or while shopping on-line. Ratings and reviews by third parties provide immediate perspective from those that may have already tried the product.

Consumers can watch videos on sites like YouTube to see how easy or difficult a product might be to assemble or use. Consumers can compare and gauge a new product's relative advantage, compatibility and complexity at any time and any place. They can observe how people have used products. This act of information seeking may lead to various outcomes within just moments, including gained awareness of potential problems or solutions, awareness of brands and products as well as consideration of new or different barriers and triggers. In other words, such information seeking may reduce uncertainty, impacting perceptions and the decision to adopt.

As our dependency on technology increases, manufacturers struggle with the decision to maintain a unique system versus having one that is compatible with other systems. For example, Apple products are highly compatible to each other but create a barrier to other products both in terms of their actual technology and how their usage experience. People that enjoy the way Apple products work may feel that competitive products have a disadvantage as they will not be as enjoyable or compatible.

Another example is Keurig coffee machines, which introduced its home coffee maker in 2004. Once it gained popularity, consumers began to switch brands of coffee to ones compatible with the technology, forcing coffee producers to either adapt or be left out of their consideration set.

The internet and technological advances have also had an impact on trialability of new products by making it easier to receive a product and similarly, simplifying the process of returning a product if so desired. Trial and compatibility have also been impacted by technology such as augmented and virtual reality. Such technologies provide venues for marketers to help consumers experience products without requiring the products to be physically present.

For example, technology now permits consumers to drop an image of furniture into an image of a room in their house or see makeup colors on a matched skin tone (Atkin, Hunt, & Lin, 2015). Such applications allow consumers to collect more information and react to an idea on a more personal and individual level to aid in consideration and decisions.

Research Question 1

Technological advancements now allow for immediate search and evaluation of information to compare offerings and ultimately reduce uncertainty. Early Adopters have an innate desire to be ‘in the know’ about new products. Have Early Adopters increased search and evaluation behavior in recent decades?

Communication Channel

Diffusion involves communication, in terms of how information regarding innovation is transferred to and from people within a social network through communication channels. Historically, mass media was considered the most effective means of generating awareness and sparking the diffusion process as it spreads knowledge of innovation to a large audience rapidly. However, communication channels have evolved due to modern technology that has potentially changed how people engage and with whom.

Traditionally, marketers created advertising for new products to generate awareness and encourage trial, utilizing primarily a one-way flow of information. Today, however, communication is much more likely to flow in both directions with advertising directed at consumers, consumer seeking information and even live correspondences and immediate interaction. There are now many more touchpoints within a consumer journey where information relative to innovation may be present and consumers may engage with companies or brands. Simultaneous two-way correspondences have become mainstream as consumers may now engage in conversation with brands and companies utilizing services such as on-line chatting or texting. Consumers now have greater control in the diffusion process as they may seek out information and influence it in the marketplace (Atkin et al., 2015).

Consumers and organizations now play a greater role in communication and communication channels. Word of mouth has evolved to ‘electronic-word of mouth’ (E-WOM) opening the door to tremendous study in recent years within academia. E-WOM is defined as “any positive or negative statement made by potential, actual or former customers about a product or company that is made available to a multitude of people and institutions via the internet (Hennig-Thurau, Walsh, & Walsh, 2003).

Online channels now allow for interpersonal ties and connections with people regardless of location. Such connections have opened the door for many more potential networks bound by common interests, traits or demographics. Homophily is the tendency for people to gravitate toward people they relate to on the basis of similar demographics or values such as beliefs, attitudes or interests. Research has shown that within such groups, communication becomes more effective because such similarities lead to greater knowledge, thus ultimately influencing behavior change.

Homophilous people tend to promote and advance diffusion with each other within a network (McPherson, Smith-Lovin, & Cook, 2001). Within such networks, it is believed that a group dynamic takes place as momentum behind certain news or information is introduced from several sources, suggesting complex contagion. A recent study compared contagion vs homophily and found that when

studied in terms of new product adoption, homophily can account for much of what is considered contagion (Aral, Muchnik, Sundararajan, & Jackson, 2009).

People may gravitate toward each other within communication channels based upon interest in product categories. Today, people can follow influencers, bloggers, organizations and companies that share information about various interests and categories. Such information often includes news of the latest new products or experiences which are then shared to people with greater interest in the topic, speeding up the diffusion of information to those most likely to respond.

Research Question 2

Technological advancements now allow for more, faster and easier interactive communication prior to making a purchase decision. Are Early Adopters engaging with others more prior to making purchase decisions?

Social System

A social system is defined by Rogers as a set of interrelated units engaged in joint problem solving to accomplish a common goal. Within any social group or community, there are gatekeepers, opinion leaders and change agents that influence the speed through which news of the innovation diffuses (2010).

Homophilious groups connected by a common interest provide a venue for innovators, often serving as gate keepers or influencers, to introduce news to those most accepting and interested in shared topics, categories or discoveries. Similarly, Early Adopters serving as change agents may share knowledge they gain through more topic focused networks to their broader social networks, spreading information to the masses as opinion leaders.

The ability for momentum to accelerate or decelerate is based upon a number of conditions, such as timing, location, content, trust of source, etc.) which is also consistent with learning related to E-WOM (Watts & Dodds, 2007). While technological advancements have certainly impacted social systems and diffusion overall, it is believed that they are most likely to impact persuasion as perceived risk is reduced by the influence of its members (Midgley & Dowling, 1978).

Consumers may now seek out and follow opinion leaders of their choice through various social network channels on any topic of interest. Contagion, the study of how individuals monitor others and imitate their behavior, impacts the diffusion of innovation by playing a role in how people obtain information, are persuaded and decide to adopt or not. People are more likely to imitate behaviors of individuals they feel are most like themselves or those they consider higher in status (Atkin et al., 2015; Valente, 1995). Marketers often use influencers to infuse news of their innovation into social networks in the hopes of accelerating awareness and trial builds as well as building brand equity from such associations.

FOMO, which is the ‘fear of missing out’, has become a growing area of interest since the digital revolution within psychology studies and is now transcending into marketing. Many people have what is often described as an addiction to keeping abreast of the latest information, news, events and trends. Such a phenomenon causes people to actively seek out information so that they become aware of innovation and trends ahead of the innovation curve, or prior to majority. This also speeds up the innovation process (Abel, Buff, & Burr, 2016).

Research Question 3

Due to technological advancements of recent decades, are influencers now playing a greater role in the diffusion of innovation, specifically in terms of how Early Adopters respond to them?

Time

Rogers refers to diffusion as a process that must be observed over time (2010). This is a behavior based approach that is grounded upon the behavior and actions of those individuals within a network that learn of and adopt a new product earlier than the remaining individuals within the same network.

Throughout each component of the Diffusion of Innovation theory, technological advancements have certainly sped up how information is transferred and how we communicate with each other. Mobile devices and accessibility to Wi-Fi, puts access to the internet at our fingertips significantly speeding up our ability to gather information and correspond with others via copious communication channels. Consumers may now acquire information from their mobile devices from practically any location. This includes information on products, services, ratings and reviews, visuals, videos, advice, and details on where to purchase, prices and return policies.

The time between the stages of innovation can literally be moments now, as once acquiring information and forming an opinion toward an innovation, a consumer may immediately decide to purchase a product. Using any screen, people can now click to purchase a product on sites where knowledge is acquired. Implementation is sped up as well as products are shipped immediately and in some categories, such as music, entertainment and books, products can be downloaded instantaneously. And in such cases, confirmation can also take place within moments through instant sharing of the purchase or experience as well as ratings and reviews through social media.

Research Question 4

Technology provides access for immediate purchase decisions. Early Adopters are believed to be more inclined to make impulse purchases. Has technology increased impulse purchasing by early adopters more compared to the changes in behavior among non-early adopters?

METHODOLOGY

There are three general approaches to identifying and measuring Early Adopters or consumers more inclined to purchase innovation earlier than others. These include behavior based approaches (such as measuring how many leading edge products a person owns), innate innovativeness characteristics (such as general interest in new products relative to friends and family) and cross sectional methods that provide somewhat of a hybrid of the two (Goldsmith & Hofacker, 1991).

There has been much debate about the best approach and often the decision is based upon the objective at hand. To understand attitudes and behaviors across categories, self-reported methods of innovativeness are more often used as behavioral approaches have been determined to more likely capture differences across domains (Gatignon & Robertson, 1985; Hirschman, 1980). For the purposes of this analysis, an innate innovativeness measure is ideal as such an approach has been found to effectively identify people that are more innovative and determined it to be effective across domains. We used the statement “I am always one of the first among my friends to try new products/services”. This statement is similar to the one used by Goldsmith and Hofacker, “In general, I am the first among my circle of friends to adopt new (category) product when it appears” (1991).

To gain insights toward our research questions, we established critical requirements in terms of the data that would be used to answer the research question. First, we investigated the availability of data that reflects relevant attitudes of Early Adopters over a 20-year period. We established 1996 as the baseline as the adoption of Internet access was minimal at that time. We also required that the attitudinal data should be based on questions that have consistently been asked in the exact same manner each year for the past 20 years. Finally, we required that the sampling plan was essentially the same each year and that the sample size is large by most research standards.

The source of data that met our requirements was the Simmons National Consumer Study (NCS). The sample size for adults in the United States who participated in the survey in 1996, 2006 and 2016 were 190,637, 215, 873 and 240,779 respectively. Simmons has consistently used a probability-based stratified sampling to provide nationally representative data for consumers in the United States in terms of income, status and geographic distribution.

The Simmons NCS survey has been conducted since 1952, so it allows us to compare data over time, primarily from the mid-1990s to today during which technological advancements truly evolved. The data is generalizable with a very large sample allowing us to look at data among sub-groups with robustness.

The Simmons data has been primarily used by professionals in the field of advertising because it provides consumers' overall media habits and opinions regarding various activities. However, it should be noted that Simmons provides aggregate rather than individual-level data. In this form, Simmons only allows researchers to run univariate statistics such as percentages and frequencies. Finally, the Simmons NCS survey includes questions that capture information regarding technology use as well as attitudes and behavior related to the Diffusion of Innovation components.

Early Adopters were defined as those who agreed (definitely or somewhat) to the statement provided by Simmons that 'I am always one of the first among my friends to try new products/services.' and non-Early Adopters as those that were neutral or disagreed. The measure is self-reported and asked using a five point Likert scale.

To understand how the attitudes and behavior of Early Adopters and non-Early Adopters evolved over time data from 1996, 2006 and 2016 was analyzed. Trending was only possible for 30 measures within the survey as many of the questions have been changed over time limiting the ability to trend consistently. From those 30, we identified ones most relevant to the Diffusion of Innovation theory and our research questions. We also compared Early Adopters to non-Early Adopters during each of the years we looked at. As an additional requirement, at a minimum, we required at least 2 items to be available to address each research question.

RESULTS

Research Question 1

Technological advancements now allow for immediate search and evaluation of information to compare offerings and ultimately reduce uncertainty. Early Adopters have an innate desire to be 'in the know' about new products. Have Early Adopters increased search and evaluation behavior in recent decades?

TABLE 1

	Self Reported Early Adopters			Self Reported Non-Early Adopters			<u>Non EA</u>	
	<u>1996</u>	<u>2006</u>	<u>2016</u>	<u>1996</u>	<u>2006</u>	<u>2016</u>	<u>EA Diff</u>	<u>Diff</u>
	(%)	(%)	(%)	(%)	(%)	(%)	Ppts	Ppts
	51,163	59,934	77,425	110,863	155,939	163,355		
	27%	28%	32%	58%	72%	67%		
I like to shop around before making a purchase	68.40	73.90	77.90	72.10	72.40	74.00	9.5	1.90
I always check ingredient/nutritional content before I buy	56.70	62.70	68.40	49.90	51.00	54.10	11.7	4.2

As shown in the data in Table 1, Early Adopters have increased their search and comparison behavior, whereas Non-Early Adopters show just a slight increase from 1996-2016. The same is noted about checking ingredients before buying. Interestingly, on the first more general attribute, Early Adopters agreed with this statement less so than Non-Early Adopters in 1996, however, they have

significantly increased in agreement now and are more likely to agree with this statement now than Non-Early Adopters.

Research Question 2

1. Technological advancements now allow for more, faster and easier interactive communication prior to making a purchase decision. Are Early Adopters engaging with others more prior to making purchase decisions?

TABLE 2

	Agree			Disagree			Difference '16-'96	
	Self Reported Early Adopters			Self Reported Non Early Adopters				
	<u>1996</u>	<u>2006</u>	<u>2016</u>	<u>1996</u>	<u>2006</u>	<u>2016</u>	<u>EA Diff</u>	<u>Non EA Diff</u>
	(%)	(%)	(%)	(%)	(%)	(%)	Ppts	Ppts
	51,163	59,934	77,425	110,863	155,939	163,355		
	27%	28%	32%	58%	72%	67%		
I often seek the advice of others before making a purchase	51.50	50.10	58.80	43.80	40.10	37.00	7.3	-6.8
My children have a significant impact on brands I chose	43.40	52.40	57.50	31.40	34.70	33.00	14.1	1.6
My spouse has a significant impact on the brands I chose	50.60	54.50	62.30	44.50	46.80	42.40	11.7	-2.1

The trended Simmons NCS data shows that Early Adopters have increased their agreement with the statement ‘I often seek the advice of others before making a purchase’. While the statement does not directly indicate whether technology is permitting this behavior, based upon the data shown in Research Question 2, that Early Adopters desire to be connected at all times, we can determine that it is playing a role in their ability to confer with others anytime, anyplace. Interestingly, Non-Early Adopters have declined on this measure.

Early Adopters display similar agreement on the two attributes related to family, specifically gaining input from children and a spouse prior to making a purchase. This again supports the notion of connectivity playing a role in their daily activities. Non-Early Adopters show less differences across the trended data.

Research Question 3

Due to technological advancements of recent decades, are influencers now playing a greater role in the diffusion of innovation, specifically in terms of how Early Adopters respond to them?

TABLE 3

	Agree			Disagree			Difference '16-'96	
	Self Reported Early Adopters			Self Reported Non Early Adopters				
	<u>1996</u>	<u>2006</u>	<u>2016</u>	<u>1996</u>	<u>2006</u>	<u>2016</u>	<u>EA Diff</u>	<u>Non EA Diff</u>
	(%)	(%)	(%)	(%)	(%)	(%)	Ppts	Ppts
	51,163	59,934	77,425	110,863	155,939	163,355		
	27%	28%	32%	58%	72%	67%		
A celebrity endorsement may influence me to consider/buy	24.40	28.30	41.80	10.30	10.90	10.80	17.4	0.5

Early Adopters are more likely than Non-Early Adopters to agree that celebrity endorsements influence their decision to consider or buy a product. Further, their agreement of this attribute has increased significantly since 1996 suggesting that their connectivity through technology to such news and influencer is playing a greater role.

Research Question 4

Technology provides access for immediate purchase decisions. Early Adopters are believed to be more inclined to make impulse purchases. Has technology increased impulse purchasing by early adopters more compared to the changes in behavior among non-early adopters?

TABLE 4

	Agree			Disagree			Difference '16-'96	
	Self Reported Early Adopters			Self Reported Non Early Adopters				
	<u>1996</u>	<u>2006</u>	<u>2016</u>	<u>1996</u>	<u>2006</u>	<u>2016</u>	<u>EA Diff</u>	<u>Non EA Diff</u>
	(%)	(%)	(%)	(%)	(%)	(%)	Ppts	Ppts
	51,163	59,934	77,425	110,863	155,939	163,355		
	27%	28%	32%	58%	72%	67%		
I usually wait until others try things before I try them	34.20	38.80	60.20	41.40	36.20	42.60	26	1.2
I tend to make impulse purchases	49.10	51.70	57.30	29.00	31.20	32.00	8.2	3

Data among both Early Adopters and Non-Early Adopters confirm that people are making more impulse purchases now versus 1996. While this is true for both groups, Early Adopters display a significant increase in their agreement to this measure.

DISCUSSION

The data shows that Early Adopters have become more engaged with technology and using it more than non-Early Adopters for behaviors related to the components of the Diffusion of Innovation theory. Early Adopters display a greater interest in being connected at all times, not only to those in their close, personal network but also to influencers, celebrities, brands and companies. They want to feel connected. They want to stay informed of news and information. Additionally, they want to connect to others on topics they are most interested in. This connectivity is increasing the speed in which diffusion of innovation can take place. It is also evolving the construct of the social networks and channels in which information is shared.

Most interesting is that Early Adopters have evolved to a greater extent than Non-Early Adopters on key measures related to the Diffusion of Innovation. Their attitudes and behavior related to the role that technology plays on all components of the Diffusion of Innovation Theory (innovation, communication channels, social systems and time) have evolved to a greater degree.

While it is believed that Early Adopters behave different than other categories of people, such as Majority and Laggards, we must consider based upon these findings if they are pulling apart. While this study did not focus on homophily, there are enough indicators in this data and other research to propose that Early Adopters may be creating and attracted to networks of like-minded people where they may speak more about innovation in terms of their own motivators of curiosity, interest in trying new products and being aware of the most up-to-date products. If these social systems are not inclusive of those that are more inclined to fall into the majority category, will such innovations flow through the diffusion process today as they may have prior to the technological revolution of recent decades?

The findings of this study show a widening gap between Early Adopters and Non-Early Adopters over the past twenty years, supporting the notion of a potential crack in the bell curve. This concept has been proposed in recent years and warrants further exploration (Moore, 2002). If social systems are forming based upon both topics of interest and innate innovativeness, marketers may need to help information related to innovation to diffuse through a broader system. Further research in understanding the implications of a widening gap between Early Adopters and Non-Early Adopters is warranted in terms of understanding where, when and how to reach each group.

CONCLUSIONS

This study provides the grounds for further exploration of how technology has impacted the behavior of Early Adopters and how such changes may be widening the gap between Early Adopters and the masses. While the foundation of the Diffusion of Innovation remains, we must consider how technology advancements may impact diffusion of products and services overall and across the five categories of adopters, especially from Early Adopters to Early Majority. Such learning is important to maintaining up-to-date learning relative to the theory overall but also to related theories in communication and innovation.

It is believed that between 60-80% of new products fail in market (Simester, 2016). In most cases, marketing research is conducted beforehand, so how can this be? It is essential that, as marketers, we seek to understand how diffusion of innovation may have evolved due to technological advancements. Since the Diffusion of Innovation theory is based on a process grounded upon communication, it is possible that diffusion could break down if consumers are grouping together based on topic and innate innovativeness, and as such we may need to shape communication plans to address.

By identifying differences in what motivates Early Adopters versus Early Majority, marketers can adjust their communication plans accordingly so that the diffusion process will not break down. The

findings of this study, support the idea that a gap between Early Adopters and non-Early Adopters does often exist and may be widening. Thus, we must consider how those that first learn of innovation may experience and engage with news of innovation to the masses and understand how each group may be motivated differently.

Such findings may also impact marketing research, as many companies are now experimenting with new research tools and techniques that are based more on cocreation with consumers that are more engaged with their categories. If developing new products with Early Adopters, they may find such consumers to be excited about trying a new product simply because they get excited about learning about and being involved in new initiatives. However, this may not be enough or benefits may not be as clear to Early Majority consumers. Early Adopters may also have different influencers and reference points in which they are basing their value equation on.

LIMITATIONS

To understand the impact of technology advancements over time, we relied on NCS data. We were limited to the measures that were available across the three data points of 1996, 2006 and 2016. The NCS data provided enough support to answer our research questions, however we were not able to trend data on connectivity and the types of social groups that people are involved with. It would be interesting to see if, over time, the construct of the social systems has evolved.

Further research is needed to explore a potential widening of a gap between Early Adopters and Non-Early Adopters. There are enough indicators to hypothesize that homophilious social constructs in conjunction with Early Adopters evolving to a greater degree than Non-Early Adopters on the components of the Diffusion of Innovation, may be changing the manner in which innovation diffuses or not through a broader network.

Finally, as noted earlier, Simmons provides aggregate rather than individual-level data. As such, Simmons limits researchers to run univariate statistics such as frequencies and percentages. The next step in this research stream would be to work with Simmons to run individual-level data to obtain an even deeper understanding of comparisons of purchase behavior between Early Adopters and all other consumers.

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