ROLE OF PERCEIVED INNOVATION CHARACTERISTICS AND INFORMATION QUALITY ON PERCEIVED USEFULNESS IN ADOPTION OF TECHNOLOGICAL PRODUCTS

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BY

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This is to certify that the thesis entitled Role of Perceived Innovation Characteristics and Information Quality on Perceived Usefulness in Adoption of Technological Products, has been prepared by me under the supervision and guidance of Dr. Prabhat Kumar Yadav. The thesis is my own original work completed after careful research and investigation. The work of the thesis is of the standard expected of a candidate for PhD Programme. The final hard bound copy of the thesis is submitted after incorporating all the suggestions / corrections suggested by the referees.

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I, Manjari Mundanad, registered as Research Scholar, bearing Registration No. 133104 for the Doctoral Programme under the Faculty of Management, Nirma University, do hereby declare that I have completed the course work, pre-synopsis seminar, and research work as prescribed under R. Ph.D. 3.5.

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ROLE OF PERCEIVED INNOVATION CHARACTERISTICS AND INFORMATION QUALITY ON PERCEIVED USEFULNESS IN ADOPTION OF TECHNOLOGICAL PRODUCTS

Abstract:

Innovation is essential in development of technological product. Technological products are advancing on a day-to-day basis. With various technological products being developed, it has been observed, the lifecycle of the product has reduced. In a shorter life span of product creation and growth, it is a challenge for the marketers to convince customers to accept a product and adopt it. This study will help the marketers understand various factors that lead to intention to adopt a technological product with special reference to wearable technologies.

There have been many adoption theories that have developed to understand the factors leading to adoption of a product. In all the theories, behavioural intentions have played a role. Many models like "Innovation Diffusion Theory" (Rogers, 1962), "Unified Theory of Acceptance and Use of Technology" (Venkatesh, 2003) were developed to study adoption intention. In various models, it was theorized, perceived usefulness plays an important role in intent to adopt a product. There are many other factors that affect intention to adopt a product.

Product innovation characteristics (PIC) are the characteristics which make new product or innovation different from other products or innovation. As mentioned by Roger, 1962 and Rogers and Shoemaker, 1971, PIC has five dimensions namely, relative advantage, compatibility, visibility, trialability, ease of use (complexity). Adoption of a product or innovation is a decision-making process which begins with awareness of the product or innovation. There is risk associated in buying new product or innovation. Every person who considers buying a new product or innovation conducts a cost benefit analysis (McWilliams, & Siegel, 2011). In the study of

wearable technology, price associated would be more. With higher price, lies the higher risk. To mitigate the risk associated with the product, information plays a role in understanding the new product or innovation (Brockman & Morgan, 2003). Information is received from various sources. From marketing literature (Kotler et. al, 2010), there are major four sources from where information is received- internet, print, television and word of mouth (WOM).

Based on the insights, the current study theorizes and develops research model by integrating innovation diffusion theory (IDT), information systems theory and UTAUT model. The proposed research model attempts to study the following research questions: (1) Whether Perceived Innovation Characteristics, Information Quality and Perceived Usefulness lead to adoption of a technological product? (2) Does network diversity affect the adoption process of new product?

For the research the respondents were working professionals. A sample of 351 responses was collected through convenience sampling. The study was divided into four parts in terms of information sources, namely, internet, television, print and word of mouth. The findings of the study provide empirical support for the research hypotheses. It was found that (1) Perceived usefulness has a strong role to play in adoption process. It acts as a mediator between perceived innovation characteristics-adoption intention and perceived information quality-adoption intention. (2) Amongst the various mediums, in television medium, tie strength have not shown moderating effect. For rest of the mediums tie strength has moderated the relationship between perceived usefulness and adoption intention. (3) It was observed the strong ties strengthen intention to adopt wearable devices. Finally, the current study concludes with theoretical and managerial insights based on empirical findings. These insights provide clarity and recommendations to marketers for the factors to be considered in new product development (NPD).

Keywords: *Adoption, Perceived Innovation Characteristics, Perceived Information Quality, Tie-strength, Wearable Technology, New Product Development*

CHAPTER 1- INTRODUCTION

The fast-changing environment of technology products and their wider acceptance has been an essential issue for marketers, which sometimes also shows sudden growth (McDade, 1996). It is characterized by a short lifecycle and changes how people work in their daily lives.

The new technology product launches have profusely increased (Goffin, 1998; Antiaco & Kleijen, 2008). Technological products or technological innovations are part of product innovation. According to Griffith and Rubera, 2014; Hoegg and Alba 2011, and Rubera and Droge 2013, Product innovation includes technological and design innovation. Product innovation or new product is function changes and changes in external appearance.

1.1 Technology Products:

In Greek, technology known as technè, defined by Lindell and Scott, is "an art or craft." Technology, as mentioned by Salomon, 1984 is the "Science of things made by using man's skill and labour ." Technological product innovation is new in terms of improved product characteristics. The improved characteristics are enhanced technology, knowledge, or materials (Rogers M., 1998).

There are vast technological products, from smartphones to AI-based robotic products. These products are considered smart devices, ubiquitous devices.

The study we have conducted is on wearable technology, which is a form of consumer technology product. Amongst the smart products, wearable devices have shown growth in the market. The Indian wearable industry saw 168.3 % year-over-year growth in 2019 ("India's Wearables Market Ships Record 14.9 million units in 2019; Growth led by Ear-worn Devices, Says IDC India", 2021).

1.1.1 Wearable devices

Definition:

All technological products have different uses and ease of use aspects. The technological products are different in size and weight. Technological products like wearable devices are smaller in size, lighter in weight, and more convenient.

Amongst the technological products, Wearable device is a new form of smart device. Wearable devices like smartwatches are worn on the wrist, which has computational power, inbuilt sensors, and internet connectivity, or it could be any devices worn around the body like garments, accessories, jewelry, and others (Silina Haddadi, 2015; Seymor, 2008; Bieber, Kirste, and Urban, 2012). Wearable devices enable consumers' real-time exchange of data and information with the help of various software (Kalanthari, 2017; Swan, 2012; Castillejo et al., 2013; Hiremath et al., 2014; Wang, 2015; Sun et al., 2016). Wearable devices, along with ease of use, also add the style aspect (Kalanthari, 2017; Hein and Rauschnabel, 2016)

1.1.2 Wearable industry:

Lamkin (2016) states that the smart wearable industry is estimated to grow by US$ 43 bn by 2020. Smart wearable includes watches, wristbands, headwear, and eyewear. There have been a great variety of fitness tracking devices. Amongst all the gadgets, wearable healthcare fitness gadgets have grown from 9% in 2014 to 33% in 2018. (Accenture, Alicia Phaneuf, July 2019). Also, growth to $54 billion by 2023 is expected in the wearable technology industry (Wearable tech set to become a $54bn industry by 2023, 2019). Though this industry's growth is high, the studies related to adopting this product category are fewer.

There are many players in the market. The wearable market here comprises here of eyewear, wristband, and watches. In India, fitness band constitutes about 90% of the wearable market. Among all the wearable market players, Xiaomi, GOQii, Fossil, and Apple have the highest market share in the wearable market.

With new technological products like wearable devices, there is a need to adopt such products. Regarding adoption literature, major work on adoption was initially carried out mainly by Rogers in 1962. The studies were originally based in the area of agriculture. Later there were adoption studies at the organizational level. Researchers studied consumer adoption majorly after the year 1990. Technology adoption has been part of consumer adoption. The adoption of technology products talks about the significance and success of the technology. There has been an enormous amount of new technological products launched. But many new products are not very successful (Antioco & Kliejenen, 2009). Researchers and marketers are now focusing on improving the new product development processes.

With many studies, it has been seen awareness is the key which then leads to acceptance and then adoption of the product. The creation of technological products is half the work done. Being accepted and adopted by the customers forms an integral part (Khandker, 2014).

Initially, the gap between technology creation, acceptance, and further adoption was large. Now, with dynamism in ideas, new technological products have been created faster, and the pace at which these products reach consumers has become faster. Technology reaches consumers more quickly, making it a need rather than a luxury.

Research studies are talking about technology adoption. The studies range from in-home computerized banking, autonomous shopping system, electric vehicle, mobile wallets, and wearable technology devices (Dover, P.A., 1988, Bellis, E. & Johar, G., (2020); Sierzchula, W.,

2014; Madan K. & Yadav, R. (2016); Adapa, A, Nah, F.F.H., Hall, R.H., Sian, K., & Smith, B.N., (2018); Kalanthari, M. (2017)). With an enormous technological range, marketers must identify the factors influential for success and failure. The customers have been averse to adopting the products as the risk associated with the product is more. This risk can be mitigated by various factors influencing the intention to adopt the product. One of the factors research talks about in adopting a new product is based on the characteristics of the new product or innovation. It depends on whether the product is compatible with one's needs; compared to earlier innovation. The innovation characteristics are relative advantage, compatibility, complexity, ease of use, trialability, and visibility. The trialability, visibility, complexity, or ease of using the product also plays an important role.

Innovation characteristics have affected the intention to use the product. Intention to use or perceived usefulness is the capability that the product or innovation would prove advantageous. Perceived usefulness, according to research, also improves job performance. Perceived usefulness would lead to adoption intention for the product, which later could lead to adoption (Davis, 1989; Subramanian, 1994).

Adopting technological products, especially wearable gadgets, requires understanding the product. Awareness of the product forms the foremost step for adoption. Awareness is built by the transfer of information. Awareness of a product or service could come from external sources. Information transfer happens through various media channels like the internet, television, print media, or word of mouth (WOM). Since There is too much information available regarding the products, not all the information is quality information. This quality of information changes from person to person. Information quality changes based on the need and intent to use the information (Jiang et al., 2021).

Being a social animal, the activities done by another person in society can affect an individual. Along with quality information, a person's decision is involved in other ways. The study has shown consumers seek advice from their near ones and accordingly make decisions of adoption or resistance of new products (Chong et al., 2010; Singh et al., 2020. Besides the near and dear ones, peers and acquaintances have roles in adopting a new product. The concept of social influence has been further studied as strong and weak ties. Strong ties are the friends, relatives, and near ones, and weak ties are the ones who form acquaintances (Granovetter,1973). Weak and strong ties play an influential role in creating the intention to adopt an innovation.

In the research study, significant factors, namely, Perceived Innovation characteristics, perceived usefulness, Information quality, and social influence, have been studied. The study has also contributed to how strong ties and weak ties play an essential role in adopting new products.

CHAPTER 2- REVIEW OF LITERATURE

2.1 Adoption of innovation:

The word "adoption" originates from the Latin word "adoptio," which can further be broken down as ad-to and otio-choosing. The term "adoption" was coined in the late 15th century. According to Oxford Dictionary, adoption means to embrace, acquire, and take on. Researchers in many fields have conducted adoption studies. As far as marketing terms are considered, “it is moving from a cognitive state (being aware and informed) to an emotional state (liking and preference) and, finally behavioural or cognitive state (deciding and purchasing)”. J.D Eveland, 1979, has mentioned adoption as making full use of a new idea as the best action. Adoption of innovation would mean deciding to use and implement a new idea. Rogers, 1962 has defined “adoption as a decision to continue the full-scale use of an innovation”. There are definitions of adoption which are at the industrial level. Ozanne and Churchill (1971, 322) stated that adoption is the decision to purchase an industrial innovation at the industrial level. Robertson, 1971 said that adoption accepts the product and continues using the product. V.H. Carr Jr, 1999, has defined “technology adoption as selecting technology for individual or organisational use”. For this study, the definition given by Rogers (1971) is considered. Adoption on a large scale is known as diffusion in a system. Rogers has defined diffusion as communication about innovation over the period among those within the social system.

The adoption and diffusion process of new products or innovations involves the consumer's learning behaviour. The main element in the adoption process is knowing how people learn to like (Zaltman, 1965). The consumer learning process of technological innovations has focused more on the response to the verbal description, but that is not enough, as verbal description alone will not help consumers have an authentic experience of a new product. Technological innovations

have novel interfaces that enable consumers to interact with the product and experience the functionality (Barkoczi N. et al., 2015). The learning process deals with cognitive learning, the individual being aware of the stimulus, and affective learning begins when the individual starts liking the product (Zaltman, 1965).

The adoption process moves from the cognitive state, i.e., awareness and being informed about the innovation, to the emotional state, i.e., liking and preferring the innovation. The product is either adopted due to experience in using the product or the essential features of the product.

The innovation characteristics are “relative advantage, compatibility, observability, complexity, and trialability (Rogers, 1962)”. Innovation characteristics are perceived as perception is an integral part of human behaviour. “Relative advantage is the perception that innovation is better than the one superseded” (Rogers, 1962). Compatibility with the innovation suggests that the innovation is consistent with the person's values, needs, and experiences. Complexity is the perception that the innovation is difficult to understand or use. Trialability uses the innovation on a limited basis, with limited experimentation, and observability results from innovation being visible to others. The product characteristics like compatibility, trialability, relative advantage, complexity, and observability affect the adoption rate of innovation. Among these factors, compatibility, trialability, and complexity are closely related to the learning process. Apart from the stated factors, social influence plays a significant role in consumer acceptance of innovation. (Rogers, 1962).

The rate at which the adoption process takes place is different. Initially, the pace at which adoption of innovations takes place is slow and then increases until half of the potential adopters accept the new product. Then it stays for a while and then declines. S-curve is formed when the rate of adoption is plotted on a graph. Based on the time of adoption, there is a categorization of adoption

made as Innovators, early adopters, early majority, late majority, and Laggards. The innovators, early adopters, and early majority contribute to 50% of adopters. Based on characteristics, adopters are classified (Rogers, 1962). Innovators, early adopters, and the early majority are venturesome, respectable, deliberate, and younger, whereas the late majority, laggards, are skeptical, traditional, and older.

Adoption rate is determined with attributes of innovation, the type of innovation decision, communication channels, nature of the social system, and the extent of the change agent's promotion efforts (Rogers, 1971). Here, the adoption rate is the speed at which the adoption and diffusion took place. The adoption rate is measured by the “number of receivers who adopt the new idea at a particular time (Rogers, 1971)”. The adoption process can be assessed width-wise and depth-wise. Depth-wise adoption means the amount of product usage or the purchase of related products like the accompanying peripherals. The width would mean the adoption unit of who is using the product or the several ways the product can be used (Rogers E.M and Beal G.M., 1958). The adoption of technological products has penetrated people's lives in modern times. Research on new product adoption, specifically new technological products, has increased due to the rising number of new technological products ranging from digital cameras to wireless products to products working on artificial intelligence (Chan, 2009). Many factors make an individual decide to adopt the product.

Adopter categorization has been established based on the product's adoption time. As the new product is created, it is not adopted by all. Some people adopt the product at an earlier stage, some at the products later stage, and some do not adopt at all. The figure given below shows the various type of adopters.

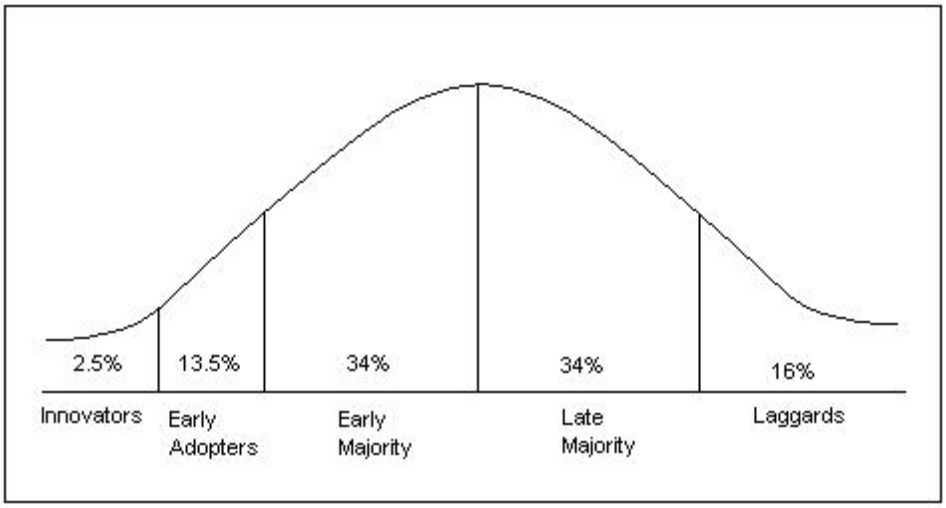


Fig 1: Adopter Categorization

Source: Rogers, E. M. 1962. *Diffusion of innovations*, New York: Free Press

As shown in figure 1, the first category is that of innovators. Innovators are the ones who adopt the new product or idea as soon as it is out in the market. Innovators contribute to 2.5% of total adopter categories. The next category is early adopters, who the innovators influence to adopt the product. They form 13.5% of the adopter categories. The early majorities understand the new product or idea, accept this change, and adopt the new product. They are the first significant adopter categories contributing about 34% of them. The late majorities are not risk-takers and wait for most of the population to adopt the new product. They, at a later stage, understand the change and adapt. The late majority contributes to 34% of the adopter category. The last category is laggards, who are unwilling to adopt the new product. They are not ready for the change. Laggards contribute to 16% of the adopter categories.

Amongst them, information and information sources play a crucial role. The impersonal and cosmopolitan sources like the media make an individual aware of the innovation. Later at the evaluation stage, personal information plays an essential role in adoption decisions (Rogers, 1962). Network ties also play a crucial role in adopting a new product (Suarez, 2005). The information

about the product needs to be transferred by the individuals. Here, the information transfer would be from the adopters to the non-adopters, which has resulted in the adoption process moving into diffusion, i.e., to larger non-adopters, thus contributing to the growth in the diffusion process. This growth signifies the success of innovation in the market (Mahajan & Wind, 1985). The information from various sources must be transferred from an adopter to a non-adopter. Individuals are affected by each other in some way or the other.

To a great extent, individuals get influenced by others, and others even persuade their actions. This influence is a social impact. Social impact is the changes in physiological states, feelings, motives, emotions, beliefs, behaviour, and values in an individual due to the presence of another individual or the actions of another individual (Latane, 1981). The social impact in psychology can be further extended to the adoption process. Research work by Centola, 2011; Rogers, 1962; Rogers and Shoemaker, 1971; Tucker 2008; Risselada et al., 2014; Wang et al., 2008 and many more talks about the influence of the individuals who have adopted the product or the number of users using the product highly affects and can influence the non-adopters to become adopters. Network externalities, network diversity, and personal influence are some words used in place of social influence. The context of social influence will be discussed later in-depth in the study.

2.2 Adoption models:

Consumers adopt many technological products and services in everyday life at home or the workplace. There are models defined to measure the adoption behaviour. In the year 1989, TAM was developed by Davis. TAM was initially developed to predict information technology acceptance and usage in the work setting. The system used to be expected by user motivation, which is then directly influenced by the system's features and capabilities, which forms external

stimuli (Davis, 1989; Venkatesh et al., 2003). The primary constructs in the model are "perceived usefulness, perceived ease of use, and actual system use(Davis, 1989)". After researchers developed TAM, TAM 2 had a subjective norm construct. Out of all the constructs, perceived usefulness is critical in the TAM. "Perceived usefulness is the degree to which the individual believes using a particular system or product will enhance their job performance (Davis,1989)". Perceived ease of use is another critical construct that considers the specific system would be free from mental and physical effort (Davis,1989). Perceived ease of use influences perceived usefulness (Davis, 1989).

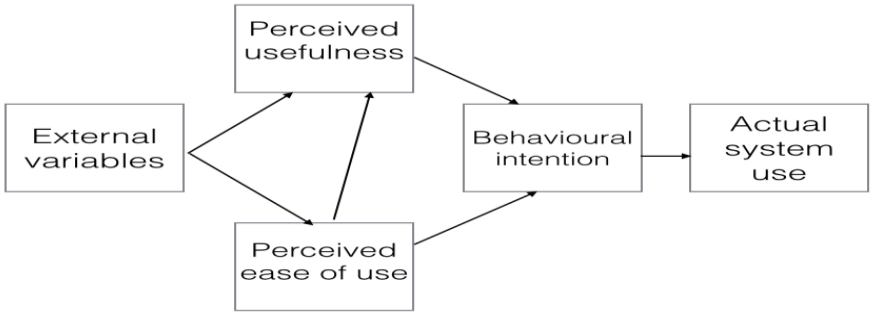


Fig 2: Technology Acceptance Model

Source: Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

Both TAM and TAM1 were developed for the work setting. In 1960, Rogers developed a model, Innovation Diffusion Theory (IDT). It has been used in innovation in agriculture at the individual and organizational levels (Tornatzky and Klein 1982). IDT has antecedents, processes, and consequences. The model's antecedents are personality characteristics, social characteristics, and the strength of the perceived need for innovation. The innovation diffusion process has four main stages: "knowledge, persuasion, decision, and confirmation (Rogers,1971)". The innovation adoption occurs at the decision stage, which can be continuously used or rejected. There have been many studies that have considered innovation diffusion theory for empirical studies.

2.2.1 Innovation Diffusion Model:

Innovation Diffusion Theory (IDT), used since 1960, has been given by Rogers and is grounded in sociology. Moore and Benbasat, 1991 have adapted the innovations presented by Rogers and refined the construct to study individual technology acceptance in an organization. The Innovation Diffusion theory takes an unorthodox approach to studying changes in preference for a new product. The theory sees change primarily as the evolution or "reinvention" of products and behaviours (Les Robinson, 2009). Hence, they become better fit for the needs of individuals and groups in the diffusion of innovations. The model emphasizes on change in innovations rather than changing people (Les Robinson, 2009).

The model has three divisions – antecedents, process, and consequences.

Innovation can be adopted at the decision stage and used continuously or rejected later.

The model of the innovation-decision process consists of four functions or stages- Knowledge, Persuasion, Decision, and confirmation.

According to Rogers, each of the four stages is defined as:

1) Knowledge: In this stage, “the individual is exposed to innovation to understand the functioning of the innovation.”

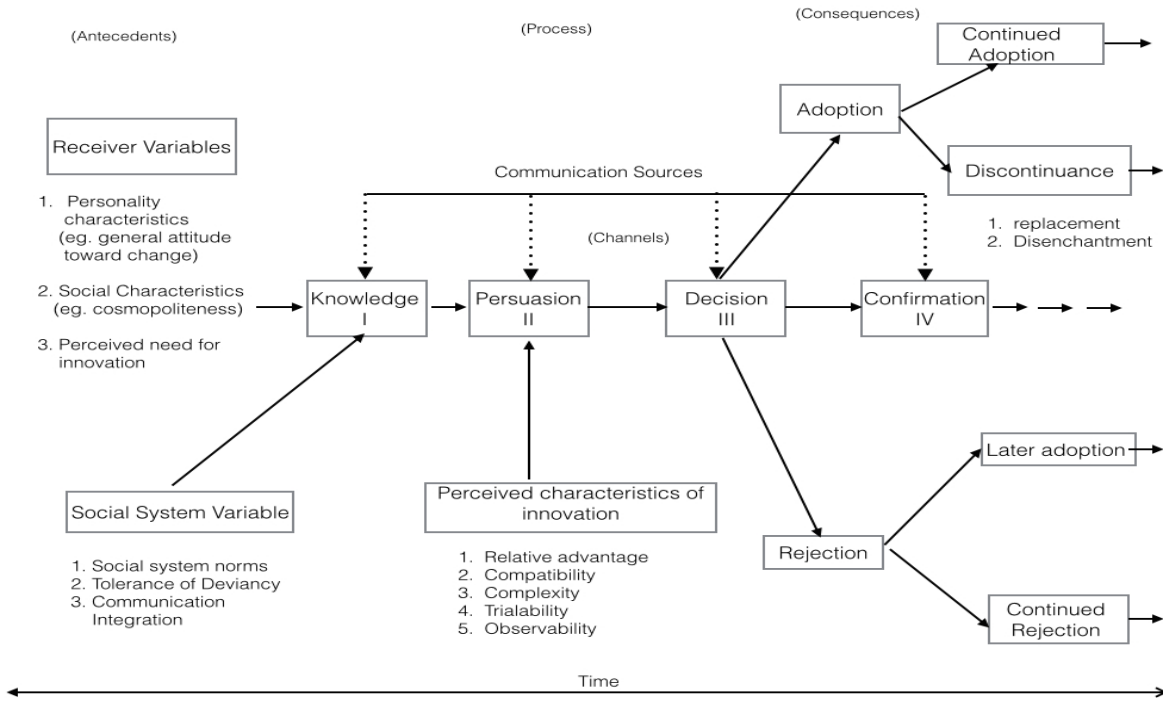
2) Persuasion: In this stage, individuals form an attitude towards innovation. The attitude could be favourable or unfavourable, meaning that the decision to adopt the product or the innovation would not occur in this stage.

3) Decision: The individual will choose to adopt or reject the product or innovation at this stage.

4) Confirmation: After the decision stage, the individual adopting the innovation would require reinforcement for innovation-decision, but after the reinforcement, can reverse the previous decision if conflicting messages are received.

Here the antecedents consist of the individual personality attributes like the attitude toward change, social characteristics such as cosmopolitans, and strength of his perceived need for innovation

Fig 3:



Innovation Diffusion Theory

Rogers E. M, Shoemaker and Floyd F, 1971. Communication of Innovations. New York: The Free Press, 1971

2.2.2 User Acceptance of Information Technology: Toward a Unified View:

UTAUT model has been developed by previously established models. Seven significant constructs were determinants of intention or usage in one or more individual models. The determinants that directly affect user acceptance and usage behaviour are performance expectancy, effort expectancy, social influence, and facilitating conditions. Attitude toward using technology, self-efficacy, and anxiety are not direct determinants for measuring user acceptance of technology. The moderators for the model are gender, age, voluntariness, and experience. The shown below is the model.

Performance Expectancy: "The degree to which an individual believes that using a system would help them to attain gains in job performance. It is the strongest predictor for measuring intention (Venkatesh et.al., 2003)".

Effort expectancy: "It is the degree of ease of using the system". It has been captured from the perceived ease of use from TAM, complexity in MPCU, and ease of use from the IDT model (Venkatesh et.al., 2003).

Venkatesh and Morris, 2000 have drawn from the research that effort expectancy is more salient for women than men. Also, it has been observed that with age, the processing complexity of stimuli decreases (Plude & Hoyer, 1986; Venkatesh et al., 2003)

Social Influence is defined as "the degree to which an individual perceives those important others believe he or she should use the system. The social norm from the other model is the root of this construct (Venkatesh et.al., 2003)".

Behavioural control from the TPB model, c-TAM TPB model, and compatibility of IDT model

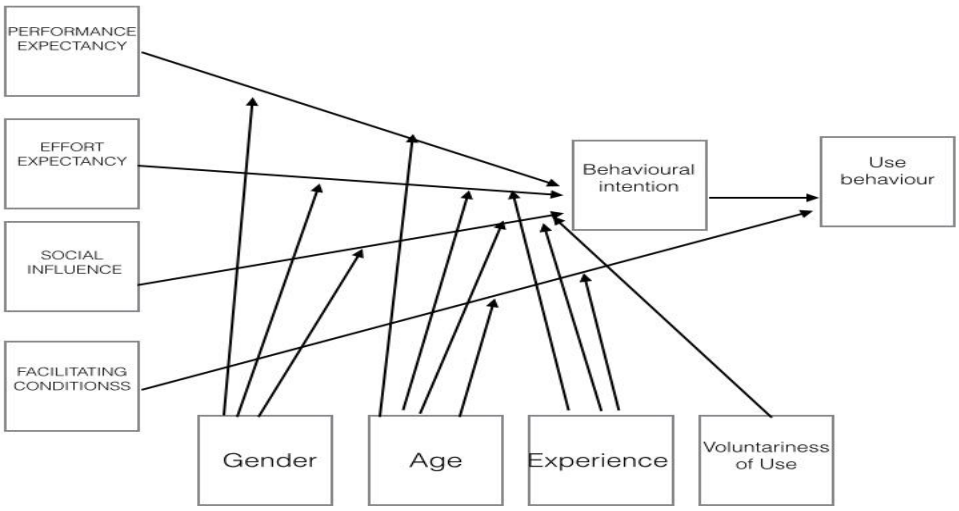


Fig 4: User Acceptance of Information Technology: Toward a Unified view

Source: Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS quarterly, 425-478.

2.3 Perceived usefulness:

Perceived usefulness has been a critical variable in adoption theories. Many studies have mentioned that using a particular technology would improve how the user performs or completes the task. (Guriting and Ndubisi, 2006; Jaruwachirathanakul and Fink, 2005; Eriksson et al., 2005; Laforet and Li, 2005; Nui Polatoglu and Ekin, 2001; Liao and Cheung, 2002). Many researchers have given various definitions of perceived usefulness. In TAM, perceived usefulness talks about the belief in enhancement after using the technology. According to Davis et al. (1992), perceived usefulness is the consumers' perceptions of the result of the experience. Perceived usefulness is also “the individual's perception of enhancing the individual's performance when using innovative technology” (Davis, 1993). Mathwick et al., 2001, have defined perceived usefulness as “the extent to which a person considers a particular system to improve his performance (Jahangir and Begum, 2008)”. There have been many studies in the banking industry based on the importance of

perceived usefulness in adopting a new system or technology. Perceived usefulness deals with functional outcomes, which could be the benefits associated with a particular technology (Kulviwat et al., 2007; White et al., 2007). TAM has also mentioned perceived ease of use and perceived usefulness causing the adoption of the technological product. TAM used for organisational context would mandate the users to use the new technology in the organisation, which requires the technology to be easily used by all kinds of employees. But it has been mentioned that perceived usefulness is a key factor for the adoption of the technology compared to the ease of use (Davis, 1989; Hu et al., 1999; Kulviwat et al., 2007). Usefulness has been an essential driver of business intention. Most of the models developed for the adoption studies have been in the workplace context. The main difference between the TAM in the consumer context and workplace context is the addition of hedonic factors in the model for consumer studies (Childers et al., 2001; Dabholkar and Bagozzi, 2002). Along with perceived usefulness, other factors will affect the adoption process.

2.4 Information quality:

Information behaviour has been a study of the needs of humans to acquire or find a product or process and eventually rely on the information. Information has power that individuals from all walks of life utilise. The word information has its root in the Latin word 'information,' which means 'to give form to mind,' 'instructor 'teach' (Webster, 1898). There have been many definitions given for "information." Shannon and Weaver (1949) have quoted information as a stimulus individuals use to reduce uncertainty. They also consider information as a quantitative measure for communicative exchanges. Information has also been explained as ideas, facts, and data that can be communicated formally or informally (Chen and Hernon, 1982). Information is required to

understand the need of the customer. Human need is an inner state that motivates individuals to think and act accordingly.

Information is needed for the right need to be known, influencing information-seeking behaviour. Wilson (2000) has defined information seeking as mandatory to satisfy a person's inner state, i.e., the need to fulfill a goal. The information-seeking behaviour combines face-to-face communication, television advertisements, or reading a magazine. “It is a totality of human behaviour relating to sources and channels of information, including active and passive information seeking and information use (Wilson, 1999)”. It is an integral part of effective decision-making (Soane et al., 2014; Griffin, Dunwoody & Neuwirth, 1999). Information-seeking behaviour originates in 'User Studies,' which encompasses users' characters, needs, dependencies, and satisfaction levels. The information-seeking behaviour model developed by Wilson (1999) has covered studies based on Information science, which could be later expanded in other areas.

Information utility is measured using the information's relevance, comprehensibility, novelty, and credibility (Moenaert,1996; Moenaert et al., 1992). Lederer et al., 2000, stated that information quality is “relevance, accuracy, timeliness, and thoroughness of information”. Information quality is also dependent on the credibility of the source of information. (Tseng and Fogg, 1999; Nicolaou and McKnight, 2006). Information integrity has been the core of information quality (Boritz, 2004; Nicolaou and McKnight, 2006). Information qualities vary with different users. So, perceived information quality is the user's perception of the general information (Nicolaou and McKnight, 2006). Quality information efficiently reduces uncertainty and makes the wrong decisions, thus reducing the costs involved in making those wrong decisions. Such quality information reduces the cost of learning and overall information-seeking expenses, leading to adoption decisions.

2.5 Perceived Innovation characteristics:

Innovation characteristics research relates the attributes or features and innovation adoption. Few studies have discussed innovation characteristics in the research studies that the potential adopters have perceived. Rogers introduced the innovation attributes in 1962. According to Rogers (1962), these attributes help provide a framework to evaluate innovation by a potential adopter. The characteristics that Rogers (1962), Rogers, and Shoemaker (1972) suggested are relative advantage, compatibility, complexity, trialability, and observability.

Innovation characteristics impact the decision-making ability of consumers. Relative advantage is one of the characteristics of innovation characteristics. The more the relative advantage, the more will be the adoption intention. Findings show that innovation provides a better advantage than the earlier products or services (Abbas M. et al., 2021).

Many models have studied factors affecting the intention to adopt new products. Many researchers have studied Perceived Innovation Characteristics (PIC) (Al-Rahmi et al. 2019; Chang et al. 2017; Lee et al. 2011; Liao and Lu 2008; Van Slyke et al. 2004; Žvanut et al. 2011). The model explains that perceived innovation characteristics affect the intention to adopt a new product or an innovation (Chang C. et al., 2020).

Studies have shown how various dimensions of perceived innovation characteristics influence the intention to adopt smartwatches. One of the dimensions is that of relative advantage. Switching from traditional watches to smartwatches has been happening for the past few years. Earlier, traditional watches were used for looking at the time. Now –a – days, wristwatches are used for timekeeping, fashion, and status symbols. Smartwatch evolution brought about increasing functionality in wearable devices. To name a few, like connecting to smartphones and picking

calls, reading messages, measuring heartbeats, keeping track of daily activity, and many more. With improved functionality, people are switching to smartwatches and other wearable devices.

The concept of the relative advantage of a new product is the product being better than the previous one. Therefore, smartwatches have proved to have a relative advantage as one of the antecedents that affect the intention to adopt the new product.

Relative advantage is a dimension that can be different for different people as it is part of the people's perception in terms of the physical and functional characteristics of the new product.

For some, the functional usage of new products is more than the earlier innovation. This usage would mean greater intensity of the functional utility of a product for a person; more significant would be the relative advantage. With greater relative advantage, greater would be the intention to adopt that new product (Bolem, M.C., 2020).

Ease of use in innovation characteristics or the complexity of a product plays a crucial role in buying the product. With products like smartwatches, the functionality is more than traditional watches. Smartwatches are perceived to be complex as smartwatches functionality is more than conventional watches. The perception of complexity depends on the adopter categories the person belongs to. If the person belongs to the innovator category, the learning curve to understand the product would not be high. Still, the learning curve would be high for late adopters or laggards, which would mean investing more time and cognitive effort to learn to use the new product. So, if perceived complexity increases, there would be lesser would be intent to adopt the latest product, and if the perceived characteristics of ease of use of the product increase, greater would be the intent to adopt the new product (Bolen, M.C.; Wang XQ and Zander S, 2018; Thong, JYL, 1999).

Perceived visibility of a product is the extent to which the new product is physically being noticed. Perceived visibility is the by-product that people see others using. Studies have shown greater the perceived visibility of the product, the greater the intention to adopt the product. With visibility, the risk factor associated is mitigated to some extent (Chuah et al., 2016).

Trialability will help the prospective adopter to try the innovation. Trialability helps customers learn more about the innovation (Yuen KF,2020). Trialability, to a limited extent, lets the customer experience the innovation. Due to this, the customer would get an idea of how the innovation would be helpful.

The proposed model developed was based on the following gaps:

Perceived information quality: Information has been an integral part of knowing the product. Not all information is appropriate. Quality of information plays a key role. Few studies have taken the information as an antecedent for the adoption process.

The studies on adoption have concentrated on services and agriculture. Not many studies have focused on information quality for technological products.

2.6 Network diversity:

Individuals' adoption decisions are based on cost-benefit analysis (Rogers, 2003). While making decisions, there is always uncertainty attached. As a result, the potential adopters play the role of prior adopters or influence the potential adopters to choose adoption decisions (Singh & Phelps, 2013; DiMaggio and Powell, 1983). The influence of the influential on the potential adopter is based on the number of influential transmitting the information and the recipient and the characteristics of both influential and potential adopters. The factor of social proximity plays a

significant role in social influence on adoption decisions. Social influence depends on social proximity, which can increase or decrease the number of influential factors that could affect the product's adoption (Greve, 2005; Singh & Phelps, 2013).

Along with the abovementioned factors, the product's utility plays a significant role in the potential adopters making an adoption decision. The product utility is often increased by increasing the number of users using the product. That is an increased number of people in a "network." The increased number of people or users in the network increases the interaction among the people.

Adoption can be expressed as the function of adopters' knowledge, attitudes, or behaviours concerning the new product (Van den Bulte C. & Stremersch S, 2004). Using the new product on a user in a network would benefit other users. Individual adoption decisions are influenced by perceived innovation characteristics and personal influence (Gatignon and Robertson, 1985). When information is sought, personal influence has a high impact (Gatignon and Robertson, 1985; Katz and Lazarsfeld (1955); Weimann, 1982; Robertson, 1971; Bettman, 1979; Rogers, 1983). Social or personal influence is the change in an individual's behaviours, thoughts, or feelings from one's perspective(Eckhardt et al., 2009). As per social impact theory, the intensity of influencing people will affect the influence of individual experiences from others (Latane, 1981). The "strength" of the tie is essential to increase the intensity to influence the individual.

Influentials have been an essential part of adoption studies. An individual's attitude causes the individual to decide to adopt or reject a product. The influencers make a substantial impact on the prospective adopters. These influentials form a network, and the network becomes diverse with many people. The strength of ties is the relational bond which changes the information-sharing activities. The information regarding the product is based on strong and weak bonds. The bonds

affect the buying behaviour of a person. Some researchers have covered the effect of the strength of ties in the adoption process. The studies on adoption show most of the studies are organisational studies. Research on the consumer adoption process is less. There is a need for consumer-based studies in new product development.

2.7 Research Objectives:

The study's objective is to provide the framework for measuring adoption intention for a technological product with particular reference to wearable devices. Thereby evaluating the model based on the effect of factors-perceived innovation characteristics, network diversity, and perceived information quality on adoption intention. The model is aggregated to form the total effect of the factors on the intention to adopt. The objective of the study is as follows:

· To study the effect of perceived innovation characteristics on the product's usefulness.

· To study the effect of information quality on the usefulness of the product

· To study the moderating effect on the relationship between perceived usefulness and intention to adopt.

2.8 Research Questions:

The following questions are formulated based on the research gap-

Q1. Whether Perceived Innovation Characteristics, Information Quality, and Perceived Usefulness lead to the adoption of a technological product

Investigative Questions

• Whether a relationship exists between the Perceived Innovation Characteristics, Information Quality, Perceived Usefulness, and Adoption?

• Whether a relationship exists between information quality and the perceived usefulness of the product?

• Whether the perceived usefulness of a product leads to the intention to adopt a new product.

Investigative Questions

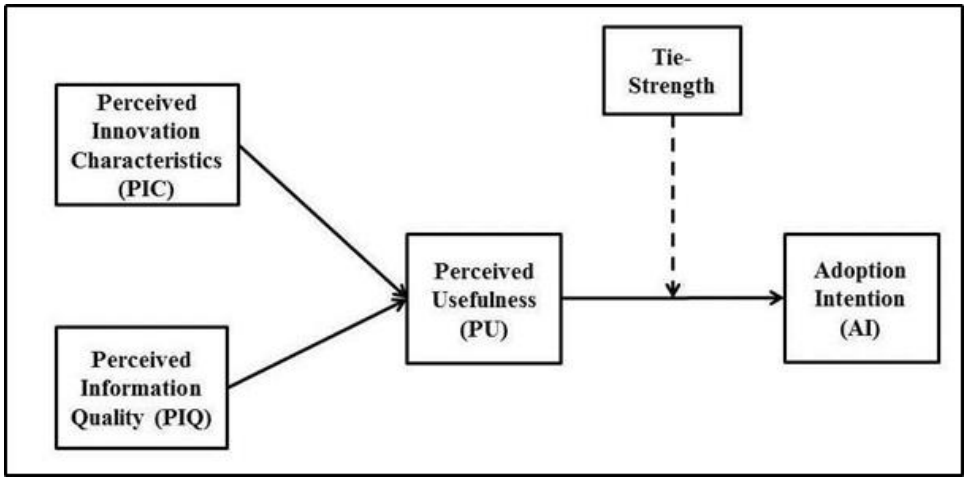
Q2. Does network diversity affect the adoption process of a new product?

• Whether strong ties and weak ties moderate the relationship between perceived usefulness and adoption of a new product

CHAPTER 3- CONCEPTUAL MODEL

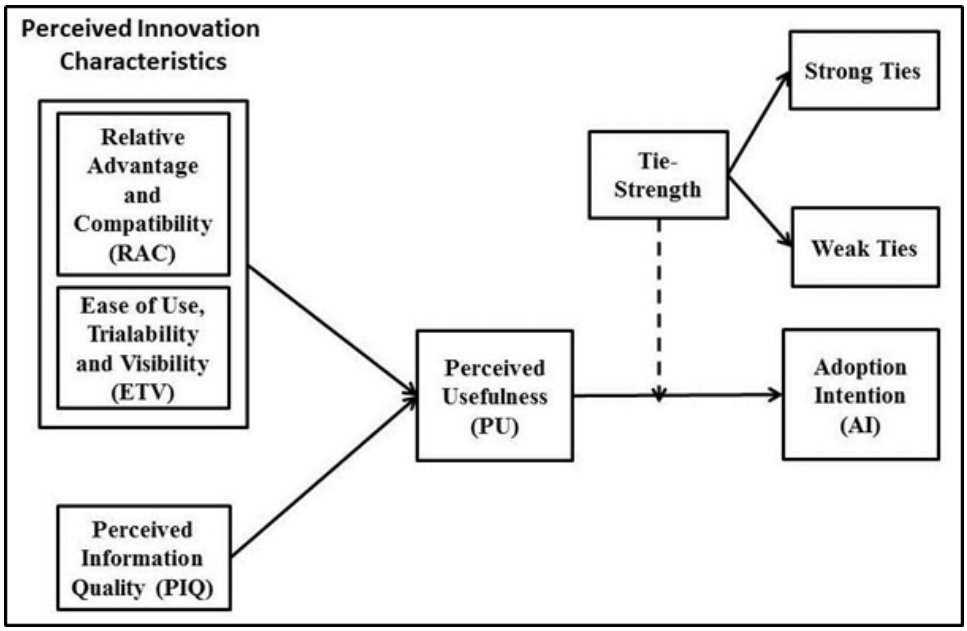
The concept of adoption has been explained in section 2.1. There have been key factors leading to the intention to adopt a new product. The relationship of the factors has been described by various models established by authors, as mentioned in section 2.2. Wisdom, Chor, Hoagwood, and Horwitz, 2015 have broken adoption into the stages-pre-adoption stage, where information is required for the adoption process, and the outcome is of adoption decision made by the consumers. When concerning information quality, awareness plays an important role, as mentioned in section 2.4. Along with information, for developing adoption intention for a new product, the influentials have a role to play which has been discussed in detail in section 2.6. Based on the literature in chapter 2 and identifying the gaps, the following model has been proposed in the study.

3.1 Conceptual Framework



Note: ⟶ denotes main effects, ⇣ denotes interaction effect

Fig 5: The proposed conceptual framework is tested in the current study



Note: → denotes hypothesized main effects, - - -↓- - - denotes hypothesized interaction effect

Fig 6: Proposed Abstract Conceptual Model

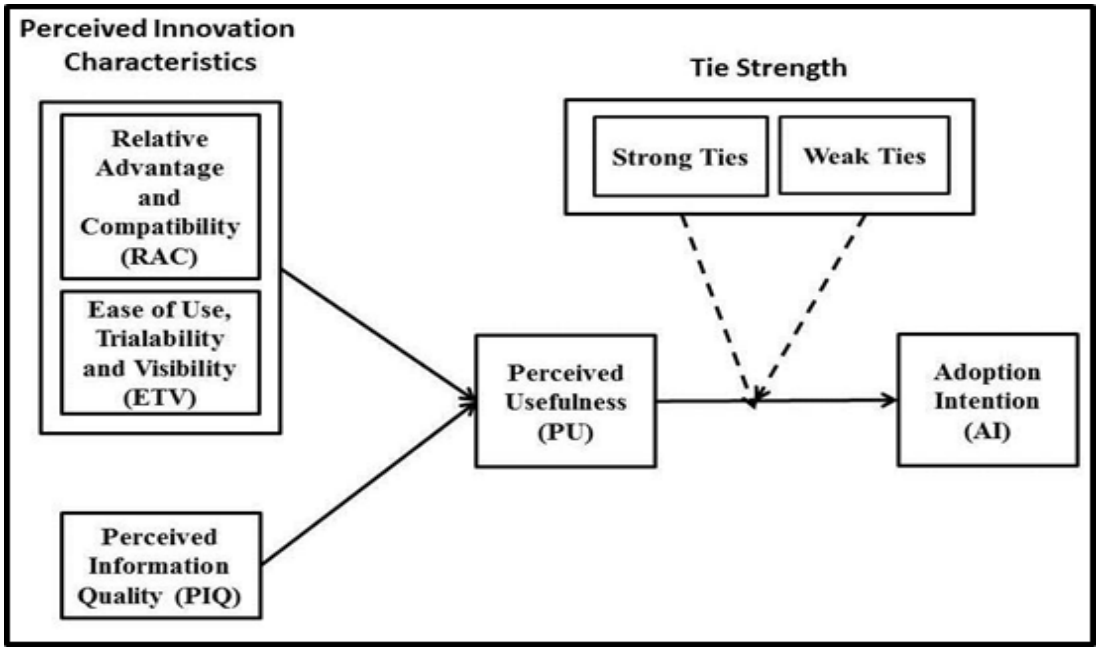


Fig 7: Proposed Detailed Conceptual Framework (With Moderating Effect)

There have been studies showing the various factors which are affecting adoption intention. In the study of the adoption process, the construct of perceived usefulness plays an important role. In the study, the role of innovation characteristics, quality of information, and the role of the influential have been studied.

The current framework is adapted from various models- The Technology Acceptance Model (TAM) developed by Davis, 1989 Innovation Diffusion Theory (IDT) developed by Rogers, 1962, Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al., 2003 and Strength of weak ties by Granovetter MS., 1973.

Based on the literature review, the hypothesis has been formulated

3.2 Perceived Innovation Characteristics and Perceived Usefulness

There has been a significant relationship between perceived innovation characteristics and perceived usefulness. As mentioned in the study by Agarwal and Prasad (1999) there is positive relationship between an individual's appropriate experiences and the acceptance of new technology.Chau and Hu (2001) in the study have mentioned that the effect of compatibility is significant in relation to perceived usefulness. Later, in the studies conducted by Wu and Wang (2005) and Chang and Tung (2008a), there is a positive and direct effect of compatibility on perceived usefulness. Similarly, there have been empirical studies showing complexity has an adverse impact on the intention to adopt and the perceived usefulness (Shih, 2007; Lee, 2007; Hardgrave et al., 2003).

Observability has been affecting the intention to adopt an innovation. From various studies, the hypothesis can be drawn that Observability affects the perceived usefulness (Lee, 2007; Yang,

2007; Huang, 2004). A study shows that the higher the perceived level of trialability, the higher the perceived usefulness of the innovation (Yang, 2007; Lee et al., 2011). Similarly, Relative advantage has a positive impact on perceived usefulness (Lee et al., 2011).

In 1991, Moore and Benbasat, in their research, mentioned all the characteristics applicable to acceptance behaviour. Only the outcome studied was in the context of the current usage of the innovation. Tornatzky and Klein, 1982, found only three characteristics – relative advantage, compatibility, and complexity to be continuously related to the adoption behaviour, whereas the other characteristics included in the study conducted by Moore and Benbasat were limited. This would mean that other attributes like ease of use, visibility, and trialability would have varying relevance according to acceptance studies (Agarwal and Prasad, 1997). The study has been conducted in four parts in accordance with the information exchange medium, namely, internet, print, television, and word of mouth. Each construct is tested for each medium; therefore, eight hypotheses are developed for each relation.

Hence, this study hypothesizes as follows,

H1: In Internet medium, RAC (Relative Advantage and Compatibility) significantly affects Perceived Usefulness

H2: In Internet medium, ETV (Ease of Use, Visibility, Trialability) significantly affects Perceived Usefulness

H6: In a Print medium, RAC (Relative Advantage and Compatibility) significantly affects Perceived Usefulness

H7: In a Print medium, ETV (Ease of Use, Visibility, Trialability) significantly affects Perceived Usefulness

H11: In Television medium, RAC (Relative Advantage and Compatibility) significantly affects Perceived Usefulness

H12: In Television medium, ETV (Ease of Use, Visibility, Trialability) significantly affects Perceived Usefulness

H16: In Word of Mouth (WOM), RAC (Relative Advantage and Compatibility) significantly affects Perceived Usefulness

H17: In the Word of Mouth (WOM) medium, ETV (Ease of Use, Visibility, Trialability) significantly affects Perceived Usefulness.

3.3 Perceived Information Quality and Perceived Usefulness

Technology advances cause the product to be more complex. At the same time, consumers are becoming more mature, intelligent, sophisticated, and demanding more information to curtail the risk associated with advanced technological products. Better information can make the buying decision more efficient as it would help better know the utility of the product (Benninati, 1994; Rosenthal, 1994; Snider, 1992, 1993; Whittmore, 1994; Hill et al., 1996). Larcker and Lessig, 1980) examined the information received in their study. In this study, around eight constructs are measured, one of them being the information's usability. Larcker and Lessig have defined this as the quality of information that helps utilize the information received by the customers.

The Information quality variable was mainly studied at the organizational level. Information that the individuals do not understand is not found reliable. This leads the information to be incoherent with an individual's needs and does not provide with useful information (Kuo & Lee, 2009). With unreliable or incoherent data, the information will not create a need for the individual to intend to adopt the new product. The prior studies by (Kuo & Lee, 2009; Ahn et al., 2007; Chang et al., 2005; Lin, 2007) has shown the impact of Perceived information quality on the perceived usefulness of the new product. Franz and Robey (1986), Kraemer, Danzinger, Dunkle, and King (1993, Q.2a, p. 133), and Sidden and Kiew (1196) have talked about the increase in usefulness with an increase in information quality.

As this study is conducted in four parts regarding the medium of information exchange- internet, print, television, and word of mouth, the relationship between the perceived information quality and perceived usefulness has been studied, with four hypotheses being constructed for this relationship.

The following hypotheses are formulated for the relationship between perceived information quality and perceived usefulness.

H3: In the Internet medium, Perceived Information Quality significantly affects perceived usefulness

H8: In a Print medium, Perceived Information Quality significantly affects perceived usefulness

H13: In the Television medium, Perceived Information Quality significantly affects perceived usefulness

H18: In Word of Mouth (WOM) medium, Perceived Information Quality significantly affects perceived usefulness.

3.4 Perceived Usefulness and Adoption Intention

Studies have shown the positive effect of perceived usefulness on the intention to adopt a new product or service. There has been a significant positive relationship between perceived usefulness and attitude toward using the new internet services (Childers et al., 2001; Gentry & Calantone, 2002). A similar impact of perceived usefulness on the attitude toward mobile internet services has been observed (Bruner & Kumar, 2005; Lee, Kim, & Chung, 2003).

According to TAM, perceived usefulness and ease of use are determinants of the intention to use and actual usage (Davis, 1989). Most of the studies were information system (IS) and web acceptance studies (Kim et al., 2007; Shih,2004; Venkatesh & Morris, 2000; Kim and Lee, 2014). Mara et al. (2013) have mentioned perceived usefulness as a significant enabler of adoption intention.

H4: In Internet medium, Perceived usefulness significantly affects Adoption Intention

H9: In a Print medium, Perceived usefulness significantly affects Adoption Intention

H14: In the Television medium, Perceived usefulness significantly affects Adoption Intention

H19: In Internet medium, Perceived usefulness significantly affects Adoption Intention

The 'strength' has a moderating role to play in the analysis of the social network as the intensity of influencing the people to an individual is a critical factor that affects the influence of an individual experience from others (Latané, 1981).

CHAPTER 4- RESEARCH METHODOLOGY

4.1 Research Design:

The descriptive research design will focus on the proposed framework to study the impact of perceived information quality and perceived innovation characteristics on adoption intention through perceived usefulness with moderating effect of tie strength on the relationship between perceived usefulness and adoption intention. The study will describe the relationship among identified factors and their effect at each stage of the proposed relationship in the presence and absence of moderators.

4.2 Sampling method:

The study focuses on finding the individual's intention to adopt technological products with particular attention to wearable technologies. Working professionals were considered the target population to test the proposed framework based on the described hypothesis. Further, the study was conducted mainly in Ahmedabad, Mumbai, Pune, Delhi, Kolkata, and Chennai. Convenience sampling, followed by snowball sampling, is used as the sampling method.

4.3 Data Collection Method:

The survey method was used to collect suitable for testing the proposed research frame. The mode of administering the survey is through the designed structured survey questionnaire. The questionnaires were distributed both at a personal level and through the internet. The respondents were asked to fill out the questionnaire based on their perceptions. According to the Likert scale markings, the respondents were asked to mark from 1 to 7.

4.4 Data Collection Tools and Measures:

A scientifically structured questionnaire based on the existing literature was used to measure the identified variables. The statements in the tool are designed to measure an individual's perception on a seven-point Likert scale (1= Strongly disagree and 7 = Strongly agree) except for tie strength which is a dichotomous variable.

In the questionnaire, the information quality variable has been divided into four parts in terms of the medium of information transfer: internet, print, television, and word-of-mouth.

The following table shows the variables used in the study

Table 4.1 Variables used in the study

Variable	Source
Information Quality	Wang and Strong (1996) and Wixcom and Todd (2005)
Perceived innovation characteristics	Moore and Benbasat (1991)
Perceived usefulness	Davis (1989)
Network diversity	Cohen S. et al. (1997)
Adoption intention	Moore and Benbasat (1991)

The information-quality scale was adopted Wang and Strong (1996) and Wixcom and Todd (2005). The construct of information quality is a 7-point Likert scale. The item of the construct is just or over-identified. The construct must be identified or identified, meaning the degree of freedom is zero or more.

The current study considered two control variables, income, and gender, to study extraneous effects. As per studies, the socio-demographic variables have affected the intention of adoption. Income and gender have been affecting adoption intention. Gender has greatly influenced the adoption intention of new technological products. In the study of mobile augmented reality of science education, it was observed that females had lower satisfaction levels for using the system (Arvanitis et al., 2011). In the study of smart clothing, men showed more technical experience than women (Schaar and Ziefle, 2011). Also, a study on wearable fitness gadgets showed that gender played a significant role in adopting health and fitness gadgets (Canhoto and Arp, 2016). Similarly, the studies by (Rauschnabel et al., 2016) and (Kwee-Meier et al., 2016) show that socio-demographic variables affect the adoption of various technological products.

A designed structured questionnaire was pre-tested and examined with expert opinion. During the pre-test stage, a of the dimensions representing the variable was reworded. After the pre-testing questionnaire was tested for suitability during the pilot, the measurement was examined based on 54 respondents. Therefore, every construct item was further tested for reliability and validity (above 0.5), while the validity was analyzed using content, criterion, and construct validity. The first section of the questionnaire asks about wearable gadget possession and intent to adopt them. The last section is the socio-demographic details of the individuals as gender, age, professional qualification, and income.

A sample of 351 responses was collected from individuals across the major cities. The number 351 has been defined based on the items in the questionnaire.

Of the 351 respondents, 51.6% were married, and 61.5% were men. Among different age groups, 53.7% belonged to the 25-44 category, 35.1% belonged to the 45-64 group, and 11.2% belonged

to the 20-24 group. Amongst the occupation, management professionals amount to 27.3%, Engineering professionals contribute 32 %, legal professionals contribute 13%, medical professionals amount to 14%, and accountants/consultants/film artists/interior designers contribute 13.7% of the total respondents. In terms of income, 16.4% lies in the bracket of INR 55001-88800, 23.3% in the bracket greater than INR 1,50,000, 23% in the bracket of INR 88801-INR1,50,000, 15.5% lies in the bracket of INR 33001-55000 and 11.8% lies in the income less than INR 33000.

In terms of qualification, 49.4% of the respondents were masters/postgraduates, 38.5% of respondents were bachelors, and 12.1% were doctorate.

4.5 Data Analytical Tool:

The purification of the collected data was performed to confirm normality and skewness. The cleansing of data ensures the usability of the collected data to proceed with the reliability, validity, and exploratory factor analysis with the help of IBM-SPSS software (version 20). The test confirms that each proposed factor for the model was tested with the help of a multivariate technique due to the presence of mediators and moderators. SEM was performed to find the relationship between the variables that are not directly visible, and they were the latent constructs. SEM was useful for explaining the relationship between latent constructs by correlating directly measured variables through two stages- 1) The measurement model and 2) The structural model. The measurement model helps measure the observed variables that represent latent constructs. The structural model helps measure the relationship between latent constructs with the help of AMOS software (version 20).

CHAPTER 5- DATA ANALYSIS

Data analysis is the body of structured methodology that describes facts, detects patterns, tests hypotheses, and develops explanations. There are various stages of data analysis to determine, predict, and explain the type of relationships among proposed variables. After data purification, a reliability and validity tests were conducted. Further, the analysis was categorized as initial and final analysis. The initial analysis includes identifying missing data, finding outliers, normality of data, and quality of measurement instrument. The initial analysis also includes confirmatory factor analysis that confirms model fitness. The second part of data analysis is the final analysis, where the strength of the relationship among variables is identified using structural equation modeling, a multivariate analytical tool.

In this study, the analysis was divided into four parts based on the information transfer medium- Internet, Print, Television, and Word of Mouth (WOM). KMO tests were conducted to assess the adequacy of sampling, which was 0.571 (Internet), 0.537 (Print), 0.531 (Television), 0.532 (WOM) (Ref Table 1.2, Table 1.4, Table 1.6, Table 1.8), i.e., above the threshold value of 0.5.

5.1 Examining Quality of data

The dataset of 351 respondents was analyzed for initial purification. Here the initial purification includes identifying missing values and data distribution. The analysis was done on SPSS and AMOS software to identify the multivariate outliers, reliability, and validity and then to confirm the normal distribution of the dataset by examining skewness and kurtosis value.

5.1.1 Missing value:

The missing values occur either due to the unwillingness of respondents to respond to the specific information required or unintentionally because they miss responding. Initial screening of the questionnaire helps in identifying the missing values. There are two ways to tackle the missing values. One is to tackle the missing value. The first is to fill the neutral/mean values, and the second is to remove incomplete responses (Hair et al., 1998). Data from the pilot study confirms the acceptability of the questionnaire to the response. This has resulted in the retention of the questions as prescribed. However, in the final dataset, a few responses were missing.

The missing response further generates an error during the data analyses. The ways to deal with the missing data are to substitute the data with a neutral value, substitute an imputed response, case-wise deletion method. The study used the case-wise deletion method to deal with the missing data. It resulted in the removal of 06 responses from the overall dataset. A total of 345 responses were retained and later used for further analysis.

5.1.2 Outliers:

The outlier is an “observation that appears to be numerically distant from the existing dataset of the sample population” (Grubbs, 1969). Such data is logically inconsistent due to their extreme values against the existing dataset within the sample population (Malhotra and Dash, 2010). This kind of response is due to heavy-tailed distribution identified through the kurtosis value. Such responses affect the overall analysis.

The outlier is defined as a “score four times greater than the mean leverage score” (Wilcox, 2003). The current research employs multivariate tools; the outliers are studied by leveraging indices for

every case. However, in the study, Mahalanobis distance statistics identify outliers. The results are obtained while performing confirmatory factor analysis (CFA), which signifies one of the assumptions for structural equation modeling. Arbuckle (2010) explained the heuristics for determining the outlier observations as "small numbers in the p1 column are to be expected. Small numbers in the p2 column indicate observations that are improbably for the centroid under the hypothesis of normality".

The table is produced for the top 100 observations, ranked according to Mahalanobis distance (Ref Table 2.1). Also, it shows two additional statistics P1 and P2. The p1 column is the probability of the observation exceeding the squared Mahalanobis distance. The p2 column shows the probability that the largest squared distance of any observation would exceed the squared Mahalanobis distance of any observation would exceed the Mahalanobis distance computed (Bolt,1999). All the data where P2 is less than one is checked for outliers.

Hence it is inferred that the significant value is not high in both P1 and P2, so the data is normally distributed. (Ref table 2.1, table 2.2, table 2.3, table 2.4).

5.2 Normal Distribution:

The normality of the dataset indicates that the mean of the random variables is drawn from the dataset of a single population. It is determined based on the skewness and kurtosis with a benchmark of +- two. The results show that the data is normal.

5.3 Initial Data Analysis- Measurement model:

The initial data analysis includes examining the reliability and validity of the identified variables and reducing the total number of scale items through exploratory factor analysis and confirmatory

factor analysis. The confirmatory factor analysis results are used to check the validity of the dataset and fitness of the proposed model in evaluating criteria for structural equation modeling.

5.3.1 Exploratory Factor Analysis:

The factor is used to reduce the number of the total items proposed in the initial stage and summarize these retained items based on the group characteristics. This measurement technique aims to identify the minimum number of constructs during the analysis procedure to reveal the original data (DeVellis, 2003). Exploratory factor analysis (EFA) is implemented, whereas the number of constructs was predetermined based on the framework proposed. The scale items were adapted from past studies and were modified according to the suitability of the research model.

An exploratory factor analysis was performed based on the varimax rotation method. The number of factors was predetermined and was confirmed based on common factors with an Eigenvalue greater than 1 (Kaiser and Rice, 1974). Initially, few items were loaded and cross-loaded as determined categories or factors. Initially, the dataset for the internet medium resulted in the deletion of twenty items. Items were based on low-factor loadings and cross-loading.

The second dataset of the Television medium resulted in the deletion of nineteen items. The outcome in this dataset yielded twenty-nine items representing six broad categories. For the third dataset, print medium resulted in the deletion of 14 items. The outcome in the internet dataset yielded twenty-eight items representing six broad categories.

The outcome in this dataset yielded thirty-four items representing six broad categories. The fourth dataset, word-of-mouth medium, resulted in the deletion of twenty items. The final data set yielded twenty-eight items representing five broad categories.

Relative advantage & compatibility, and Trialability, visibility & ease of use are combined due to the higher correlation between the variables.

5.3.2 Reliability:

Reliability explains the consistent nature of the measurement tool if repeated measurements are made. Such a dataset needs to be free from random errors due to a significant effect on the overall reliability (Malhotra and Dash, 2008). Internal consistency reliability is used to assess the consistency of the dataset. It is defined as "An approach for assessing the internal consistency of the set of items when several items are summated to form a total score for the scale" (Malhotra and Dash, 2008). There are many methods to examine reliability (a) the Test-retest method, (b) the Alternative forms method (c) the Internal consistency method.

Internal consistency is identified as the most acceptable method among academicians and researchers. The method focuses on the sum of total scores where each item measures some aspects of the measurement construct and needs to be consistent with the characteristics they indicate (Malhotra and Dash, 2008). Cronbach Alpha is calculated to measure the internal consistency of the measurement tool and to confirm the reliability of the scale. The coefficient alpha for almost all the constructs is above the threshold limit of 0.6. Almost all the coefficient alpha ranges from 0.7 to 0.9 (Refer to Table 2.5, Table 2.6, Table 2.7, and Table 2.8).

5.3.3 Validity:

Validity is an essential point of assumption during multivariate analysis by several tools and techniques. It explains the "extent to which differences in observed scale scores reflect true differences among objects on the characteristics being measured rather than systematic or random

error" (Malhotra and Dash, 2008). Therefore, the resulting data from the given scale need to be measured error-free to achieve validity. It is measured in the form of content validity, criterion validity, or constructs validity (Refer to Table 2.5, Table 2.6, Table 2.7, and Table 2.8).

Content validity or face validity examines the state of well-being of the scale to represent the measurement task of an instrument concerning a specific targeted population. It is a subjective evaluation and examines whether the scale items can hold the domain of the measured construct. It explains the degree to which the scale holds the construct's theoretical definition (Rungtusanatham, 1998). During the examination of content validity, four experts from the field were approached to confirm the validity of the scale personal interview method. The items were obtained based on the literature of previous studies and were examined by the items. However, due to the subjective nature of the method, the process is followed with convergent validity for further assessment.

A statistical procedure known as Pearson's correlation method measures convergent validity. Convergent validity explains the high correlation between two or more measures explaining the same construct (Carlson and Herdman, 2012). Measurement with high correlation indicates high convergent validity and is appropriately conceptualized within the construct. For measuring discriminant validity is used to measure convergent validity. Therefore, the square root of the AVE of each construct was higher than the bivariate correlation value between constructs (Fornell and Larcker, 1981) (Ref. Table-5.1, 5.2, 5.3, 5.4). Results indicate a correlation among the variables and support the scale's validity. It is always better to check convergent validity before measuring the cause-and-effect relations (Shook et al., 2004). Factor loadings of confirmatory factor analysis indicate convergent validity (Malhotra and Das, 2008). In the study for Word of Mouth, an Internet medium, results show that 19 out of 47 items in the scale have factor loadings below 0.5, which

seems to be comparatively low. In contrast, other items have significant factor loading at an acceptable threshold of 0.5 (Hair et al., 2006) (Ref. Table 2.5, Table 2.6).

In the study for the print medium, results show that 13 out of 47 items in the scale have factor loadings below 0.5, which seems to be comparatively low. In contrast, other items have significant factor loading at an acceptable threshold of 0.5 (Hair et al., 2006) (Ref. Table 2.7).

In the study for television medium, results show that 18 out of 47 items in the scale have factor loadings below 0.5, which seems to be comparatively low. In contrast, other items have significant factor loading at an acceptable threshold of 0.5 (Hair et al., 2006) (Ref. Table 2.8).

Table 5.1: Internet

	PU	AI	PIQ
PU	**0.727**		
AI	0.82	**0.918**	
PIQ	0.522	0.355	**0.810**

Table 5.2: Television

	PU	AI	PIQ
PU	**0.708**		
AI	0.794	**0.875**	
PIQ	0.426	0.227	**0.831**

Table 5.3: Print

	PU	AI	PIQ
PU	**0.718**		
AI	0.774	**0.916**	
PIQ	0.412	0.227	**0.778**

Table 5.4: WOM

	PIQ	AI	PU
PIQ	**0.799**		
AI	0.155	**0.899**	
PU	0.367	0.774	**0.713**

5.4 Confirmatory Factor Analysis (CFA):

Confirmatory factor analysis is used for the measurement refining process. As discussed earlier, it is used to validate the model by examining the CFA models (Ziegel, 1997). Further, it examines the fitness of the proposed framework based on different fit indices. The factors representing these indices are RMSEA, CFI, TLI, SRMR, IFI, NFI, and χ^2/df to explain the model fitness making it less sensitive to sample size (Ref table 5.5). Few studies also argue that it is unlikely that every suggested indicator model fitness occurs within the provided threshold value (Hulland et al., 1996; Iacobucci, 2010).

Table 5.5: Overall model fit of Measurement model:

Internet

Sr No.	Model fit	value
1	CMIN/DF	2.343
2	CFI	0.940
3	NFI	0.900
4	TLI	0.932
5	IFI	0.940
6	PCFI	0.828

Sr No.	Model fit	value
1	RMSEA	0.063
2	SRMR	0.0553

Print

Sr No.	Model fit	value
1	CMIN/DF	2.715
2	CFI	0.901
3	NFI	0.853
4	TLI	0.891
5	IFI	0.902
6	PCFI	0.815

Sr No.	Model fit	value
1	RMSEA	0.073
2	SRMR	0.073

Television

Sr No.	Model fit	value
1	CMIN/DF	2.419
2	CFI	0.934
3	NFI	0.893
4	TLI	0.924

Sr No.	Model fit	value
1	RMSEA	0.065
2	SRMR	0.06

5	IFI	0.934
6	PCFI	0.816

Word of Mouth

Sr No.	Model fit	value
1	CMIN/DF	2.361
2	CFI	0.928
3	NFI	0.882
4	TLI	0.918
5	IFI	0.928
6	PCFI	0.820

Sr No.	Model fit	value
1	RMSEA	0.0654
2	SRMR	0.0569

X^2/df ratio is the equation for measuring Normed χ^2, used to overcome the complexities of χ^2. The value of χ^2 signifies the "absolute discrepancy between the matrix of applied variance and covariance to the matrix of an empirical sample of variances and covariance." The probability of a 95% χ^2 value is accessed to reject or accept the null hypothesis, indicating a significant difference between the two matrices.

Gullisken and Tukey (1958) noted, "if the sample size is large, the χ^2 test will show that data are significantly different from those expected on the given theory even though the difference may be very slight as to be negligible or unimportant on other criteria." Kenny and McCoach(2003) supported the explanation of the sensitivity of χ^2 with respect to the sample size and model complexity. According to their explanation, the probability of rejecting the model increases with

the increased value of χ^2. To overcome such complexity, scholars have stated the use of Normed χ^2 with a threshold value of greater than 1 and less than 3 (Byrne, 2016; Hair et al.,1998).

Further, the study considers the indices of the baseline comparison model to evaluate and support the fitness of the proposed model. These indices are represented as IFI, TLI, CFI, and NFI, expressing the relative improvement in model fitness, i.e., the fit of the estimated model with the observed data (Bentler, 1990; Bollen, 1989; Tucker and Lewis, 1983). These indices are considered to have a value between 0 and 1. Hulland et al. (1996) suggested that a value near 1 is a good fit, while a value near 0.90 indicates adequate fitness of the model. Bentler (1990) suggested that the indicates of the baseline comparison model are used to overcome the limitations of χ^2, thereby accessing the incremental fitness of the model.

Byrne (2016) stressed RMSEA as the most informative criterion in covariance structure modeling. It is defined as a parsimony-adjusted index and considers the error of approximation not affected by sample size and relaxes the stringent requirement of χ^2. Kline (2015) referred to it as a population-based index with a value of less than 0.08, representing the reasonable error of approximation within the observed population. The threshold value for RMSEA was suggested at a threshold level of 0.05, which was later elaborated to 0.08 for a good fit (Byrne, 2016). Hulland et al. (1996) and MacCullam et al. (1996) supported that the threshold value from 0.06 to 0.10 indicate adequate fit, while a value above 0.10 shows poor model fitness.

During the confirmation of the entire model fitness, more items were removed from the scale, representing the dimension of environmental uncertainty. The items removed were based on low factor loading that lowers the measurement model (Ref. Table: 4.1). With higher factor loadings of the dimensions, the model forms into 2^{nd} order where Relative advantage and Compatibility

were combined into one and named as RAC; Ease of Use, Television, Visibility were combined to form ETV based on the factor loadings obtained.

Hence, confirmatory factor analysis confirms that items within each construct are discriminated from the others in the overall model. Also, the overall model provides a significantly good fit among all the proposed latent variables and thus directs the process of the analysis toward examining the relationship between the dependent and independent variables.

5.5 Final Data Analysis- Structural Model:

This stage depicts the relationship between nature and strength among dependent, independent, and mediating variables. The results explain the dynamic relationship between the proposed variables. Dimensions represent perceived innovation characteristics- Relative advantage, compatibility, trialability, visibility, ease of use, and perceived information quality as an independent variable influencing the variable adoption intention through perceived usefulness as a mediator. The strength of the ties dimension is examined as a moderator for the relationship between the dimensions of perceived usefulness and adoption intention.

The model was tested with perceived usefulness as the mediator. The independent variable, perceived information quality, has four dimensions in terms of the medium in which information is exchanged, namely- Internet, Word-of-Mouth (WOM), Print, and Television. The study has been tested as four models each for the information medium. The first phase of the model explains the mediating effect between perceived innovation characteristics and adoption intention. The second phase of the model describes the mediating effect between perceived information quality and adoption intention. The third phase of the model explains the moderating role of the strength of ties-strong ties and weak ties on the relationship between perceived usefulness and adoption intention.

5.6 Result of mediating effect:

Results of structural equation modeling explain that dimensions of perceived innovation characteristics and perceived information quality significantly affect adoption intention through the mediation effect of perceived usefulness.

Table 5.6 shows the result of all four mediums- Internet, Television, Print, and Word of Mouth

1] RAC → Perceived Usefulness → Adoption Intention

This phase of the model explains the role of RAC as an independent variable influencing effect on adoption intention through the mediation effect of perceived usefulness.

In the case of the Internet medium, RAC has a significant effect on perceived usefulness ($\beta=0.574$, $p < 0.001$).

In a Print medium, RAC has a significant effect on perceived usefulness ($\beta=0.683$, $p < 0.001$).

In Television too, RAC has a significant effect on perceived usefulness ($\beta=0.678$, $p < 0.001$).

In the case of Word of Mouth, RAC has a significant effect on perceived usefulness ($\beta=0.584$, $p < 0.001$). With greater relative advantage and compatibility, greater would be the usability of the product.

2] ETV → Perceived Usefulness → Adoption Intention

In the model, further, the construct ETV, which is the combination of ease of use, trialability, and visibility, has an influence on perceived usefulness.

For internet medium, $\beta = 0.421$, $p < 0.001$; print medium, $\beta = 0.299$, $p < 0.001$; television medium, $\beta = 0.278$, $p < 0.01$; WOM medium, $\beta = 0.455$, $p < 0.001$.

Higher ease of use would make the technological product easier for the person intending to adopt the product, which leads to higher usability of the product. Trialability is the factor that helps the prospective adopter to use the product for a limited period to understand the product to be adopted.

This causes the uncertainty to be reduced. Visibility is the product visible or being used by other adopters around. With greater visibility, the intention to adopt the product increases. With an increase in the combination of ease of use, television, and visibility, the influence on perceived usefulness also increases.

From the beta values, after comparing the four mediums, it was found that for the internet and WOM medium, the variables ease of use, trialability, and visibility (ETV) have a greater influence on PU than television and print medium.

3] PIQ → Perceived Usefulness → Adoption Intention

Perceived Information quality is influencing perceived usefulness. Information quality changes from person to person. It also depends on the medium of information.

In the case of the internet medium, there is a positive effect of PIQ on PU ($\beta = 0.143$, $p<0.001$).

For print medium, $\beta = 0.109$, $p<0.001$; in case of television medium, $\beta = 0.031$, $p<0.01$; for the WOM, $\beta = 0.045$, not significant

Comparing all three media, for WOM, the relationship between PIQ and PU is not significant. For the rest of the medium, the relationship between PIQ and PU is significant, but the effect is not very strong.

In all cases, Internet medium, Print medium, Television, and Word of mouth, greater perceived usefulness, the usability factor of the product, the intent to adopt the product

For the Internet medium, $\beta=0.831$, $p<0.001$; In the case of Print and Television medium, $\beta=0.786$, $p<0.001$, and for the Word-of-Mouth medium, $\beta=0.807$, $p<0.001$.

Table 5.6: A path analysis

	Hypothesis	Path	Beta	SE	Hypothesis
	H1	PU ← RAC	0.574***	0.059	Supported
	H2	PU ← ETV	0.421***	0.092	Supported
	H3	PU ← PIQ	0.143***	0.038	Supported
Internet	H4	AI ← PU	0.831***	0.088	Supported
	H6	PU ← RAC	0.683***	0.09	Supported
	H7	PU ← ETV	0.299***	0.103	Supported
	H8	PU ← PIQ	0.109**	0.031	Supported
Print	H9	AI ← PU	0.786***	0.069	Supported
	H11	PU ← RAC	0.678***	0.09	Supported
	H12	PU ← ETV	0.278**	0.103	Supported
	H13	PU ← PIQ	0.102**	0.031	Supported
Television	H14	AI ← PU	0.786***	0.069	Supported
WOM	H16	PU ← RAC	0.584***	0.064	Supported

	H17	PU ← ETV	0.455***	0.069	Supported
	H18	PU ← PIQ	0.045 (ns)	0.04	Not Supported
	H19	AI ← PU	0.807***	0.079	Supported

5.7 Moderated Mediation:

For the Internet Medium,

PIQnew → PUnew → AInew

Table 5.7.1

	Beta	SE	LLCI	ULCI
Moderated Mediation	-0.1628	0.0565	-0.2793	-0.0588

Table 5.7.2

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.4764	0.0784	0.3318	0.6388
1.0000	0.3136	0.0509	0.2184	0.4172

From Table 5.7.1 and Table 5.7.2, the LLCI (-0.2793) and ULCI (-0.0588) are both negative, showing moderated mediation. Beta is –0.1628. A strong tie has a greater effect (0.4764) than a weak tie (0.3136).

RACnew → PUnew → AInew

Table 5.7.3

	Beta	SE	LLCI	ULCI
Moderated Mediation	-0.2401	0.0761	-0.3954	-0.0923

Table 5.7.4

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.5233	0.0892	0.3525	0.7055
1.0000	0.2832	0.0559	0.1813	0.3995

From Table 5.7.3 and Table 5.7.4, the LLCI (-0.3954) and ULCI (-0.0923) are both negative, and this shows there is moderated mediation. A strong tie has a greater effect (0.5233) than a weak tie (0.2832). Beta here is –0.2401 and has a greater influence on adoption intention.

TVEnew → PUnew → AInew

Table 5.7.5

	Beta	SE	LLCI	ULCI
Moderated Mediation	-0.2401	0.0761	-0.3954	-0.0923

Table 5.7.6

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.5233	0.0892	0.3525	0.7055
1.0000	0.2832	0.0559	0.1813	0.3995

From Table 5.7.5 and Table 5.7.6, the LLCI (-0.3954) and ULCI (-0.0923) are both negative, and this shows there is moderated mediation. A strong tie has a greater effect (0.5233) than a weak tie (0.2832) and has a greater influence on adoption intention.

For the Print Medium,

PIQnew → PUnew → AInew

Table 5.8.1

	Beta	SE	LLCI	ULCI
Moderated Mediation	-0.1164	0.0442	-0.2124	-0.039

Table 5.8.2

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.3121	0.0713	0.1805	0.7055
1.0000	0.1958	0.0422	0.1172	0.2819

From Table 5.8.1 and Table 5.8.2, for the print medium, the LLCI (-0.2124) and ULCI (-0.039) are both negative. This shows there is moderated mediation. A strong tie has a greater effect (0.3121) than a weaker tie (0.1958) and has a greater influence on adoption intention.

RACnew →PUnew → AInew

Table 5.8.3

	Beta	SE	LLCI	ULCI
Moderated Mediation	-0.2746	0.0935	-0.4576	-0.0939

Table 5.8.4

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.5180	0.1046	0.3127	0.7249
1.0000	0.2455	0.0582	0.1383	0.3683

From Table 5.8.3 and Table 5.8.4, for the print medium, the LLCI (-0.4576) and ULCI (-0.0939) are both negative. This shows there is moderated mediation. A strong tie has a greater effect (0.5180) than a weaker tie (0.2455) and has a greater influence on adoption intention.

TVEnew → PUnew → AInew

Table 5.8.5

	Beta	SE	LLCI	ULCI
Moderated Mediation	-0.2468	0.0812	-0.4047	-0.0867

Table 5.8.6

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.6557	0.0993	0.4637	0.8505
1.0000	0.4089	0.0611	0.2898	0.5311

From Table 5.8.5 and Table 5.8.6, for the print medium, the LLCI (-0.4047) and ULCI (-0.0867) are both negative. This shows there is moderated mediation. A strong tie has a greater effect (0.6557) than a weaker tie (0.4089) and has a greater influence on adoption intention.

For the Television Medium,

PIQnew → PUnew → AInew

Table 5.9.1

	Beta	SE	LLCI	ULCI
Moderated Mediation	0.0035	0.0399	-0.0684	0.0872

Table 5.9.2

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.2132	0.0519	0.1187	0.3196
1.0000	0.2167	0.0437	0.1361	0.3040

From Table 5.9.1 and Table 5.9.2, for the print medium, the LLCI (-0.0684) is negative, and ULCI (0.0872) is positive. This shows there is no moderated mediation.

RACnew → PUnew → AInew

Table 5.9.3

	Beta	SE	LLCI	ULCI
Moderated Mediation	-0.0049	0.0789	-0.1482	0.1581

Table 5.9.4

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.2849	0.0798	0.1257	0.4374
1.0000	0.2800	0.0523	0.1836	0.3896

From Table 5.9.3 and Table 5.9.4, for the print medium, the LLCI (-0.1482) is negative, and ULCI (0.1581) is positive. This shows there is no moderated mediation. The β is -0.0049.

TVEnew → PUnew → AInew

Table 5.9.5

	Beta	SE	LLCI	ULCI
Moderated Mediation	-0.0026	0.0697	-0.1368	0.1366

Table 5.9.6

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.3664	0.0853	0.2056	0.5404
1.0000	0.3637	0.0603	0.2494	0.4872

From Table 5.9.5 and Table 5.9.6, for the television medium, the LLCI (-0.1368) is negative, and ULCI (0.1366) is positive. This shows there is no moderated mediation—the β=-0.0026.

For the WOM Medium,

PIQnew → PUnew → AInew

Table 5.10.1

	Beta	SE	LLCI	ULCI
Moderated Mediation	-0.1035	0.0403	-0.1885	-0.0284

Table 5.10.2

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.2631	0.0608	0.1458	0.3855

1.0000	0.1596	0.0357	0.0939	0.2326

From Table 5.10.1 and Table 5.10.2, for the television medium, the LLCI (-0.1885) and ULCI (-0.0284) are both negative, showing moderated mediation. The β=-0.1035. From the table, the effect of a strong tie is 0.2631, which is more than for a weak tie, for which the effect is 0.1596. This shows that the strong tie strengthens the relationship between perceived usefulness and the adoption intention. It also suggests the mediation between the relationship between PIQ and adoption intention.

RACnew → PUnew → AInew

Table 5.10.3

	Beta	SE	LLCI	ULCI
Moderated Mediation	-0.1223	0.0389	-0.1965	-0.0413

Table 5.10.4

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.2228	0.0423	0.1394	0.3052
1.0000	0.1005	0.0225	0.0593	0.1476

From Table 5.10.3 and Table 5.10.4, for the television medium, the LLCI (-0.1965) and ULCI (-0.0413) are both negative, showing moderated mediation. The β= - 0.1223. From the table, the effect of a strong tie is 0.2228, which is more than for a weak tie, for which the effect is 0.1005. This shows that the strong tie strengthens the relationship between perceived usefulness and the adoption intention. It also suggests the mediation between the relationship between RAC and adoption intention.

TVEnew → PUnew → AInew

Table 5.10.5

	Beta	SE	LLCI	ULCI
Moderated Mediation	-0.1651	0.0840	-0.3285	-0.0003

Table 5.10.6

Tie strength	Effect	BootSE	BootLLCI	BootULCI
.0000	0.4730	0.0963	0.2932	0.6737
1.0000	0.3079	0.0570	0.2041	0.4279

From Table 5.10.5 and Table 5.10.6, for the television medium, the LLCI (-0.3285) and ULCI (-0.0003) are both negative. This shows there is moderated mediation. The β=-0.1651. From the table, the effect of a strong tie is 0.4730, which is more than for a weak tie, for which the effect is 0.3079. This shows that the strong tie strengthens the relationship between perceived usefulness and the adoption intention. It also suggests the mediation between the relationship between PIQ and adoption intention.

From the above analysis, tie strength moderated the relationship between perceived usefulness and adoption intention, except for television medium. This would imply a strong tie to strengthen the intention to adopt. Overall, the model fit for the structural model is given as follows in Table 5.11

Table 5.11 Overall model fit for Structural Model:

Internet:

Sr No.	Model fit	value
1	CMIN/DF	2.349
2	CFI	0.939
3	NFI	0.899
4	TLI	0.932
5	IFI	0.939
6	PCFI	0.835

Sr No.	Model fit	value
1	RMSEA	0.064
2	SRMR	0.0554

Print:

Sr No.	Model fit	value
1	CMIN/DF	2.710
2	CFI	0.901
3	NFI	0.853
4	TLI	0.891
5	IFI	0.902
6	PCFI	0.819

Sr No.	Model fit	value
1	RMSEA	0.073
2	SRMR	0.073

Television

Sr No.	Model fit	value
1	CMIN/DF	2.425
2	CFI	0.933
3	NFI	0.891

Sr No.	Model fit	value
1	RMSEA	0.065
2	SRMR	0.0665

4	TLI	0.924
5	IFI	0.933
6	PCFI	0.824

WOM (Word of Mouth)

Sr No.	Model fit	value
1	CMIN/DF	2.384
2	CFI	0.926
3	NFI	0.880
4	TLI	0.917
5	IFI	0.926
6	PCFI	0.826

Sr No.	Model fit	value
1	RMSEA	0.065
2	SRMR	0.0664

CHAPTER – 6 DISCUSSIONS AND IMPLICATION

6.1 Theoretical Implications:

The adoption studies have been taking place over a period. There have been various adoption models. Adoption studies have roots in the Theory of Reasoned Action (TRA) in 1989. Later, Technology Acceptance Model (TAM) was developed by Ajzen, and perceived usefulness was a critical construct. Later with the Innovation diffusion model (IDT), innovation characteristics were one of the essential constructs studied. In the adoption study, awareness about the new product plays a significant role. Awareness of the product would lead to acceptance and further to adopt the product. If new products are technological products, then the risk associated with the product also increases.

To mitigate the risk, information regarding the product plays a key role. This information further leads to decision-making about the product. Studies have shown that the quality of information about the product plays a crucial role. It has been shown that right and better information leads to better decision-making skills (Benninati, 1994; Rosenthal, 1994; Snider, 1992, 1993; Whittmore, 1994; Hill et al., 1996).

In the adoption process, various products have been considered. There have been many factors leading to deciding to adopt the product. Initially, the studies were based on product awareness, creating interest, making decisions, and adopting the product. Rogers, in 1962, mentioned that adoption is a long-term process. It would mean accepting a product and then continuing or discontinuing the usage of the product. The initial study on adoption by Rogers, 1962; Venkatesh and Brown, 2001, was longitudinal, then there have been cross-sectional studies like that of Mehra et al., 2021; Perez, G. et al., 2017 and many more. In a cross-sectional study, adoption intention is

studied. This study, too, is a cross-sectional study of the adoption of technological products. The study emphasizes the intention to adopt, focusing on distinct factors that affect the adoption intention, focusing on wearable technology.

In the models developed by various researchers, vital constructs affect the intention to adopt a new product. Rogers (1962) mentioned the effect of product characteristics being a key factor for customers to think about adopting a new product. He has explained this characteristic in five dimensions relative advantage, compatibility, ease of use, trialability, and visibility. The study has included these dimensions to test the effect of innovation characteristics on intent to adopt. Relative advantage is current innovation perceived to be better than earlier innovation. In this study, the relative advantage and compatibility relationship have been tested, influencing adoption intention with perceived usefulness as the mediator. It was found that the beta value is more significant than 0.5, which means that relative advantage and compatibility affect adoption intention. Similarly, Ease of use, trialability, and visibility have beta values, showing that the effect is low to moderate. The construct was compared across information mediums, and the characteristics showed an indirect influence on the adoption intention.

In adoption-studies perceived usefulness of the product plays a vital role. Amongst the variables that influence adoption intention, one of them is perceived usefulness. Initially, when people decide to use the product or not use it, it depends on whether the product will bring better job performance which is the usefulness of the product. In this study, perceived usefulness plays the role of mediator. It was found that there is a strong relationship between perceived usefulness and adoption intention across the four mediums of information, namely, internet, print, television, and word of mouth. TAM (Theory of Acceptance Model) was the first model to introduce the perceived usefulness construct. There have been researches that have shown that perceived usefulness has

been an integral part of adoption studies. The study on e-learning systems (Alsabawy AY et al., 2016), the study on online shopping (Ramayah T. and Ignatius, J., 2005), and other studies have shown the effect of perceived usefulness in the adoption of new products.

Another construct that has an important role in adoption studies is the influentials. Influential are those close to the prospective buyers or those who are acquaintances. Social influence was given importance in the model of Unified theory of acceptance and use of technology model developed by Venkatesh et al. 2001 in the year 2001.

The term "Influential" or "social influence" has been used in different studies by names like network externalities, network diversity, or social ties. Granovetter (1973), in the paper titled "The Strength of Weak ties," has mentioned that weak ties form the interpersonal relationship between colleagues, acquaintances, and others who are not extremely close to each other. This weak tie help in the diffusion of new products. The studies show that the relationship between usefulness and adoption is moderated by the tie strength (Zhang et al., 2018). Studies have shown that social ties do influence consumer decision-making. The study has provided a deeper understanding of the moderating role of network diversity in adopting technological products. The study confirms the strong ties play a moderating role in adopting the technological product.

6.2 Managerial Implications:

The study has contributed to the practitioners by suggesting that higher information quality leads to higher adoption intention of wearable devices. High perceived information quality has included data currency, reliability, accuracy, and the right amount of detail. The study has further discussed information quality across the Internet, Television, Print, and Word-of-Mouth. It has mentioned how information quality is perceived and changes according to the individuals. Also, it shows that

the information quality differs across the medium, which affects the intention to adopt wearable devices.

Along with the information quality, perceived innovation characteristics differ according to the people adopting the product. This particular construct in the study has helped the marketer understand the effect of the dimensions- relative advantage, visibility, trialability, compatibility, and ease of use on the intention to adopt the wearable device. It further helps the marketer understand which factor amongst the above five requires improvements when the product is released in the market for sales.

In the study, it was found that perceived usefulness played the role of the mediator. This particular factor was affected by perceived information quality factors and perceived innovation characteristics. Also, previous research and this study have shown the importance of perceived usefulness in the adoption intention of wearable devices. The study indicates that the marketer must concentrate on improving the usefulness of the products amongst the customers.

The factor of network diversity or social influence, as mentioned in other studies, has a significant role in the adoption of wearable technologies. The study also shows that network diversity-strong ties and weak ties strengthen or weaken the relationship between the usefulness and adoption intention of the product. The study suggests marketers aim to look for the strong ties of the innovators or the early adopters of the wearable devices, which would help strengthen the customers' intention to adopt these devices.

6.3 Limitation and Scope:

The study has adopted convenient sampling; it could expand pan India for better sampling and results. With time limitations, this method was adopted for data collection. This study, when

extended to pan India, could bring better implications. As mentioned by Rogers (1962) and Rogers & Shoemaker (1971), the adoption process is continuous. In this study, adoption intention was taken as the construct. For better results, this study can be conducted longitudinal as studied by Venkatesh & Brown, 2001, for PC adoption. With Longitudinal analysis, not just the intention to adopt can be measured, but also the adoption process can be measured. This study can be extended to other new or innovative products for marketers to understand the factors of adopting other new products.

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APPENDIX

Table 1.1: Results of Reliability Pilot Data, 37 responses

Internet

Reliability Statistics

Cronbach's Alpha	No of Items
.909	46

Table 1.2: Results of KMO and Bartlett's Test– Pilot Data, 37 responses

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.571
Bartlett's Test of Sphericity	Approx. Chi-Square	904.340
	df	351
	Sig.	.000

Table 1.3: Results of Reliability Pilot Data, 37 responses

Television

Reliability Statistics

Cronbach's Alpha	No of Items
.904	46

Table 1.4: Results of KMO and Bartlett's Test– Pilot Data, 37 responses

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.531
Bartlett's Test of Sphericity	Approx. Chi-Square	1155.945
	df	435
	Sig.	.000

Table 1.5: Results of Reliability Pilot Data, 37 responses

Print

Reliability Statistics

Cronbach's Alpha	No of Items
.899	46

Table 1.6: Results of KMO and Bartlett's Test– Pilot Data, 37 responses

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.537
Bartlett's Test of Sphericity	Approx. Chi-Square	1212.715
	df	465
	Sig.	.000

Table 1.7: Results of Reliability Pilot Data, 37 responses

WOM

Reliability Statistics

Cronbach's Alpha	No of Items
.907	46

Table 1.8: Results of KMO and Bartlett's Test– Pilot Data, 37 responses

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.523
Bartlett's Test of Sphericity	Approx. Chi-Square	1060.360
	df	406
	Sig.	.000

Table 1.9: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.284	26.978	26.978	7.284	26.978	26.978	4.956	18.357	18.357
2	5.141	19.042	46.019	5.141	19.042	46.019	4.705	17.426	35.783
3	2.859	10.589	56.608	2.859	10.589	56.608	3.524	13.051	48.833
4	2.147	7.954	64.562	2.147	7.954	64.562	2.390	8.853	57.686
5	1.824	6.756	71.318	1.824	6.756	71.318	2.174	8.051	65.737
6	1.376	5.098	76.416	1.376	5.098	76.416	2.109	7.810	73.548
7	1.198	4.437	80.853	1.198	4.437	80.853	1.686	6.245	79.792
8	1.009	3.738	84.590	1.009	3.738	84.590	1.295	4.798	84.590
9	.854	3.162	87.752						
10	.609	2.257	90.009						
11	.518	1.920	91.929						
12	.351	1.299	93.228						
13	.320	1.187	94.415						
14	.275	1.020	95.435						
15	.261	.966	96.400						
16	.186	.687	97.088						
17	.157	.582	97.669						
18	.151	.558	98.227						
19	.126	.466	98.693						
20	.082	.304	98.997						
21	.073	.271	99.268						
22	.066	.244	99.512						
23	.058	.215	99.726						
24	.032	.119	99.846						
25	.024	.089	99.935						
26	.012	.045	99.980						
27	.005	.020	100.000						
Extraction Method: Principal Component Analysis.									

Table 2.1: Result of Multivariate Outlier Analysis (Internet Medium): Mahalanobis distance statistics – Final data 345 responses

Observation number	Mahalanobis d-squared	p1	p2
33	60.025	.000	.000

119	59.917	.000	.000
117	57.732	.001	.000
229	57.504	.001	.000
191	56.594	.001	.000
220	56.125	.001	.000
4	55.981	.001	.000
311	55.592	.001	.000
328	55.592	.001	.000
212	55.439	.002	.000
215	55.230	.002	.000
116	53.339	.003	.000
44	53.317	.003	.000
49	52.844	.003	.000
45	51.678	.004	.000
244	51.416	.004	.000
276	51.416	.004	.000
259	51.022	.005	.000
292	51.022	.005	.000
300	49.605	.007	.000
313	49.552	.007	.000
330	49.552	.007	.000
165	49.249	.008	.000
264	48.535	.009	.000
318	48.446	.010	.000
335	48.446	.010	.000
190	48.415	.010	.000
268	47.463	.012	.000

222	46.800	.014	.000
36	45.562	.019	.000
230	45.499	.020	.000
77	45.061	.022	.000
148	44.902	.023	.000
216	44.421	.025	.000
248	44.113	.027	.000
281	44.113	.027	.000
236	43.853	.029	.000
263	43.846	.029	.000
296	43.846	.029	.000
136	43.676	.030	.000
38	43.457	.031	.000
87	43.181	.033	.000
228	43.147	.034	.000
250	42.662	.038	.000
283	42.662	.038	.000
31	42.658	.038	.000
48	42.466	.039	.000
23	42.400	.040	.000
47	42.144	.042	.000
27	42.056	.043	.000
50	41.822	.045	.000
178	41.354	.050	.000
43	41.193	.052	.000
19	40.360	.061	.000
32	40.069	.065	.000

88	40.029	.066	.000
24	39.737	.070	.000
29	39.729	.070	.000
233	39.610	.072	.000
8	39.260	.077	.000
179	39.088	.080	.000
187	39.042	.080	.000
108	39.033	.080	.000
80	38.918	.082	.000
89	38.904	.082	.000
198	38.805	.084	.000
279	38.389	.091	.000
238	38.374	.092	.000
270	38.374	.092	.000
252	38.314	.093	.000
285	38.314	.093	.000
66	38.216	.094	.000
208	38.012	.098	.000
239	37.370	.111	.000
240	37.370	.111	.000
271	37.370	.111	.000
272	37.370	.111	.000
196	37.251	.113	.000
52	36.837	.122	.000
147	36.088	.140	.000
137	36.049	.141	.000
75	36.035	.142	.000

254	35.852	.146	.000
287	35.852	.146	.000
25	35.579	.154	.000
249	35.359	.160	.000
282	35.359	.160	.000
245	35.201	.164	.000
277	35.201	.164	.000
183	35.149	.166	.000
312	35.090	.167	.000
329	35.090	.167	.000
22	34.959	.171	.000
181	34.844	.174	.000
247	34.320	.191	.000
7	34.301	.191	.000
46	34.150	.196	.000
110	33.758	.209	.000

Table 2.2: Result of Multivariate Outlier Analysis (Television Medium): Mahalanobis distance statistics

Observation number	Mahalanobis d-squared	p1	p2
242	100.865	.000	.000
147	77.606	.000	.000
300	75.812	.000	.000
266	74.348	.000	.000
303	74.348	.000	.000

321	72.912	.000	.000
284	72.278	.000	.000
258	66.328	.000	.000
293	66.328	.000	.000
5	66.236	.000	.000
3	59.632	.000	.000
14	58.155	.000	.000
30	55.941	.001	.000
332	55.837	.001	.000
220	55.649	.001	.000
246	54.650	.001	.000
6	51.487	.002	.000
201	51.148	.002	.000
223	49.979	.003	.000
124	46.826	.007	.000
55	46.396	.008	.000
320	45.739	.010	.000
184	45.090	.012	.000
49	44.836	.012	.000
233	44.654	.013	.000
257	43.928	.015	.000
292	43.928	.015	.000
142	43.719	.016	.000
283	43.181	.018	.000
334	42.612	.021	.000
339	42.557	.021	.000
274	42.339	.023	.000

311	42.339	.023	.000
122	42.152	.024	.000
48	42.047	.024	.000
10	41.909	.025	.000
196	41.616	.027	.000
51	41.447	.028	.000
199	41.114	.030	.000
172	41.110	.030	.000
316	40.509	.035	.000
226	40.471	.035	.000
28	40.316	.036	.000
249	40.279	.037	.000
252	40.214	.037	.000
253	40.214	.037	.000
287	40.214	.037	.000
288	40.214	.037	.000
144	40.145	.038	.000
53	39.964	.039	.000
54	39.926	.040	.000
113	39.685	.042	.000
278	39.599	.043	.000
315	39.599	.043	.000
333	39.407	.045	.000
190	39.270	.046	.000
57	39.233	.046	.000
239	38.930	.050	.000
218	38.845	.050	.000

85	38.833	.051	.000
121	38.770	.051	.000
52	38.498	.054	.000
326	38.192	.058	.000
23	38.169	.058	.000
50	37.648	.065	.000
178	37.395	.069	.000
94	37.319	.070	.000
174	37.060	.074	.000
296	36.719	.079	.000
188	36.657	.080	.000
38	36.226	.088	.000
93	36.139	.089	.000
71	36.071	.090	.000
279	35.952	.093	.000
267	35.525	.101	.000
304	35.525	.101	.000
200	35.508	.101	.000
63	35.340	.104	.000
27	35.177	.108	.000
133	35.137	.109	.000
156	35.050	.111	.000
176	34.626	.120	.000
34	34.066	.133	.000
234	33.939	.137	.000
36	33.914	.137	.000
263	33.901	.138	.000

299	33.901	.138	.000
26	33.642	.144	.000
143	33.476	.149	.000
187	33.255	.155	.000
241	33.103	.159	.000
41	32.814	.168	.000
261	32.044	.192	.000
32	31.770	.201	.000
82	31.481	.211	.001
312	31.376	.215	.002
12	31.246	.219	.002
214	30.991	.229	.006
275	30.948	.230	.005
324	30.725	.239	.010

Table 2.3: Result of Multivariate Outlier Analysis (Print Medium): Mahalanobis distance statistics – Final data 319 responses

Observation number	Mahalanobis d-squared	p1	p2
312	74.057	.000	.000
212	73.837	.000	.000
24	71.754	.000	.000
228	71.739	.000	.000
314	69.888	.000	.000
48	68.978	.000	.000
117	66.111	.001	.000

319	65.272	.001	.000
26	63.548	.002	.000
175	62.855	.002	.000
50	62.732	.002	.000
136	62.542	.002	.000
215	61.642	.003	.000
30	61.064	.003	.000
115	60.391	.004	.000
187	60.356	.004	.000
190	59.944	.004	.000
46	56.741	.009	.000
302	56.687	.009	.000
222	55.933	.010	.000
220	55.713	.011	.000
169	55.538	.011	.000
19	55.273	.012	.000
137	54.938	.013	.000
135	54.264	.015	.000
165	53.877	.016	.000
269	53.517	.018	.000
47	53.480	.018	.000
22	53.346	.019	.000
125	53.317	.019	.000
231	52.802	.021	.000
7	52.799	.021	.000
3	52.738	.021	.000
191	52.583	.022	.000

34	52.451	.023	.000
45	52.410	.023	.000
114	51.813	.026	.000
298	51.348	.029	.000
126	50.864	.032	.000
44	50.727	.032	.000
39	50.701	.033	.000
52	50.340	.035	.000
86	49.940	.038	.000
23	49.767	.040	.000
66	49.400	.043	.000
245	49.193	.044	.000
277	49.193	.044	.000
75	49.126	.045	.000
49	48.866	.047	.000
77	48.392	.052	.000
87	48.339	.053	.000
304	48.319	.053	.000
240	48.304	.053	.000
241	48.304	.053	.000
272	48.304	.053	.000
273	48.304	.053	.000
229	48.260	.053	.000
28	48.238	.054	.000
280	47.716	.059	.000
227	47.406	.063	.000
237	47.160	.066	.000

260	47.000	.068	.000
293	47.000	.068	.000
181	46.997	.068	.000
265	45.963	.083	.000
51	45.756	.086	.000
32	45.591	.088	.000
183	45.461	.091	.000
306	45.429	.091	.000
233	45.315	.093	.000
194	45.108	.096	.000
106	44.737	.103	.000
211	44.654	.104	.000
102	44.498	.107	.000
150	44.200	.113	.000
216	44.166	.114	.000
148	44.116	.115	.000
264	43.758	.122	.000
297	43.758	.122	.000
184	43.287	.132	.000
96	43.196	.134	.000
179	42.771	.144	.000
37	42.705	.145	.000
248	42.424	.152	.000
58	42.381	.153	.000
167	42.348	.154	.000
170	42.285	.156	.000
33	42.252	.156	.000

250	42.091	.161	.000
283	42.091	.161	.000
6	41.933	.165	.000
316	41.885	.166	.000
164	41.853	.167	.000
130	41.758	.169	.000
230	41.620	.173	.000
208	41.448	.178	.000
189	40.843	.195	.000
107	40.818	.196	.000
234	39.913	.224	.000

Table 2.4: Result of Multivariate Outlier Analysis (WOM Medium): Mahalanobis distance statistics – Final data 329 responses

Observation number	Mahalanobis d-squared	p1	p2
233	107.393	.000	.000
257	79.818	.000	.000
294	79.818	.000	.000
5	72.538	.000	.000
249	71.729	.000	.000
284	71.729	.000	.000
139	71.530	.000	.000
164	70.835	.000	.000
291	70.811	.000	.000
312	70.511	.000	.000

275	70.025	.000	.000
214	67.860	.000	.000
79	66.718	.000	.000
224	60.252	.000	.000
14	60.039	.000	.000
322	59.813	.000	.000
192	58.616	.001	.000
237	57.277	.001	.000
28	56.487	.001	.000
211	56.239	.001	.000
134	55.486	.001	.000
86	55.278	.002	.000
6	54.746	.002	.000
175	52.924	.003	.000
229	52.216	.004	.000
324	52.047	.004	.000
4	50.660	.005	.000
49	50.608	.006	.000
117	50.301	.006	.000
26	50.233	.006	.000
329	48.895	.009	.000
311	48.540	.009	.000
217	48.285	.010	.000
274	47.474	.012	.000
3	47.283	.013	.000
46	47.053	.014	.000
32	46.471	.016	.000

191	45.397	.020	.000
87	45.274	.021	.000
231	45.073	.022	.000
230	44.419	.025	.000
269	44.118	.027	.000
306	44.118	.027	.000
51	43.514	.031	.000
115	43.441	.032	.000
52	43.333	.032	.000
307	43.332	.032	.000
8	42.551	.038	.000
190	42.435	.039	.000
166	42.001	.043	.000
68	41.741	.046	.000
232	41.653	.047	.000
36	41.592	.047	.000
265	41.469	.049	.000
302	41.469	.049	.000
41	41.456	.049	.000
48	41.278	.051	.000
39	40.745	.057	.000
270	40.440	.060	.000
114	39.682	.071	.000
243	39.460	.074	.000
244	39.460	.074	.000
278	39.460	.074	.000
279	39.460	.074	.000

252	39.093	.079	.000
148	39.073	.080	.000
77	38.840	.084	.000
106	38.669	.086	.000
316	38.586	.088	.000
10	38.376	.091	.000
136	38.258	.094	.000
47	37.860	.101	.000
2	37.801	.102	.000
126	37.407	.110	.000
45	37.243	.114	.000
218	37.062	.117	.000
155	36.564	.129	.000
254	36.240	.137	.000
290	36.240	.137	.000
256	36.199	.138	.000
293	36.199	.138	.000
7	36.111	.140	.000
30	36.092	.140	.000
178	36.060	.141	.000
21	35.366	.159	.000
303	35.189	.164	.000
147	34.810	.175	.000
266	34.769	.177	.000
287	34.673	.180	.000
248	34.451	.186	.000
283	34.451	.186	.000

236	34.399	.188	.000
25	34.216	.194	.000
130	34.202	.194	.000
165	34.135	.196	.000
253	34.118	.197	.000
289	34.118	.197	.000
92	34.041	.200	.000
53	33.742	.209	.000
181	33.565	.216	.000

Table 2.5: WOM

Constructs and Measurements items	**Factor loadings**	**AVE**	**CR**
Relative advantage (Cronbach alpha= 0.915)			
A5: Overall, I find using technology product to be advantageous.	0.870		
A6: Using the technology product enhances my effectiveness	0.878		
A7: Using the technology product gives me greater control over my work	0.793		
A8: Using the technology product increases my productivity	0.836		
Compatibility			
C1: Using the technology product is compatible with all aspects of my work	0.828		
C2: Using the technology product is completely compatible with my performance on daily tasks	0.868		
C3: I think that using the technology product fits well with the way I like to perform various tasks	0.870		
C4: Using the technological product fits into my workstyle	0.866		
		0.557	0.788
RAC		**0.722**	**0.948**
Trialability			
T1: I've had a great deal of opportunity to try various technology product	0.771		
T4: Before deciding whether to use any technological product, I was able to properly try them	0.664		
T5: I was permitted to use a technological product on a trial basis long enough to see what it could	0.663		
Visibility			
V1: It is easy for me to observe others using technology product.	0.794		
V2: I have seen what others do using their technology product	0.786		
V3: One sees the technology product around	0.738		
Ease of Use			
E4: I believe that it is easy to get a technological product to do what I want it to do	0.627		
E5: Overall, I believe that a technological product is easy to use	0.864		
E6: Learning to operate a technological product is easy for me	0.821		

ETV		**0.565**	**0.920**
Perceived Usefulness		**0.508**	**0.671**
PU1: I would find technology product to be useful	0.793		
PU2: Using technology product improves my job performance	0.623		
Adoption Intention		**0.770**	**0.909**
AI1: I plan to use technology product in the future	0.885		
AI2: I intend to use technology product in the future.	0.925		
AI3: I predict I would use technology product in the future	0.819		
Perceived Information Quality		**0.639**	**0.914**
In5: This information is useful to our work	0.844		
In6: This information is relevant to our work	0.844		
In7: This information is appropriate for our work	0.847		
In8: This information is applicable to our work	0.813		
In11: This information is sufficiently timely	0.713		
In12: This information is sufficiently up-to-date for work	0.723		

Table 2.6: Internet

Constructs and Measurements items	**Factor loadings**	**AVE**	**CR**
RAC		**0.903**	**0.949**
Relative advantage			
A2: Using the technology product improves the quality of work I do	0.769		
A5: Overall, I find using technology product to be advantageous.	0.871		
A6: Using the technology product enhances my effectiveness	0.910		
A7: Using the technology product gives me greater control over my work	0.859		
A8: Using the technology product increases my productivity	0.864		
Compatibility			
C1: Using the technology product is compatible with all aspects of my work	0.858		
C2: Using the technology product is completely compatible with my performance on daily tasks	0.898		
C3: I think that using the technology product fits well with the way I like to perform various tasks	0.888		
C4: Using the technological product fits into my workstyle	0.885		
TV		**0.519**	**0.683**
Trialability			
T1: I've had a great deal of opportunity to try various technology product	0.780		
T4: Before deciding whether to use any technological product, I was able to properly try them	0.697		
T3: A technology product was available to me to adequately test run various tasks	0.861		
Visibility			
V1: It is easy for me to observe others using technology product.	0.834		
V2: I have seen what others do using their technology product	0.838		
V3: One sees the technology product around	0.758		
Ease of Use		**0.621**	**0.830**
E1: I believe that a technology product is cumbersome to	0.734		
E2: My using a technology product requires a lot of mental	0.825		
E3: Using a technology product is often frustrating	0.805		
Perceived Usefulness		**0.528**	**0.690**
PU1: I would find technology product to be useful	0.687		

PU2: Using technology product improves my job performance	0.763		
Adoption Intention		**0.792**	**0.938**
AI1: I plan to use technology product in the future	0.905		
AI2: I intend to use technology product in the future.	0.932		
Perceived Information Quality		**0.660**	**0.920**
In4I: This information is sufficiently current for our work	0.796		
In5I: This information is useful to our work.	0.896		
In6I: This information is relevant to our work	0.846		
In7I: This information is appropriate for our work	0.842		
In8I: This information is applicable to our work	0.750		
In11I: This information is sufficiently timely	0.719		

Table 2.7: Print

Constructs and Measurements items	**Factor loadings**	**AVE**	**CR**
RAC		**0.887**	**0.940**
Relative advantage (Cronbach alpha= 0.915)			
A1: Using the technology product enables me to accomplish tasks more quickly	0.705		
A3: Using the technology product makes it easier to do my job	0.727		
A5: Overall, I find using technology product to be advantageous.	0.872		
A6: Using the technology product enhances my effectiveness	0.907		
A7: Using the technology product gives me greater control over my work	0.852		
A8: Using the technology product increases my productivity	0.864		
Compatibility			
C1: Using the technology product is compatible with all aspects of my work	0.839		
C2: Using the technology product is completely compatible with my performance on daily tasks	0.885		
C3: I think that using the technology product fits well with the way I like to perform various tasks	0.880		
C4: Using the technological product fits into my workstyle	0.876		
TV		**0.558**	**0.716**
Trialability			
T1: I've had a great deal of opportunity to try various technology product	0.808		
T2: I know where I can go to satisfactorily try out various uses of a technology product	0.735		
T4: Before deciding whether to use any technological product, I was able to properly try them	0.668		
T5: I was permitted to use a technological product on a trial basis long enough to see what it could do	0.677		
T3: A technology product was available to me to adequately test run various tasks	0.823		
Visibility			
V1: It is easy for me to observe others using technology product.	0.834		
V2: I have seen what others do using their technology product	0.838		
V3: One sees the technology product around	0.758		

Ease of Use		**0.607**	**0.822**
E1: I believe that a technology product is cumbersome to	0.721		
E2: My using a technology product requires a lot of mental	0.816		
E3: Using a technology product is often frustrating	0.797		
Perceived Usefulness		**0.516**	**0.677**
PU1: I would find technology product to be useful	0.628		
PU2: Using technology product improves my job performance	0.798		
Adoption Intention		**0.839**	**0.940**
AI1: I plan to use technology product in the future	0.901		
AI2: I intend to use technology product in the future.	0.950		
AI3: I predict I would use technology product in the future	0.896		
Perceived Information Quality		**0.605**	**0.924**
In3P: The information is accurate	0.705		
In4P: This information is sufficiently current for our work	0.758		
In5P: This information is useful to our work	0.701		
In6P: This information is relevant to our work	0.702		
In7P: This information is appropriate for our work	0.641		
In13P: The information is well formatted	0.896		
In14P: The information is well laid out	0.896		
In15P: The information is clearly presented	0.878		

Table 2.8: Television:

Constructs and Measurements items	**Factor loadings**	**AVE**	**CR**
RAC		**0.692**	**0.943**
Relative advantage (Cronbach alpha= 0.915)			
A5: Overall, I find using technology product to be advantageous.	0.840		
A6: Using the technology product enhances my effectiveness	0.893		
A7: Using the technology product gives me greater control over my work	0.844		
A8: Using the technology product increases my productivity	0.868		
Compatibility			
C1: Using the technology product is compatible with all aspects of my work	0.829		
C2: Using the technology product is completely compatible with my performance on daily tasks	0.862		
C3: I think that using the technology product fits well with the way I like to perform various tasks	0.864		
C4: Using the technological product fits into my workstyle	0.856		
TV		**0.583**	**0.737**
Trialability			
T1: I've had a great deal of opportunity to try various technology product	0.815		
T2: I know where I can go to satisfactorily try out various uses of a technology product	0.741		
T3: A technology product was available to me to adequately test run various tasks			
T4: Before deciding whether to use any technological product, I was able to properly try them	0.620		

T5: I was permitted to use a technological product on a trial basis long enough to see what it could do	0.622		
Visibility			
V1: It is easy for me to observe others using technology product.	0.767		
V2: I have seen what others do using their technology product	0.807		
V3: One sees the technology product around	0.735		
Ease of Use		**0.607**	**0.822**
E1: I believe that a technology product is cumbersome to	0.734		
E2: My using a technology product requires a lot of mental	0.789		
E3: Using a technology product is often frustrating	0.793		
Perceived Usefulness		**0.503**	**0.667**
PU1: I would find technology product to be useful	0.619		
PU2: Using technology product improves my job performance	0.775		
Adoption Intention		**0.867**	**0.868**
AI1: I plan to use technology product in the future	0.883		
AI2: I intend to use technology product in the future.	0.928		
AI3: I predict I would use technology product in the future	0.811		
Perceived Information Quality		**0.691**	**0.918**
In5T: This information is useful to our work	0.854		
In6T: This information is relevant to our work	0.859		
In7T: This information is appropriate for our work	0.870		
In8T: This information is applicable to our work	0.830		
In11T: This information is sufficiently timely	0.719		