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# SMART WEARABILITY'S RIPPLE EFFECT: CONSUMER ADOPTION AND CONTINUANCE INTENTIONS

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**Abstract**

Smart technology comprised of smart home appliances, smart equipment, where smart wearables are widely spread across the world. The smart wearable device industry is predicted to generate enormous profits and to grow fast in the near future. The purpose of this research is to look at the impact of smart technology readiness on consumer purchase intentions a special reference to smart wearables. The study focuses on optimism, innovativeness, discomfort, insecurity, usefulness, ease of use, and attitude as important variables of technology readiness, and purchase intention variables include adoption and continuance intention for smart wearables. The data was collected using structured questionnaire and the results were derived from statistical analysis using SPSS software. The results have brought practical implications for the marketers and the future researches.

**Key words:** Technology Readiness, Attitude, Continuance Intention, Adoption

## Introduction

The global overview of research on adoption of smart wearables indicates that there has been a significant increase in the adoption of smart wearables in recent years. According to Statista (Statista 2022), the worldwide smart wearables market will increase at a compound annual growth rate (CAGR) of 13.0% from $20.64 billion in 2022 to $23.33 billion in 2023. The smart wearables market is estimated to increase at a CAGR of 10.2% to $34.39 billion by 2027 Around 429 million smart wearable gadgets will be marketed by 2022. Wrist-worn devices such as smartwatches and fitness trackers dominate the industry, accounting for 91.1% of total market share in 2020. In terms of usage, fitness tracking is the most popular application of wearables, followed by communication, health monitoring, and entertainment. The adoption of wearable technology varies by region. North America is the largest market for wearables, followed by Europe and Asia-Pacific. However, Asia-Pacific is expected to grow at the fastest rate due to the increasing popularity of fitness and health tracking devices. Overall, the global overview of research on adoption of smart wearables suggests that these devices have significant potential to improve health and wellness, but there is still room for improvement in terms of addressing user concerns and improving interoperability among devices.

The impact of smart technology readiness on consumer purchase intention of smart wearables in India is a critical area of research, given the growth potential of the Indian market for such devices. The adoption of smart wearables in India is still in its early stages, and factors such

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as perceived usefulness, ease of use, and affordability significantly influence consumer purchase intention. Additionally, the level of technology readiness among Indian consumers also plays a crucial role in determining their willingness to adopt these devices. Therefore, it is essential for companies operating in the Indian market to design effective marketing strategies and tailor their product offerings to meet the unique needs and preferences of Indian consumers.

Though the market of smart wearables is increasing the adoption of smart wearables is still limited, and one possible reason for this may be the lack of consumer readiness for smart technology. The main objective of this research is to examine at the influence of smart technology preparedness on customer purchasing intentions. The study focuses on optimism, innovativeness, discomfort, insecurity, utility, ease of use, and attitude as important variables of technological readiness, and purchase intention variables include adoption and continuation intention for smart wearables.

**Review of literature**

Parasuraman (2000) had proposed the construct of people's technology readiness and discussed its conceptualization. The program of research that was carried out to operationalize the concept, create and refine a multiple-item scale to measure it, and evaluate the psychometric properties of the scale. The paper concludes with a discussion of the scale's potential practical applications and a plan for additional research to improve our comprehension of technology's role in customer service and marketing. Davis (1985) had proposed the technology acceptance model (TAM), that was developed with two major objectives in mind. First, it should improve understanding of user acceptance processes, providing new theoretical insights into the successful design and implementation of information systems. Second, TAM should provide the theoretical basis for a practical "user acceptance testing" methodology that would enable system designers and implementors to evaluate proposed new systems prior to their implementation. Wolf et al., (2018) examined wearable device acceptance factors, building upon the Technology Acceptance Model (TAM) whilst integrating five additional factors: perceived enjoyment, social image, performance risk, financial risk and privacy risk. It was confirmed that the traditional internal acceptance factors of the TAM perceived usefulness and perceived ease of use significantly correlate with the intention to use a wearable. Kim and Shin (2015) findings suggest that affective quality and relative advantage of smart watches were found to be associated with perceived usefulness, whereas mobility and availability contributed to greater perceived ease of use of the technology.

Park (2020) results derived using both confirmatory factor analysis and structural equation modelling methods findings indicate that users' intentions to use smart wearable devices are determined by five influential factors: satisfaction, enjoyment, usefulness, flow state, and cost. Chen et al., (2023) study revealed that performance expectancy, perceived cost, hedonic value and aesthetic appeal all have significant impact on elderly users' intention to use wearable devices. Furthermore, personal innovativeness in information technology, personal physiological condition, and intention to use all have significant impact on elderly users' actual usage behaviour of wearable devices. Kamble et al., (2021) results of this study provide evidence for the importance

of variables to TAM in considering "perceived usefulness", "perceived usefulness", attitude and behavioural intention to use digital wearable devices.

Kim and Chiu (2019) The results found that positive Technology Readiness has a positive influence on perceived ease of use (PEOU) and perceived usefulness (PU), and negative Technology Readiness had a negative influence on PEOU and PU. PEOU had a positive influence on perceived usefulness (PU). Chuah et al., (2016) results reveal perceived usefulness and visibility as important factors that drive adoption intention, suggesting that smartwatches represent a type of 'fashnology' (i.e., fashion and technology). Consumers who perceive smartwatches as a technological attribute higher levels of usefulness (rather than visibility) to them. In contrast, respondents who perceive smartwatches as a fashion accessory identify visibility as more valuable (rather than usefulness). Adapa et al., (2018) study consistent with TAM, found perceived usefulness and perceived ease of use to be important factors in the adoption of smart wearable technologies and it is also found that some other constructs such as aesthetics, efficiency, time saving, and dependability link underlying personal value, image to wearable device adoption.

Gribel et al., (2016) results indicate that the strongest factor that supports the acceptance of wearable technologies is perceived usefulness, whilst the main reason for resistance towards these technologies are perceived IT security risks.

**Research Methodology**

An empirical research design was adopted for the current research. The primary data was computed using structured questionnaire and secondary data were obtain to understand comprehensive review pertaining to current research. The current research was attempted to include 150 samples using purposive sampling (criteria include the respondents should have used smart wearables at least once in their lifetime or they should have some knowledge about the wearables) where after data cleaning 115 were appropriate for further analysis. Analysis for the study was tested using SPSS software.

***Table 1 Research Methodology at Glance***

| Describer | Details |
|---|---|
| Sample size | 150 distributed, 115 completed for analysis |
| Sampling technique | Purposive sampling |
| Study area and period | Chennai and 1st week of February |
| Data collection | **Primary**- Questionnaire |
| | **Secondary**- Several source |
| Target population | Online courses participants |
| Software used | SPSS 23.0 |

The questionnaire consisted of two main sections: demographic information and a set of items designed to measure the study's dependent and independent variables. The demographic section gathered information about participants' gender, age, educational qualifications, and employment status, while the second section included items that assessed optimism, insecurity,

discomfort, usefulness, ease of use, attitude, and innovativeness as independent variables, and continuance intention and adoption as dependent variables.

The study employed IBM SPSS Statistics 23 version for data analysis. Regression and correlation analysis and ANOVA results were used to analyse the data collected from the structured questionnaire. The results of the analysis were used to identify the factors that affect continuance intention and adoption, and to determine the relationships between the study's independent and dependent variables. The study's methodology allowed for the collection of detailed data that was analysed using a robust statistical software package, making it possible to draw accurate conclusions from the results. The use of a structured questionnaire and statistical analysis enabled the study to obtain reliable and valid results, making it a rigorous and trustworthy research study.

**Results and Discussion**

The demographic profile of the respondents reveals that majority of respondents belong to Gen Z (50.4%), Gen Y (23.5%) and Gen X (22.6%) while only 3.5% of respondents identified as Baby Boomers. A fair distribution was absorbed in the gender: Male 44.3% and Female 55.7%. The educational qualification comprised 8.7% of School Students, 8.7% of Other Qualifications, 20.9% of Post Graduates and 61.7% of Under Graduates. It was revealed that 45.2% of Employed people, 42.6% of Unemployed people and Other Category of 12.2% responded to the survey.

***Table 2 Demographic Profile***

| **Descriptions** | | **Frequency (N=115)** | **%** |
|---|---|---|---|
| **Birth year** | Baby Boomers | 4 | 3.5 |
| | Gen X | 26 | 22.6 |
| | Gen Y | 27 | 23.5 |
| | Gen Z | 58 | 50.4 |
| **Gender** | Male | 51 | 44.3 |
| | Female | 64 | 55.7 |
| **Educational qualification** | Schooling | 10 | 8.7 |
| | UG | 71 | 61.7 |
| | PG | 24 | 20.9 |
| | Others | 10 | 8.7 |
| **Employment status** | Employed | 52 | 45.2 |
| | Unemployed | 49 | 42.6 |
| | Others | 14 | 12.2 |

Source: Computed using SPSS Version 26

**Impact Of Factors Affecting the Smart Wearable Adoptability**

Throughout these hypotheses the R= 0.476 depicts that the with one unit increase in the predictor variable the outcome variable (i.e.,) Adoption increase by 47.6%.

**Table 3** ***Multiple Regression Results: Impact of The Factors Affecting the Smart Wearable Adoptability***

| Hypotheses | Regression Weights | | | Beta Coeff. | t-Value | p-Value | Results |
|---|---|---|---|---|---|---|---|
| H1 | Optimism | --> | Adoption | .235 | 2.774 | .007 | Yes |
| H2 | Innovativeness | --> | Adoption | .77 | 1.002 | .318 | No |
| H3 | Discomfort | --> | Adoption | -.035 | -.452 | .652 | No |
| H4 | Insecurity | --> | Adoption | -.041 | -.487 | .627 | No |
| H5 | Usefulness | --> | Adoption | .237 | 2.680 | .009 | Yes |
| H6 | Ease Of Use | --> | Adoption | .342 | 3.323 | .001 | Yes |
| H7 | Attitude | --> | Adoption | .077 | .695 | .489 | No |
| ANOVA Results = F Value: 15.804, (p=.000) Adjusted R Square Value = .476 or 47.6% | | | | | | | |

Source: Computed using SPSS Version 26

***$H_1$: Optimism has positive impact on adoption***

The hypothesis tests if optimism carries a significant impact on adoption to smart wearables. The dependent variable adoption was regressed on predicting variable optimism to test the hypothesis H1a. Optimism significantly predicted adoption of smart wearables $F=15.804$, $p < 0.001$, which indicates that the optimism can play a significant role in shaping adoption to smart wearables ($\beta = 0.235$, $p=0.007$). These results clearly direct the positive affect of the optimism on adoption to smart wearable.

***$H_2$: Innovativeness has positive impact on adoption***

The hypothesis tests if innovativeness carries as significant impact on adoption to smart wearables. The dependent variable adoption was regressed on predicting variable innovativeness to test the hypothesis H2a. innovativeness significantly predicted adoption to smart wearables., $F=15.804$, $p > 0.001$, which indicates that the innovativeness cannot play a significant role in shaping adoption to smart wearables ($\beta = 0.77$, $p=0.318$). These results clearly direct that there is no positive effect of the innovativeness on adoption to smart wearables.

***$H_3$: Discomfort has negative impact on adoption***

The hypothesis tests if discomfort carries as significant impact on adoption to smart wearables. The dependent variable adoption was regressed on predicting variable discomfort to test the hypothesis H3a. Discomfort significantly predicted adoption to smart wearables., $F=15.804$, $p > 0.001$, which indicates that the discomfort cannot play a significant role in shaping adoption to smart wearables ($\beta = -0.035$, $p=0.652$). These results clearly direct that there is an inverse effect of the discomfort on adoption to smart wearables.

***$H_4$: Insecurity has negative impact on adoption***

The hypothesis tests if insecurity carries as significant impact on adoption to smart wearables. The dependent variable adoption was regressed on predicting variable insecurity to test the hypothesis H4a. Insecurity significantly predicted adoption to smart wearables., $F=15.804$, $p > 0.001$, which indicates that the insecurity cannot play a significant role in shaping adoption to

smart wearables (β = -0.41, p=0.627). These results clearly direct that there is an inverse effect of insecurity on adoption to smart wearables.

***$H_5$: Usefulness has positive impact on adoption***

The hypothesis tests if Usefulness carries a significant impact on adoption to smart wearables. The dependent variable adoption was regressed on predicting variable Usefulness to test the hypothesis H5a. Usefulness significantly predicted adoption of smart wearables F=15.804, p < 0.001, which indicates that the Usefulness can play a significant role in shaping adoption to smart wearables (β = 0.237, p=0.009). These results clearly direct the positive affect of the Usefulness on adoption to smart wearable.

***$H_6$: Ease of use has positive impact on adoption***

The hypothesis tests if Ease of use carries a significant impact on adoption to smart wearables. The dependent variable adoption was regressed on predicting variable Ease of use to test the hypothesis H6a. Ease of use significantly predicted adoption of smart wearables F=15.804, p < 0.001, which indicates that the Ease of use can play a significant role in shaping adoption to smart wearables (β = 0.342, p=0.001). These results clearly direct the positive affect of the Ease of use on adoption to smart wearable.

***$H_7$: Attitude has positive impact on adoption***

The hypothesis tests if Attitude carries as significant impact on adoption to smart wearables. The dependent variable adoption was regressed on predicting variable Attitude to test the hypothesis H2a. Attitude significantly predicted adoption to smart wearables., F=15.804, p > 0.001, which indicates that the Attitude cannot play a significant role in shaping adoption to smart wearables (β = 0.077, p=0.489). These results clearly direct that there is no positive effect of Attitude on adoption to smart wearables.

**Impact Of the Factors Affecting Continuance Intention to Use the Smart Wearable**

**Table 4**: Multiple Regression Results: Impact of The Factors Affecting Continuance Intention to Use the Smart Wearable

| Hypotheses | | | Regression Weights | Beta Coeff. | t-Value | p-Value | Results |
|---|---|---|---|---|---|---|---|
| H8 | Optimism | --> | Continuance Intention | .139 | 2.082 | .484 | No |
| H9 | Innovativeness | --> | Continuance Intention | .074 | 1.211 | .040 | Yes |
| H10 | Discomfort | --> | Continuance Intention | .111 | 1.820 | .229 | No |
| H11 | Insecurity | --> | Continuance Intention | -.247 | -3.728 | .072 | No |
| H12 | Usefulness | --> | Continuance Intention | .183 | 2.630 | .000 | Yes |
| H13 | Ease Of Use | --> | Continuance Intention | .393 | 4.846 | .000 | Yes |
| H14 | Attitude | --> | Continuance Intention | .300 | 3.436 | .001 | Yes |
| ANOVA Results = F Value: 34.919 (p=.000) Adjusted R Square Value = .676 or 67.6% | | | | | | | |

Source: Computed using SPSS Version 26

***$H_8$: Optimism has a positive effect on continuous intention.***

Optimism refers to an individual's positive outlook or belief in the benefits of using a product or service. Continuance intention, as discussed previously, refers to the intention of an individual to continue using a particular product or service. In the context of smart wearables, Continuance intention could refer to the intention of an individual to continue using the device to monitor and track their health and fitness data, after they have already made the purchase.

The beta coefficient of 0.139 suggests a positive relationship between Optimism and Continuance intention, indicating that as an individual's level of Optimism increases, their intention to continue using the device also increases. The t-value of 2.082 suggests that the relationship between Optimism and Continuance intention is statistically significant at the 0.05 level.

However, the p-value of 0.484 indicates that the relationship between Optimism and Continuance intention is not statistically significant. This means that there is a chance that the observed relationship could be due to chance, and not necessarily reflective of the true relationship between these two variables.

In the context of consumer purchase intention, this regression suggests that while Optimism may not have a significant impact on Continuance intention, it may still be an important factor to consider when designing marketing strategies aimed at increasing consumer adoption and continued use of smart wearables. For example, highlighting the potential benefits of using the device and instilling a sense of optimism in potential buyers may still be effective in increasing purchase intention and initial adoption of smart wearables.

***$H_9$: Innovativeness has positive effect on continuance intention.***

The given regression output suggests that there is a significant relationship between innovativeness and consumer continuance intention of smart wearables. The beta coefficient of 0.074 indicates that for a unit increase in innovativeness, there is a 0.074 unit increase in consumer continuance intention of smart wearables, all else being equal.

The t-value of 1.211 indicates that the coefficient estimate is significant at the 95% confidence level, assuming a two-tailed test. The p-value of 0.040 also supports the significance of the coefficient, as it is below the commonly used threshold of 0.05.

Overall, this regression suggests that innovativeness is a significant predictor of consumer continuance intention of smart wearables. This result implies that consumers who are more innovative may be more likely to continue using smart wearables. Therefore, companies that offer smart wearables should focus on promoting the innovative features of their products to increase the likelihood of continued use by consumers.

However, it is important to note that this regression analysis is only one part of a larger study and may not provide a complete understanding of the factors that influence consumer continuance intention of smart wearables. Other variables such as perceived usefulness, ease of use, and social influence may also play a role in determining consumers' intentions to continue using smart wearables

***$H_{10}$: Discomfort has positive effect on continuance intention.***

The given regression equation relates two variables: Discomfort and Continuance Intention, and it suggests that there is a small positive relationship between these two variables. Specifically, the beta coefficient of 0.111 suggests that as discomfort increases by one unit, the continuance intention of smart wearables increases by 0.111 units on average.

The t-value of 1.820 and the associated p-value of 0.229 indicate that this relationship is not statistically significant at the conventional level of 0.05. Therefore, the null hypothesis cannot be reject as there is no significant relationship between discomfort and continuance intention of smart wearables.

Overall, this regression analysis suggests that discomfort may not be a significant predictor of consumer continuance intention of smart wearables. However, it is important to note that this analysis is limited by the specific context and data used in the study, and additional research may be needed to fully understand the relationship between these variables.

***$H_{11}$: Insecurity has positive effect on continuance intention.***

The given regression equation relates two variables: Insecurity and Continuance Intention, and it suggests that there is a negative relationship between these two variables. Specifically, the beta coefficient of -0.247 suggests that as insecurity increases by one unit, the continuance intention of smart wearables decreases by 0.247 units on average.

The t-value of -3.728 and the associated p-value of 0.072 suggest that this relationship is marginally significant at the conventional level of 0.05, but it falls short of statistical significance. This means that there is some evidence to suggest that insecurity may be a predictor of lower continuance intention of smart wearables, but this evidence is not strong enough to confidently conclude that this relationship exists.

Overall, this regression analysis suggests that insecurity may play a role in shaping consumer continuance intention of smart wearables, but more research is needed to confirm this relationship. It is also important to note that this analysis is limited by the specific context and data used in the study, and additional factors may be important in predicting continuance intention of smart wearables.

***$H_{12}$: Usefulness has positive effect on continuance intention.***

Based on the information provided, it appears that a regression analysis has been conducted to examine the impact of usefulness on consumer continuance intention of smart wearables. The beta coefficient of -0.183 indicates that there is a negative relationship between usefulness and continuance intention, holding all other factors constant. In other words, as usefulness increases, the likelihood of consumers continuing to use smart wearables decreases.

The t-value of -2.630 is the result of testing the null hypothesis that the beta coefficient is equal to zero. Since the t-value is greater than the critical value (assuming a 95% confidence interval), the null hypothesis can be rejected and concluded that the beta coefficient is statistically significant. The p-value of 0.000 further supports this conclusion, indicating that the likelihood of observing a beta coefficient as extreme as -0.183 under the null hypothesis is essentially zero.

The findings suggest that consumers' perception of usefulness is a significant factor in their decision to continue using smart wearables. As usefulness decreases, consumers are more likely to discontinue use. This highlights the importance of designing smart wearables that are perceived as useful and valuable to the consumer. Additionally, it may be beneficial for companies to invest in marketing strategies that emphasize the usefulness and practical benefits of their products in order to increase continuance intention among consumers.

***$H_{13}$: Ease of use has positive effect on continuance intention.***

Based on the information provided, it appears that a regression analysis has been conducted to examine the impact of ease of use on consumer continuance intention of smart wearables. The beta coefficient of -0.393 indicates that there is a negative relationship between ease of use and continuance intention, holding all other factors constant. In other words, as ease of use increases, the likelihood of consumers continuing to use smart wearables decreases.

The t-value of -4.846 is the result of testing the null hypothesis that the beta coefficient is equal to zero. Since the t-value is greater than the critical value (assuming a 95% confidence interval), the null hypothesis can be rejected and concluded that the beta coefficient is statistically significant. The p-value of 0.000 further supports this conclusion, indicating that the likelihood of observing a beta coefficient as extreme as -0.393 under the null hypothesis is essentially zero.

The findings suggest that consumers' perception of ease of use is a significant factor in their decision to continue using smart wearables. As ease-of-use decreases, consumers are more likely to discontinue use. This highlights the importance of designing smart wearables that are easy to use and user-friendly. Additionally, it may be beneficial for companies to invest in user training and support to ensure that consumers are able to use their products with ease.

In summary, the results of this regression analysis suggest that both usefulness and ease of use are important factors to consider when designing smart wearables that will encourage consumers to continue using them. Companies that are able to create products that are perceived as both useful and easy to use are more likely to increase continuance intention among consumers.

***$H_{14}$: Attitude as positive effect on continuance intention.***

Based on the information provided, it appears that a regression analysis has been conducted to examine the impact of attitude on consumer continuance intention of smart wearables. The beta coefficient of -0.300 indicates that there is a negative relationship between attitude and continuance intention, holding all other factors constant. In other words, as attitude becomes less positive, the likelihood of consumers continuing to use smart wearables decreases.

The t-value of -3.436 is the result of testing the null hypothesis that the beta coefficient is equal to zero. Since the t-value is greater than the critical value (assuming a 95% confidence interval), the null hypothesis can be rejected and concluded that the beta coefficient is statistically significant. The p-value of 0.001 further supports this conclusion, indicating that the likelihood of observing a beta coefficient as extreme as -0.300 under the null hypothesis is low.

The findings suggest that consumers' attitude towards smart wearables is an important factor in their decision to continue using them. If consumers have a positive attitude towards smart wearables, they are more likely to continue using them. This highlights the importance of creating

a positive image and reputation for smart wearables through effective branding, marketing, and customer service. Companies may also benefit from investing in initiatives that promote the benefits of using smart wearables, such as improving health and fitness, increasing productivity, and enhancing convenience.

In summary, the results of this regression analysis suggest that consumer attitude is a crucial factor in determining the continuance intention of smart wearables. Companies that can create a positive image and reputation for their products and promote their benefits are more likely to increase continuance intention among consumers.

**Conclusion**

The current study aims to investigate the behaviour related variables of purchase intention, with specific focus on adoption and continuance of smart wearables. The structural results indicate that four positive and one negative factor play notable roles in deciding the continuance intention to use the devices, supposing that users' comprehensive perceptions of the devices are crucial in understanding their behaviour with regard to the devices. This study achieved its objective, using multiple regression model that analyses the impact of the above stated seven variable factors relating to technology readiness in the adoption and continuance of smart wearable devices. The analysis revealed that optimism, usefulness, ease of use proved to have a significant impact on the adoption of smart wearables much like what previous research articles stated. Among these three, ease of use was established to be the most notable factor. The pragmatic outlook hinted that the companies may need to prioritize the design and user experience of their products, as well as provide adequate training and support to users. While the other four factors- innovativeness, discomfort, insecurity, attitude depicted insignificance. Furthermore innovativeness, usefulness, ease of use and attitude proved to be factors that significantly affected the continuous intention to use smart wearables while optimism, discomfort and insecurity was ruled out depicting the opposite. The most explainable negative factor which influences the user against adoption and continuance is the discomfort experienced by them while wearing smart wearables. Thus Companies may need to focus on designing wearable devices that are comfortable to wear, even for extended periods of time. This could include using lightweight materials and ergonomic design features. Ensuring that the user experience is comfortable and pain-free could be crucial in promoting the continued use of wearable devices. If users experience discomfort, they may be less likely to continue using the device.

***Limitation of the study***

The potential limitations of a research article that investigates the impact of smart technology readiness on consumer purchase intention of smart wearables are varied and should be taken into account when interpreting the study's findings. One potential limitation is the limited generalizability of the results to other populations or cultures due to a non-representative sample. Another limitation is a small sample size that may not be representative of the entire population and lacks statistical power. The cross-sectional design of the study may also be a limitation as it may not establish causality and is limited to a specific context. Additionally, the study's limited scope, potential for extraneous variables, single data collection method, and limited time frame

may also affect the study's generalizability and ability to draw accurate conclusions. As such, these limitations should be considered when evaluating the study's results.

***Scope For Future Research***

Further research may be needed to better understand the relationship between optimism and technology adoption. For example, researchers may want to investigate whether certain types of wearable devices are more likely to be adopted by optimistic individuals. Further research could be conducted to understand the challenges and opportunities associated with interoperability and standardization of smart wearables. Adoption in different cultures and regions: Cultural and regional differences can significantly impact the adoption of smart home appliances. Further research could be conducted to understand how cultural and regional factors influence.

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