

A STUDY ON CONSUMER PERCEPTION TOWARDS SMART HOME TECHNOLOGY

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Abstract: This study explores consumer perception towards smart home technology, examining factors influencing adoption, benefits, and concerns. The research investigates how consumers perceive smart home devices, their willingness to integrate these technologies into daily life, and the impact on their lifestyle and decision-making processes. The findings provide insights into consumer attitudes, preferences, and expectations, offering valuable implications for manufacturers, marketers, and policymakers in the smart home industry.

I. INTRODUCTION

Consumer perception towards smart home technology refers to the way individuals understand, feel about, and evaluate the benefits and challenges associated with the use of connected devices and systems in their homes. These technologies, which include smart thermostats, security systems, voice assistants, lighting, and appliances, have gained significant attention due to their potential to enhance convenience, energy efficiency, and overall quality of life. For instance, smart thermostats like Nest and Ecobee allow users to monitor and optimize energy consumption, contributing to cost savings and environmental sustainability. Similarly, smart security systems, such as video doorbells and automated locks, provide homeowners with peace of mind by enhancing safety. These perceived advantages often shape positive attitudes, encouraging adoption among tech-savvy individuals and households seeking convenience. On the other hand, concerns related to privacy, data security, and the complexity of usage hinder widespread acceptance of smart home technology. Many consumers are wary of potential cyber threats, such as unauthorized access to personal data or breaches in connected devices. The challenge for technology providers lies in addressing these apprehensions while delivering reliable and userfriendly solutions. Consumer perception also varies across demographic groups, with younger generations and urban residents showing a higher inclination towards adopting smart home devices compared to older individuals or those living in rural areas. This disparity highlights the need for tailored marketing strategies and educational initiatives to bridge the gap and make these technologies more accessible to diverse audiences.

In conclusion, consumer perception towards smart home technology is a complex interplay of expectations, concerns, and experiences. While the allure of convenience, efficiency, and innovation drives interest, challenges related to cost, usability, and data security must be addressed to foster trust and encourage adoption. Understanding and shaping consumer perception will be crucial for the continued growth and success of the smart home industry, paving the way for a more connected and intelligent future.

OBJECTIVE OF THE STUDY

- To Understand consumer awareness and familiarity
- To Investigate the role of smart home technology in daily life
- To Assess consumer concerns and barriers to adoption
- To Evaluate the impact of smart home technology on consumer behaviour

STATEMENT OF THE PROBLEM

The rapid advancement of technology has introduced smart home solutions designed to enhance convenience, safety, and energy efficiency. However, despite the promising benefits, the adoption rate of smart home technology varies significantly among consumers. Understanding the factors influencing consumer perception and behaviour is critical to addressing the barriers that limit widespread acceptance and ensuring the technology's successful integration into everyday life.

A significant problem lies in the gap between technological advancements and consumer awareness. Many potential users remain unaware of the full capabilities and benefits of smart home devices. This lack of awareness is compounded by misconceptions that these technologies are complicated, expensive, or designed solely for tech-savvy individuals.

II. REVIEW OF LITERATURE

1.Users' Perceptions and Attitudes Towards Smart Home Technologies" by

Deepika Singh et al. This study, based on an online survey of 234 participants, found that while users acknowledge the potential of smart homes to enhance quality of life and security, they also express concerns about increased dependence on technology and the monitoring of private activities.

RESEARCHGATE

2.Who will be smart home users? An analysis of adoption and diffusion of smart homes (Shin, J., Park, Y., & Lee, D., 2018) found that advent of the Internet of Things (IoT) has spurred significant interest in smart home services, which are hailed as the best IoT applications available to consumers. Smart homes are surroundings that are intelligent and can adjust to the comfort and efficiency demands of their occupants. They include a variety of automated features such as security systems, lighting, HVAC management, and household appliances.

DATA INTERPRETATION AND ANALYSIS

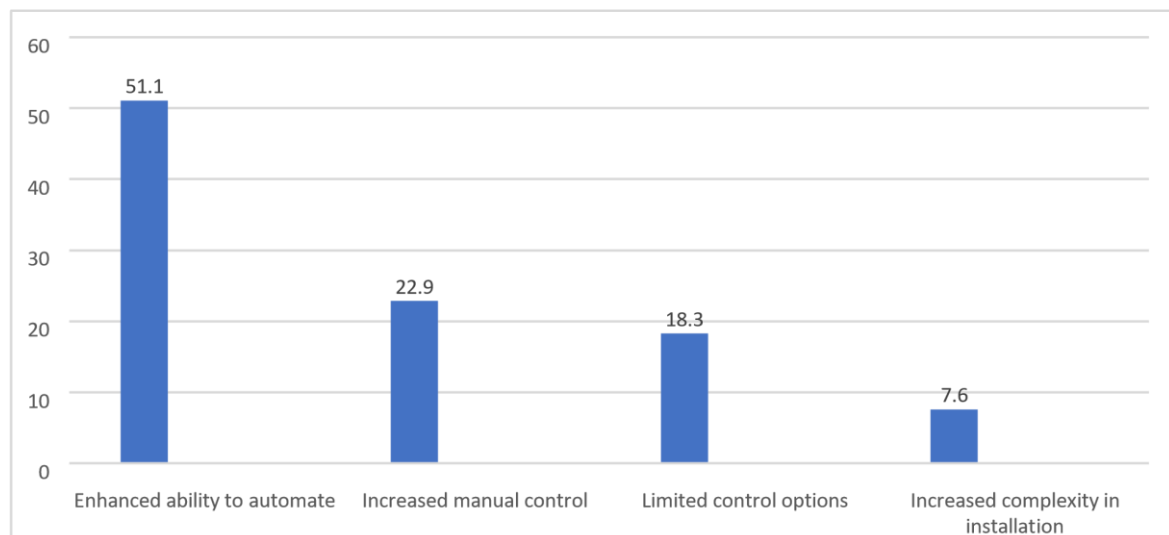
1. TABLE SHOWING RESPONDENTS ADVANTAGES OF SMART LIGHTING SYSTEM

Option	No. of. Respondent	Percentage (%)
Enhanced ability to automate and customize lighting based on schedules and preferences	67	51.1
Increased manual control	30	22.9
Limited control options	24	18.3
Increased complexity in installation	10	7.6
Total	131	100

INTERPRETATION

The primary function of a smart home hub, according to 51.1% of respondents, is automating and customizing lighting. Manual control (22.9%) and limited control options (18.3%) are also concerns, while 7.6% highlight installation complexity. Overall, automation is the most valued feature, though some users worry about control and complexity.

CHART SHOWING RESPONDENTS ADVANTAGES OF SMART LIGHTING SYSTEM



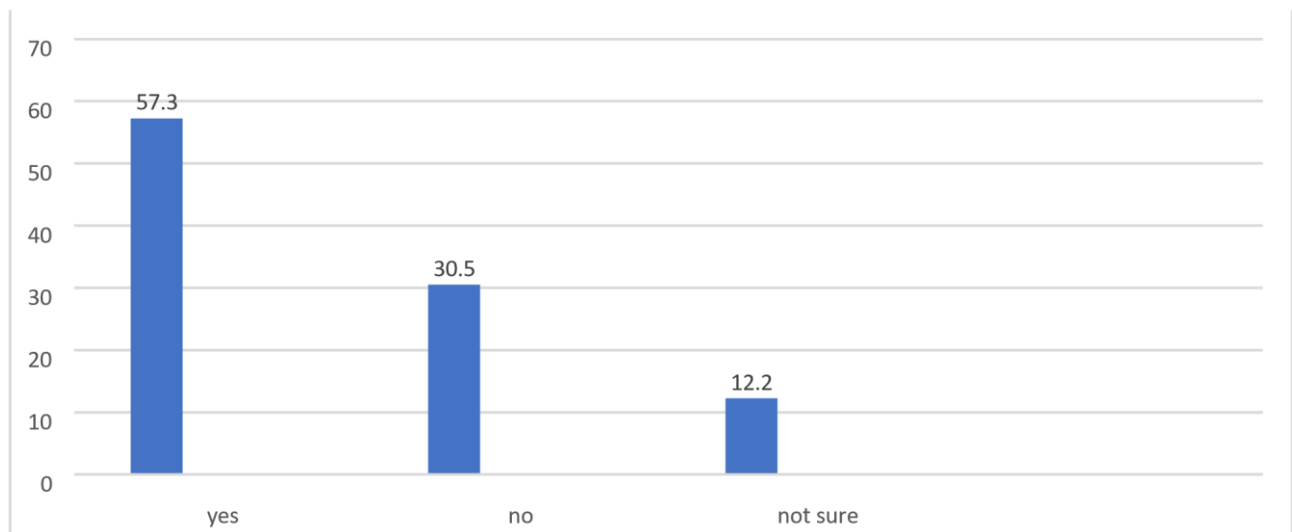
2.TABLE SHOWING RESPONDENTS BELIEVE SMART HOME TECHNOLOGY IMPROVES QUALITY OF LIFE

Response	No. of. Respondent	Percentage (%)
Yes	75	57.3
No	40	30.5
Not Sure	16	12.2
Total	131	100

INTERPRETATION

The table illustrates respondents' perceptions of whether smart home technology improves quality of life. A majority, 75 respondents (57.3%), believe that smart home technology enhances their quality of life. However, 40 respondents (30.5%) do not think it improves their life, and 16 respondents (12.2%) are uncertain. These results suggest that while most people see smart home technology as beneficial, a significant portion remains skeptical or undecided about its impact.

CHART SHOWING RESPONDENTS BELIEVE SMART HOME TECHNOLOGY IMPROVES QUALITY OF LIFE



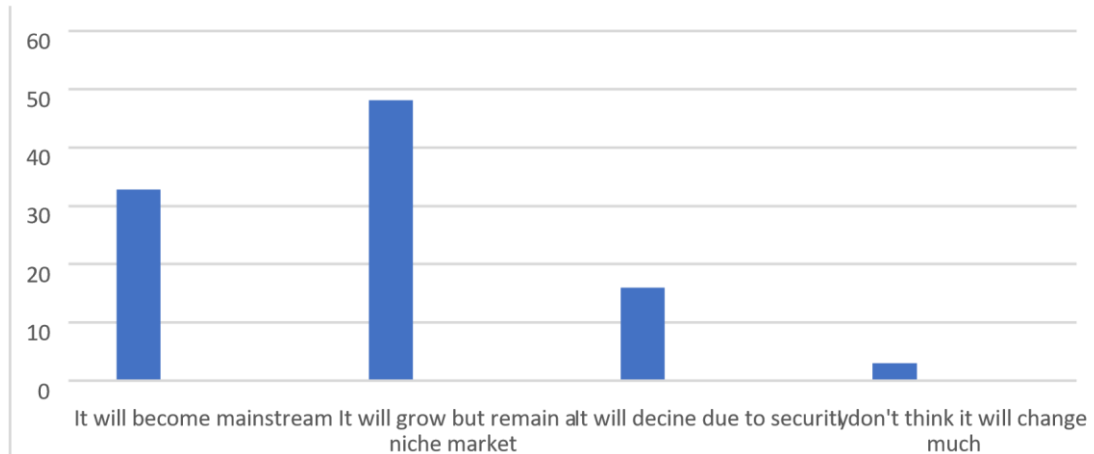
3.TABLE SHOWING RESPONDENTS ROLE OF SMART HOME TECHNOLOGY EVOLVING IN THE NEXT FIVE YEARS

Response	No. of. Respondents	Percentage (%)
It will become mainstream in most homes	43	32.8
It will grow but remain a niche market	63	48.1
It will decline due to security and privacy concerns	21	16
I don't think it will change much	4	3
Total	131	100

INTERPRETATION

The table presents respondents' views on the evolution of smart home technology over the next five years. The majority (48.1%) believe it will grow but remain a niche market, while 32.8% expect it to become mainstream in most homes. A smaller portion (16%) anticipates a decline due to security and privacy concerns, and only 3% think there will be little to no change.

CHART SHOWING RESPONDENTS ROLE OF SMART HOME TECHNOLOGY EVOLVING IN THE NEXT FIVE YEARS



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