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EXPLORING MODERN CONSUMER BEHAVIOUR AND SATISFACTION IN SMART HOME TECHNOLOGY

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Abstract:
Smart home and artificial intelligence technologies are developing rapidly, and various smart home products associated with artificial intelligence (AI) improved the quality of living for occupants. Technological advancements, continuous innovation, rising incomes, intensified competition, and increasing consumer awareness have significantly influenced buying behaviour and elevated expectations. Smart home appliances, offering advanced features and enhanced convenience, have become a key segment of the consumer durable market. However, the wide range of brands, pricing, and technological options has made consumer decision-making complex. This study examines consumer buying behaviour towards selected smart home appliances, focusing on factors influencing purchase decisions, sources of information consulted, and consumer satisfaction levels. A descriptive research design was employed, collecting primary data from 100 respondents via a structured questionnaire, complemented by secondary data from books, journals, research articles, and online sources. Respondents were selected through convenience sampling, and data collected from November 2025 to January 2026 were analyzed using SPSS, applying percentage analysis, Friedman ranking, and Average score tests. The study provides actionable insights for marketers and manufacturers to align products and strategies with evolving consumer expectations.

Keywords: Consumer Buying Behaviour, Smart Home Appliances, Purchase Decision Factors, Consumer Satisfaction and Information Sources

Introduction:

In recent years, smart home technology has quietly moved from being a futuristic concept to an everyday reality for many households. Devices such as smart speakers, intelligent lighting, security systems, and connected appliances are no longer viewed as luxury items but as tools that promise convenience, efficiency, and peace of mind. As these technologies become more deeply embedded in daily life, understanding how consumers interact with them and how satisfied they feel after adoption—has become increasingly important. Modern consumers are not only influenced by technical features or brand reputation; their behaviour is shaped by personal needs, lifestyle compatibility, ease of use, privacy concerns, and emotional responses such as trust and comfort. A smart home device may offer advanced functions, but its success ultimately depends on how well it fits into a user's routine and whether it genuinely improves quality of life. Satisfaction, therefore, goes beyond functionality and extends to the overall experience before, during, and after purchase. This project explores modern consumer behaviour and satisfaction within the context of smart home technology, focusing on the motivations, expectations, and challenges faced by users. By examining these human-centered factors, the study aims to provide insight into why consumers adopt smart home solutions, how they perceive their value, and what influences long-term satisfaction and continued use.

Review of Literature:

Mahajan S. (2025)[1] "Artificial Intelligence and Strategic Governance: Enabling Real-Time Decisions in Complex Business Ecosystems" In today's fast-paced and highly competitive business environment, strategic decision-making and operational responsiveness have become increasingly complex. To address these challenges, Artificial

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Intelligence (AI) has emerged as a powerful tool that facilitates real-time decision-making across diverse business functions. This study explores how AI enhances strategic governance by enabling organizations to assess dynamic data streams, forecast potential outcomes, and generate actionable insights that strengthen competitiveness and operational integrity. The research reviews multiple AI approaches such as machine learning and deep learning applied in contexts like supply chain optimization, consumer behaviouir forecasting, and market trend analysis

G. Aparna, N. Krishna (2024) [2] "AI-Based Intrusion Detection and Prevention Models for Smart Home Network Using ML risks". The rapid expansion of smart home Internet of Things (IoT) environments has introduced significant cybersecurity vulnerabilities, exposing connected devices and home networks to a wide range of cyberattacks. To address these security challenges, this study reviews and evaluates various artificial intelligence (AI)-based intrusion detection and prevention models that use machine learning (ML) techniques to identify and mitigate threats within smart home networks. The research highlights how ML-driven systems—particularly those employing anomaly detection, signature-based methods, and hybrid approaches—enhance threat detection accuracy and reduce false positives compared to traditional security mechanisms

Aishwarya Zamindar (2022)[3] "Review on the Application of AI in Smart Homes" The rapid development of smart home and artificial intelligence technologies has significantly enhanced the quality of life for occupants through improved smart home products. Although earlier studies have discussed the utility of AI in smart houses, few have comprehensively connected the academic literature with actual market products. This paper addresses two main research questions: What are the current trends in the smart home era and its products? and what is the relationship between academic research and commercial smart home products that incorporate AI? It reviews existing literature and products to explore how AI functions—such as device control, energy management, security, and user interaction—are implemented in smart homes, highlighting both technological trends and gaps between research and real-world applications.

Statement of the problem:

Rapid technological advancements, continuous innovations, rising income levels, increasing competition, and growing consumer awareness have significantly influenced consumer buying behaviour and raised consumer expectations. In marketing terms, consumer behaviour involves understanding who purchases a product, what is purchased, the purpose of purchase, the price consumers are willing to pay, and the place of purchase. In this context, smart home appliances have emerged as an important segment of the consumer durable market by offering advanced features and enhanced convenience. However, the availability of multiple brands, varied pricing, and diverse technological options has made the purchase decision process more complex. Consumers rely on various sources of information and are influenced by several factors while purchasing smart home appliances. Despite their increasing adoption, there is limited understanding of consumer buying behaviour, information sources, and satisfaction levels in this segment. Therefore, this study aims to examine consumer buying behaviour towards selected smart home appliances.

Objective of the study:

- To examine consumer buying behaviour with respect to selected smart home appliances.
- To identify the various sources of information consulted by consumers prior to making brand-specific purchase decisions for smart home appliances.
- To analyze the key factors influencing consumers' purchase decisions regarding smart home appliances.
- To assess the level of consumer satisfaction associated with the purchase and usage of smart home appliances.

Research Methodology:

The study employed a descriptive research design to examine consumer buying behaviour towards selected smart home appliances. The research was conducted in the designated study area among

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consumers who currently own or intend to purchase smart home appliances. Both primary and secondary data sources were used for the study. Primary data were collected using a structured questionnaire, designed to gather information on consumer preferences, sources of information, factors influencing purchase decisions, and satisfaction levels. Secondary data were obtained from books, journals, research articles, websites, and other credible sources to support and supplement the primary data. A total of 100 respondents were selected through convenience sampling, based on their availability and willingness to participate in the study. The data collection period extended from November 2025 to January 2026. The collected data were systematically coded and analyzed using the SPSS software package**,** employing statistical tools such as percentage analysis, Friedman ranking analysis, and chi-square tests to identify patterns, preferences, and significant relationships. Efforts were made to ensure accuracy and reliability of the data, although the study is subject to certain limitations such as sample size, geographical coverage, and potential respondent bias. The methodology was structured to provide comprehensive insights into consumer behaviour, decision-making factors, and satisfaction levels related to smart home appliances.

Data Analysis & Interpretation

Table no: 1
Personal outline of the respondent

Personal Profile	Particular	No of Respondent s	Percent
Gender	Male	43	43
	Female	57	57
Age	20-30	27	27
	30-40	45	45
	40-50	20	20
	Above50	8	8
Occupational Status	Unemployed	18	18
	Housewife	30	30
	Student	15	30
	Entrepreneur	**2**	**2**
	Private employee	40	40
	Government employee	5	5
How long have you been using smart home appliances	Less than 1 year	32	32
	1–3 years	43	43
	3–5 years	15	15
	More than 5 years	10	10
Monthly Income	Below 30000	57	57
	30000-50000	29	29
	Above 50000	14	14

Source: Primary Data

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Interpretation

The study reveals that 43% of respondents are male and 57% are female, indicating fairly balanced gender participation. Most respondents belong to the 30–40 age group (45%), followed by 20–30 years (27%), thus showing higher adoption among younger individuals. In regards to occupation, private employees (40%) and house wives (30%) form the majority. With respect to experience with smart home appliances, 43% have used them for 1–3 years, while 32% are new users, indicating growing adoption. Income data reveals that 57% earn below ₹30,000, suggesting that smart home appliances are increasingly accessible to lower- and middle-income groups.

Chart no: 01

Personal outline of the respondent chart

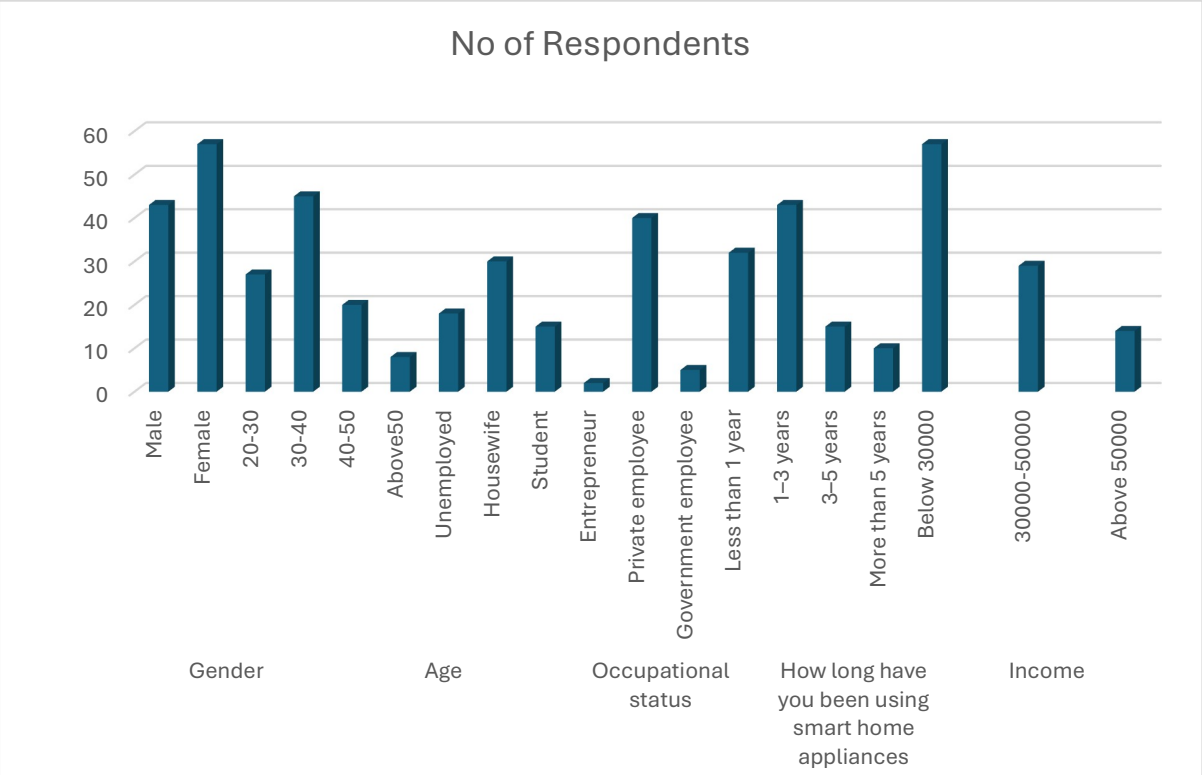

Table no: 2

Sources of information

S.No	Sources of awareness	Number	Percentage
1	Advertisements	47	47
2	Friends and Family	18	18
3	Social Media(self)	21	19
4	Online Reviews and Ratings(self)	9	9
5	Company Websites(others)	3	3
6	Sales Personnel(others)	2	2
	Total	**100**	**100.0**

Source : Primary Data

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The data reveals that advertisements through TV, newspapers, and magazines acts as the primary source of awareness, accounting for 47% of respondents**.** Social media is the next important source, influencing 19%**,** followed by friends and family at 18%, strongly indicating the role of personal networks. Online reviews and ratings account for 9%**,** showing moderate reliance on user-generated feedback. Awareness through company websites (3%) and sales personnel (2%) is very low. Overall, the findings suggest that mass media and digital platforms play a very dominant role in creating awareness, while direct company-driven sources have limited influence.

Chart no: 2
Sources of information chart

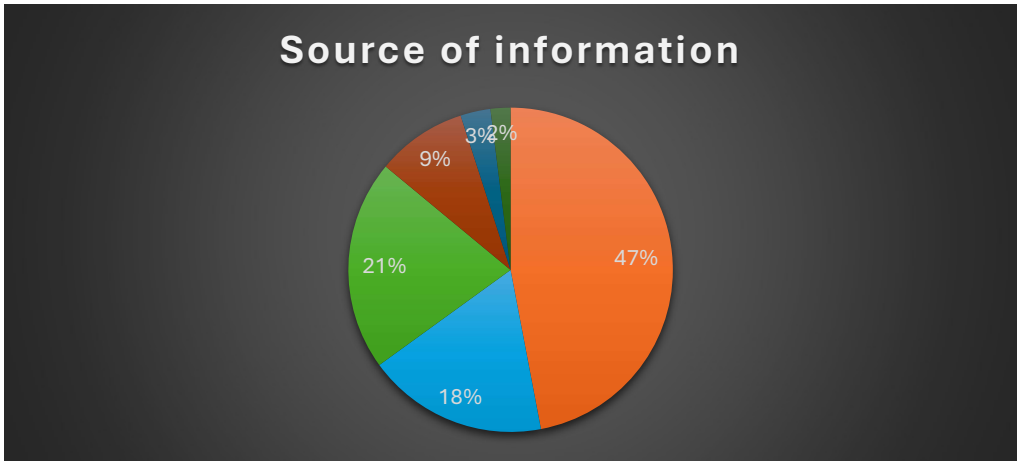

Table no: 3
Sources of awareness of the respondents

Statements	**EA 5**	**VA 4**	**MA 3**	**SA 2**	**NA 1**	**TOTAL**	**Mean Average**
Climate Control: Smart Thermostats (Nest), Smart ACs, Air Purifiers, Fans	65	15	10	7	3	100	4.32
	325	60	30	14	3	432	
Lighting & Power: Smart Bulbs, Smart Plugs (to automate anything plugged in).	87	10	3	-	-	100	4.84
	435	40	9	-	-	484	
Security & Access: Video Doorbells, Smart Locks, Security Cameras, DIY Systems (Ring, SimpliSafe).	83	12	5	-	-	100	4.78
	415	48	15	-	-	478	
Entertainment: Smart Speakers (Echo, Nest), Smart Displays, Smart TVs.	81	12	7	-	-	100	4.74
	405	48	21	-	-	474	
Kitchen: Smart Refrigerators, Ovens, Dishwashers, Coffee Machines, Air Fryers.	80	12	8	-	-	100	4.72
	400	48	24	-	-	472	
Laundry & Cleaning**:** Smart Washing Machines, Robot Vacuums.	72	12	8	5	3	100	4.45
	360	48	24	10	3	445	
Other**:** Smart Blinds, Geysers, Water Purifiers, Irons	62	18	10	7	3	100	4.29
	310	72	30	14	3	429	

Note: **Extremely Aware, Very Aware, Moderately Aware, Slightly Aware, Not Aware**
Source : Primary Data

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It is interpreted that the respondents are extremely aware about the products related to power and lighting, Security & Access, Entertainment and kitchen Appliances as the data has achieved majority in these fields. The respondents are unaware about laundry, climate and other related products.

Table no: 4
Friedman ranking analysis- factors influencing innovative technologies

S. No	Factors influencing of innovative technologies	Mean Rank	Rank
1	Price	4.34	2
2	Product Quality	4.43	4
3	Brand Reputation.	4.57	3
4	Availability & Accessibility	4.77	8
5	After-Sales Service	4.93	10
6	Design & Aesthetics	4.81	7
7	Recommendations & Reviews	4.66	5
8	Ease of Use	4.28	1
9	Technological Features	4.79	6
10	Energy Efficiency	4.88	9

Source : Primary Data

The above table shows that, the respondents focus on the easy use of the innovative technologies and also the price and brand value play a vital role for the use of these innovative technologies. Based on the table it is showcased that respondents don't care much about the after sale service and the energy efficiency of the products.

Suggestion:

 Focus on Adoption Drivers: There requires a need to Examine what motivates consumers to adopt smart home technology, such as convenience, energy efficiency, safety, and lifestyle enhancement.

 Barriers to Usage: it is very importan to Analyze challenges like high initial cost, technical complexity, data privacy concerns, and lack of interoperability between devices.

 Customer Satisfaction Factors: It is always necessary to study how ease of installation, reliability, app usability, customer support, and regular software updates influence satisfaction levels.

 Demographic Influence: Various demographic influences like age, income, education, and tech-savviness affect consumer behavior and satisfaction with smart home products.

 Post-Purchase Experience: Evaluate how user experience over time, system upgrades, and maintenance services impact repeat purchase and brand loyalty.

 Future Expectations: Identify what consumers expect from next-generation smart homes, such as AI integration, enhanced security, and sustainability features.

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Conclusion:

This study on modern consumer behaviour and satisfaction in smart home technology highlights the growing importance of smart devices in enhancing convenience, security, and energy efficiency in daily life. The findings indicate that consumer adoption is largely influenced by perceived usefulness, ease of use, and technological awareness, while satisfaction is strongly linked to reliability, data security, and quality of after-sales support. Although consumers appreciate the benefits offered by smart home systems, concerns related to privacy, high initial costs, and technical complexity continue to act as barriers to widespread adoption. Overall, the study concludes that improving user experience, ensuring data protection, and offering affordable, user-friendly solutions can significantly enhance consumer satisfaction and long-term acceptance of smart home technologies. These insights can assist manufacturers and service providers in developing more consumer-centric smart home solutions and strengthening customer trust in this evolving market.

Reference:

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