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Impact of AI Voice Assistants on Purchase Decisions

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ABSTRACT

The growing integration of artificial intelligence into digital platforms has changed the way consumers search, evaluate, and select products. Voice-enabled assistants have emerged as interactive tools that allow users to obtain information, compare alternatives, and receive personalised suggestions through conversational interfaces. While these technologies are widely used for routine tasks, their role in shaping actual purchase behaviour is still evolving, particularly in emerging digital markets such as India.

This study investigates how AI voice assistants influence consumer purchase decisions by examining the combined effect of functional value, confidence in AI-generated suggestions, adaptive personalisation, and perceived data risk. A quantitative research design was adopted, and primary data were collected from **175 respondents** using a structured questionnaire. Descriptive statistics and correlation analysis were applied to identify behavioural patterns and relationships among the variables.

The findings indicate that perceived usefulness is the strongest driver of reliance on voice assistants for shopping-related activities. Trust in AI recommendations and the relevance of personalised suggestions also contribute positively to purchase consideration. However, concerns regarding privacy and data security act as a limiting factor, reducing the likelihood of completing transactions through voice interfaces. The results show that voice assistants currently play a more influential role in the information search and evaluation stages rather than in final purchase execution.

The study highlights the growing importance of conversational AI in the consumer decision journey and suggests that improving transparency, data protection mechanisms, and recommendation accuracy can enhance adoption of voice commerce. The research provides practical insights for marketers and technology developers seeking to design trust-oriented and privacy-sensitive AI-driven shopping experiences.

Keywords: Artificial Intelligence, Voice Assistants, Voice Commerce, Consumer Purchase Behaviour, Perceived Usefulness, Trust in AI, Personalised Recommendations, Privacy Risk, Technology Adoption, Digital Consumer Decision-Making.

CHAPTER 1
INTRODUCTION

1.1 Background of the Study

The proliferation of artificial intelligence (AI) in recent years has fundamentally transformed the way consumers interact with digital technologies and make purchase decisions. AI-powered systems are increasingly embedded in everyday consumer environments, enabling automated, personalised, and context-aware interactions. Among these innovations, AI voice assistants have emerged as a significant

interface that facilitates human–computer interaction through natural language processing and machine learning capabilities.

AI voice assistants enable users to perform a wide range of tasks, including searching for product information, comparing alternatives, receiving recommendations, placing orders, and tracking deliveries, using voice commands. Unlike traditional graphical user interfaces that require visual attention and manual input, voice-based interfaces offer hands-free, conversational, and time-efficient interaction. This shift from screen-based to voice-based interaction represents a paradigm change in the digital purchase journey.

The growing integration of AI voice assistants into smartphones, smart speakers, and connected home devices has led to the development of voice commerce, which allows consumers to engage in shopping activities using spoken language. Voice commerce simplifies the decision-making process by reducing search time, filtering relevant options, and presenting curated recommendations. However, this simplification also alters the traditional consumer decision-making model, which typically involves extensive information search and evaluation of multiple alternatives.

1.2 Transformation of the Consumer Decision-Making Process

The traditional consumer decision-making process consists of need recognition, information search, evaluation of alternatives, purchase decision, and post-purchase evaluation. In digital environments, this process is often supported by visual interfaces that provide multiple product options and detailed information. AI voice assistants modify this process by offering limited, algorithmically selected recommendations, thereby reducing cognitive effort and decision complexity.

While this reduction in effort enhances convenience, it also increases the influence of AI-generated suggestions on consumer choice. When consumers rely on voice assistants for product recommendations, the system effectively becomes an intermediary in the decision-making process. This intermediary role has significant implications for brand visibility, consumer autonomy, and purchase behaviour.

Moreover, AI voice assistants utilise personal data, previous interactions, and behavioural patterns to deliver personalised recommendations. Personalisation improves relevance and efficiency, but it also raises concerns related to data privacy, surveillance, and algorithmic transparency. These concerns may affect consumer trust and willingness to engage in voice-enabled transactions.

1.3 Psychological and Technological Determinants

The adoption and influence of AI voice assistants on purchase decisions are determined by a combination of technological and psychological factors. From a technological perspective, perceived usefulness plays a crucial role, as consumers are more likely to use voice assistants when they believe that the technology enhances efficiency and convenience. Ease of use, accuracy of responses, and reliability of recommendations also contribute to positive user experiences.

From a psychological perspective, trust in AI systems is a critical determinant of consumer behaviour. Consumers must feel confident that the recommendations provided are accurate, unbiased, and aligned with their preferences. Trust reduces perceived risk and increases reliance on AI as a decision-support tool. At the same time, privacy concerns related to continuous data collection and storage may create resistance toward voice-based shopping. Consumers may perceive AI voice assistants as intrusive or insecure, particularly when sensitive personal information is involved. Therefore, privacy risk may negatively influence purchase intention despite the perceived benefits of convenience and personalisation.

1.4 Voice Assistants as Decision-Support Systems

AI voice assistants function not merely as search tools but as intelligent decision-support systems that influence consumer behaviour through recommendation mechanisms. By presenting a limited number of options, often a single default recommendation, these systems shape the choice architecture and increase the likelihood of consumers selecting the suggested product.

This phenomenon has significant implications for marketers and retailers, as it alters competitive dynamics and brand visibility. Brands that are recommended by AI systems gain a strategic advantage, while others may remain undiscovered. Consequently, understanding how consumers perceive and respond to AI-generated recommendations becomes essential for analysing purchase behaviour in voice-enabled environments.

1.5 Relevance in the Indian Context

India represents one of the fastest-growing digital markets, characterised by increasing smartphone penetration, affordable internet access, and widespread adoption of voice-based technologies. The availability of multilingual voice assistants has further accelerated adoption among diverse consumer groups. Many users in India prefer voice interaction due to convenience, language accessibility, and ease of use.

Despite the growing usage of AI voice assistants for information search and daily tasks, their use in actual purchase transactions remains relatively limited. This indicates a gap between usage and transactional behaviour. Factors such as trust deficit, privacy concerns, preference for visual confirmation, and lack of awareness regarding voice commerce may influence this behaviour.

Therefore, it becomes important to examine how Indian consumers perceive AI voice assistants and how these perceptions influence their purchase decisions. Understanding this relationship can provide valuable insights into the future of voice commerce in emerging markets.

1.6 Research Problem

Although AI voice assistants are increasingly integrated into digital ecosystems, empirical research examining their direct impact on consumer purchase decisions remains limited. Existing studies primarily focus on technology adoption, user satisfaction, or usage behaviour rather than actual buying outcomes. Furthermore, the combined effect of perceived usefulness, trust, recommendation influence, and privacy concerns on purchase decisions has not been comprehensively analysed.

This research seeks to address this gap by examining how AI voice assistants influence consumer purchase decisions and identifying the key factors that shape this influence.

1.7 Purpose of the Study

The purpose of this study is to analyse the role of AI voice assistants in consumer decision-making and to examine how:

- Perceived usefulness influences reliance on voice assistants
- Trust in AI recommendations affects purchase intention
- AI-generated suggestions shape brand selection and buying behaviour
- Privacy concerns impact consumer willingness to engage in voice commerce

The study aims to provide empirical insights into the behavioural and perceptual factors that determine the effectiveness of AI voice assistants as decision-support tools.

1.8 Significance of the Study

This study is significant from both academic and managerial perspectives. Academically, it contributes to the literature by integrating technology adoption models with AI-driven consumer decision-making

frameworks. It extends existing research by focusing on actual purchase behaviour rather than mere technology usage.

From a managerial perspective, the study provides insights for marketers, retailers, and technology developers regarding:

- The role of trust in AI-driven recommendations
- The impact of voice-based interfaces on brand visibility
- Consumer concerns related to data privacy
- Strategies to enhance adoption of voice commerce

These insights can help organisations design more effective AI-driven marketing and customer engagement strategies.

1.9 Scope of the Study

The study focuses on consumers who use AI voice assistants for product search, recommendations, and purchase-related activities. It examines their perceptions regarding usefulness, trust, personalisation, and privacy, and analyses how these factors influence their purchase decisions. The research is limited to voice-enabled interactions and does not include other AI interfaces such as chatbots or visual recommendation systems.

CHAPTER 2
REVIEW OF LITERATURE

Fred Davis (1989) in ***"Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology"*** introduced the Technology Acceptance Model, which identifies perceived usefulness as a primary determinant of technology adoption. This model provides the theoretical foundation for the present study, where perceived usefulness is examined in relation to AI voice assistants to analyse how functional efficiency influences consumer reliance on voice-based product search and purchase decisions.

Viswanath Venkatesh et al. (2003) in ***"User Acceptance of Information Technology: Toward a Unified View"*** developed the Unified Theory of Acceptance and Use of Technology, highlighting performance expectancy and effort expectancy as predictors of behavioural intention. Performance expectancy has been operationalised in this research as the perceived value of AI voice assistants in simplifying shopping tasks and influencing purchase intention.

Patricia Norberg, Daniel Horne and David Horne (2007) in ***"The Privacy Paradox: Personal Information Disclosure Intentions versus Behaviors"*** demonstrated that consumers often disclose personal data despite expressing privacy concerns. This paradox is relevant to AI voice assistants that rely on user data for personalisation. The present study incorporates privacy concern as a factor that may negatively influence trust and purchase decisions.

Alessandro Acquisti, Leslie John and George Loewenstein (2015) in ***"Privacy and Human Behavior in the Age of Information"*** examined how perceived risk affects personal data disclosure and technology usage. Their findings support the inclusion of privacy risk as a variable influencing trust in AI-driven recommendations.

Clifford Nass and Youngme Moon (2015) in ***"Machines and Mindlessness: Social Responses to Computers"*** found that users respond to conversational technologies as social entities. This anthropomorphic response increases engagement and persuasion, which is relevant to AI voice assistants

that interact in a human-like manner. The present study uses this perspective to explain how conversational interaction enhances trust and influences purchase behaviour.

João Cunha et al. (2018) in ***"Voice Commerce: Consumer Adoption of Voice-Enabled Shopping"*** reported that convenience and speed significantly increase consumer reliance on voice assistants for routine purchases. This supports the inclusion of convenience as a dimension of perceived usefulness in the present research.

Xiaolin Luo et al. (2019) in ***"Service Robots and the Future of Marketing: Trust and Adoption"*** found that trust in AI agents significantly enhances acceptance of AI-generated recommendations. This study provides empirical support for including trust as a key determinant of purchase intention.

Jakob Nielsen (2019) in ***"The Voice User Interface: Usability and Design Implications"*** highlighted that voice interfaces typically present a single recommendation, increasing the likelihood of users selecting the suggested option. This limited choice architecture is incorporated in the present research to analyse how AI recommendations influence brand selection.

James E. Katz and Mark Aakhus (2019) in ***"Social Influence of Intelligent Personal Assistants on Consumer Behaviour"*** found that repeated interactions with AI assistants create habitual reliance on recommended options. This supports the inclusion of recommendation influence as a behavioural factor affecting purchase decisions.

Marianna Sigala (2020) in ***"Artificial Intelligence in Service Management: Enhancing Customer Experience"*** concluded that conversational interfaces improve decision efficiency through personalised and context-aware responses. This supports the role of AI recommendations as decision-support mechanisms.

Sunil Gupta (2020) in ***"Driving Customer Engagement through AI-Based Personalization"*** found that AI recommendation systems reduce information overload and increase purchase probability. This insight is applied in the present study to examine how AI voice assistants shape consumer choice.

S. R. Hill and L. D. Johnson (2020) in ***"Consumer Trust in Artificial Intelligence–Based Decision Aids"*** demonstrated that perceived reliability significantly enhances trust and purchase intention. This supports the conceptualisation of trust as a mediating factor between AI interaction and buying behaviour.

Ajay Kumar and Neha Sharma (2021) in ***"AI-Enabled Retailing and Consumer Purchase Behaviour"*** reported that personalised AI recommendations increase customer satisfaction and repeat purchase intention. This reinforces the inclusion of purchase intention as the dependent variable.

Gillian Hadfield (2021) in ***"Trust and Transparency in Artificial Intelligence Systems"*** emphasised that explainability is critical for building trust in AI. This finding is used to interpret how transparency influences consumer reliance on voice assistants.

Rohit Talwar (2022) in ***"AI and the Future of Consumer Markets"*** observed that voice assistant adoption in emerging economies is driven by digital accessibility and language compatibility, but privacy concerns limit transactional usage. This provides contextual relevance for studying Indian consumers.

Nikhil Ranjan (2022) in ***"Adoption of Voice Assistants in Indian E-Commerce: Opportunities and Challenges"*** found that Indian consumers frequently use voice assistants for search but hesitate to complete purchases due to payment security concerns. This supports the examination of the usage–purchase gap.

Kumar Amit (2023) in ***"Adoption of Artificial Intelligence Technologies among Indian Consumers"*** reported that perceived usefulness and trust significantly influence behavioural intention. The present study extends this to actual purchase decisions.

Pooja Mehta and Rakesh Singh (2023) in ***"Voice Commerce in India: Consumer Behaviour and Adoption Patterns"*** highlighted that Indian users primarily utilise voice assistants for information search rather than transactions. The present research addresses this behavioural gap.

Ankit Verma (2024) in ***"Impact of AI Recommendations on Online Purchase Decisions"*** found that recommendation accuracy enhances trust and increases purchase likelihood. This supports the inclusion of recommendation effectiveness in the research model.

Sneha Kapoor (2024) in ***"Voice Search and Brand Recall in AI-Driven Environments"*** demonstrated that AI-recommended brands achieve higher recall and preference. This finding is used to analyse the influence of AI suggestions on brand selection.

Laura Hoffman and Thomas Novak (2024) in ***"AI-Driven Personalization and Consumer Decision Efficiency"*** concluded that AI reduces cognitive load and accelerates decision-making, thereby increasing purchase likelihood while potentially reducing perceived consumer control. This insight is relevant for analysing decision simplification.

Rahul Bansal (2025) in ***"AI Voice Assistants and Consumer Buying Behaviour"*** reported that AI significantly influences low-involvement purchases, while trust and perceived risk determine its effectiveness in high-involvement decisions.

Ishita Malhotra (2025) in ***"Conversational Commerce and Decision Simplification"*** found that AI accelerates decision-making but limits alternative evaluation due to restricted options. This supports the examination of AI as a decision-support tool.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodological framework adopted for the study titled ***"Impact of AI Voice Assistants on Purchase Decisions."*** It explains the research design, data sources, sampling plan, instrument development, data collection procedure, and tools used for analysis.

The purpose of this chapter is to provide a systematic explanation of how the research was conducted and how the data were organised and interpreted to understand consumer perceptions regarding AI voice assistants. The study focuses on examining the role of **trust, perceived usefulness, personalisation, and privacy concerns** in shaping purchase decisions through AI-enabled voice interfaces.

3.2 Research Approach

The study follows a **quantitative research approach**, as the objective is to measure consumer perceptions and behavioural tendencies using numerical data collected through structured responses. Quantitative research enables the researcher to identify patterns, trends, and relationships among variables systematically.

A **descriptive research design** was adopted to describe the attitudes, usage behaviour, and purchase-related responses of consumers who interact with AI voice assistants. The study does not involve manipulation of variables but rather focuses on observing and analysing existing perceptions and behaviours.

3.3 Research Design

The research is **cross-sectional in nature**, as data was collected at a single point in time from respondents who are aware of or use AI voice assistants such as Alexa, Siri, and Google Assistant.

The design is suitable for understanding:

- Current usage behaviour of AI voice assistants
- Consumer trust in AI recommendations
- Perceived usefulness in shopping activities
- Personalisation experience
- Privacy-related concerns
- Influence on purchase decisions

The research is empirical and based primarily on primary data collected through a structured questionnaire.

3.4 Sources of Data

3.4.1 Primary Data

Primary data was collected through a **self-structured questionnaire** created using Google Forms. The questionnaire was designed to capture:

- Demographic profile of respondents
- Awareness and usage frequency of AI voice assistants
- Activities performed using voice assistants
- Trust in AI-generated recommendations
- Perceived usefulness and convenience in shopping
- Personalisation experience
- Privacy concerns
- Influence on product search and purchase decisions

The attitudinal statements were measured using a **five-point Likert scale** ranging from strongly disagree to strongly agree. This allowed respondents to express the intensity of their perception.

3.4.2 Secondary Data

Secondary data was collected to develop the theoretical and conceptual foundation of the study. The sources included:

- Research papers on AI voice assistants and consumer behaviour
- Academic journals related to technology adoption and digital marketing
- Scholarly articles on trust, personalisation, and privacy in AI systems
- Books and online academic databases

This data helped in identifying key variables and framing the questionnaire in alignment with existing literature.

3.5 Sampling Design

3.5.1 Target Population

The target population for the study comprised:

- Students
- Working professionals
- Individuals who are familiar with AI voice assistants

These respondents were selected because they represent active users of digital technologies and are more likely to interact with AI-enabled voice platforms for information search and shopping assistance.

3.5.2 Sampling Technique

The study employed a **convenience sampling method**, where respondents were selected based on accessibility and willingness to participate. The questionnaire was distributed online through social and academic networks, which facilitated the collection of data within the available time frame.

3.5.3 Sample Size

A total of 175 valid responses were collected and analysed for the study. The sample size was considered adequate to identify consumer perception patterns and behavioural trends related to AI voice assistants and purchase decisions.

3.6 Instrument Development

The research instrument consisted of a **structured questionnaire** divided into multiple sections. Each section was aligned with the research objectives and measured specific constructs.

3.6.1 Demographic and Usage Profile

This section captured:

- Age group
- Gender
- Awareness of AI voice assistants
- Frequency of usage
- Purpose of using AI voice assistants

This helped in understanding the background and usage behaviour of respondents.

3.6.2 Trust in AI Voice Assistants

This section measured the level of trust respondents have in AI-generated product recommendations. The statements assessed:

- Confidence in AI recommendations
- Perceived accuracy of information
- Reliability of product suggestions
- Willingness to depend on AI for purchase decisions
- Belief that AI provides unbiased recommendations

3.6.3 Perceived Usefulness and Convenience

This section evaluated the functional benefits of AI voice assistants in shopping activities. It measured:

- Time-saving capability
- Ease of searching products
- Reduction in effort while comparing products
- Usefulness for routine purchases
- Preference for voice-based shopping

3.6.4 Personalisation and Engagement

This section examined the ability of AI voice assistants to provide customised recommendations based on user preferences. It assessed:

- Relevance of personalised suggestions
- Increased engagement due to personalisation
- Ability of AI to remember past choices
- Influence of personalisation on purchase interest
- Likelihood of repeat usage

3.6.5 Privacy Concerns

This section measured respondents' concerns regarding data security and privacy. The statements captured:

- Concern about sharing personal information
- Fear of misuse of data
- Impact of privacy concerns on purchase decisions
- Trust in AI platforms to protect user data
- Preference for stronger privacy safeguards

3.6.6 Purchase Behaviour

This section examined the influence of AI voice assistants on actual buying behaviour. It included:

- Use of AI for product search
- Purchase experience through AI recommendations
- Influence of AI suggestions on final purchase decisions

3.7 Data Collection Procedure

Primary data were gathered using an online questionnaire distributed through academic and professional networks. Participation was voluntary, and responses were automatically recorded in spreadsheet form for coding and statistical processing. Before analysis, incomplete entries were removed to ensure data consistency, resulting in a final dataset of 175 usable responses.

3.8 Data Preparation and Analysis Tools

The cleaned dataset was analysed using Microsoft Excel and SPSS. Descriptive statistics were computed to understand central tendencies and variation in respondent perceptions. Frequency tables and percentage distributions were prepared for demographic and behavioural variables, while correlation analysis was conducted to examine the strength and direction of relationships among the key constructs.

3.9 Presentation of Data

Findings have been presented through tabular summaries, graphical illustrations, and interpretative commentary. This format enables a clearer understanding of how consumers perceive AI voice assistants and how these perceptions translate into purchase-related behaviour.

3.10 Scope of the Study

The study focuses on consumers who are aware of or use AI voice assistants and examines their perceptions regarding trust, usefulness, personalisation, and privacy. It analyses how these factors influence purchase decisions in a digital and voice-enabled shopping environment.

CHAPTER 4
RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the analysis and interpretation of the primary data collected to examine the **impact of AI voice assistants on consumer purchase decisions**. The data was analysed using Microsoft Excel and SPSS, and the results have been presented through tables, percentage analysis, and graphical representations.

The analysis focuses on:

- Demographic profile of respondents
- Awareness and usage behaviour of AI voice assistants
- Trust in AI recommendations

- Perceived usefulness and convenience
- Personalisation experience
- Privacy concerns
- Influence on purchase decisions

The objective is to identify behavioural patterns and understand how these factors shape consumer decision-making.

4.2 Demographic Profile of Respondents

4.2.1 Age Distribution

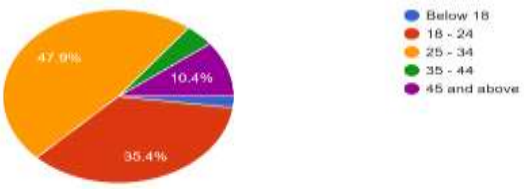

Figure 1 Age Distribution

Figure 1 shows the age-wise distribution of the respondents. The majority of participants (47.9%) belong to the **25–34 years** age group, followed by **35.4% in the 18–24 years** category. Respondents aged **45 years and above** account for **10.4%**, while the **35–44 years** and **below 18 years** groups represent a very small proportion of the sample.

This indicates that the study is largely represented by **young and digitally active individuals**, who are more likely to use AI voice assistants for product search and purchase-related activities. The lower participation of older age groups suggests comparatively lower adoption of voice-based technologies among mature consumers.

Age	Frequency	Valid Percent	Cumulative Percent
Below 18	3	1.7	1.7
18–24	62	35.4	37.1
25–34	84	47.9	85
35–44	8	4.6	89.6
45 and above	18	10.4	100
Total	**175**	**100.0**	**100.0**

Table 1 Age Distribution

4.2.2 Gender Distribution

Figure 2 Gender Distribution

Figure 2 shows the gender distribution of the respondents. The data indicate that **64.6% of the respondents are female**, while **35.4% are male**, with a negligible proportion selecting "prefer not to say."

This reflects active participation from both gender groups and suggests that AI voice assistants are used across a diverse user base. The inclusion of both male and female respondents provides a broader perspective on consumer perceptions and purchase behaviour related to AI voice assistant usage.

Gender	Frequency	Valid Percent	Cumulative Percent
Male	62	35.4	35.4
Female	113	64.6	100
Prefer not to say	0	0.0	0.0
Total	**175**	**100.0**	**100.0**

Table 2 Gender Distribution

4.3 Awareness and Usage of AI Voice Assistants

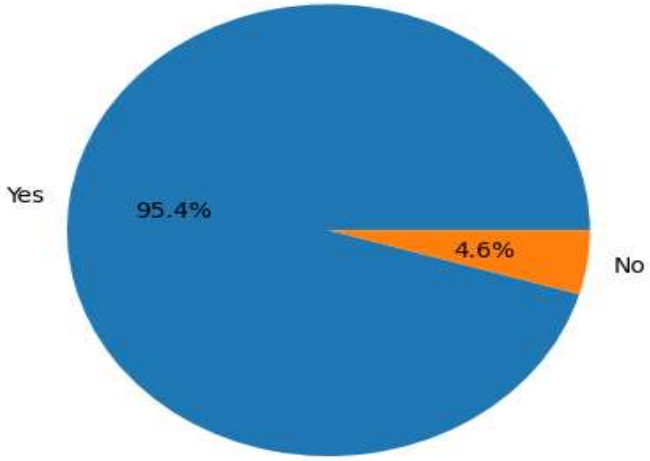

Figure 3 Awareness and Usage of AI Voice Assistants

Figure 3 illustrates that awareness of AI voice assistants is very high among the respondents, with 95.4% indicating that they are familiar with such technologies. Only a small proportion (4.6%) reported no awareness. This suggests that voice-enabled AI tools have achieved substantial visibility and reach among the sample group. The high awareness level also indicates that most respondents are in a position to form perceptions and usage behaviour related to AI voice assistants, making the dataset suitable for analysing their influence on consumer decision-making.

Awareness Level	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	167	95.4	95.4	95.4
No	8	4.6	4.6	100.0
Total	**175**	**100.0**	**100.0**	

Table 3 Awareness and Usage of AI Voice Assistants

4.4 Usage Behaviour

Figure 4 Usage Behaviour

Figure 4 presents the frequency of usage of AI voice assistants among the respondents. The data shows that a majority of the respondents (**54.2%**) use AI voice assistants **daily**, followed by **31.3% who use them occasionally**. A smaller proportion uses them **weekly**, while only a minimal percentage reported **rare usage**.

The high proportion of daily users indicates that AI voice assistants have become a part of routine digital interaction for many respondents. This frequent usage reflects growing dependence on voice-based technologies for activities such as information search, reminders, and product exploration.

The presence of occasional and weekly users suggests that while awareness is universal, the level of engagement varies based on individual needs and usage patterns. Overall, the findings indicate strong adoption of AI voice assistants, which supports their increasing role in influencing consumer behaviour and purchase-related decision-making.

Usage	Frequency	Valid Percent	Cumulative Percent
Daily	95	54.2	54.2
Weekly	20	11.4	65.6
Occasionally	55	31.5	97.1
Rarely	5	2.9	100
Total	**175**	**100.0**	**100.0**

Table 4 Usage Behaviour

4.5 Trust in AI Voice Assistants

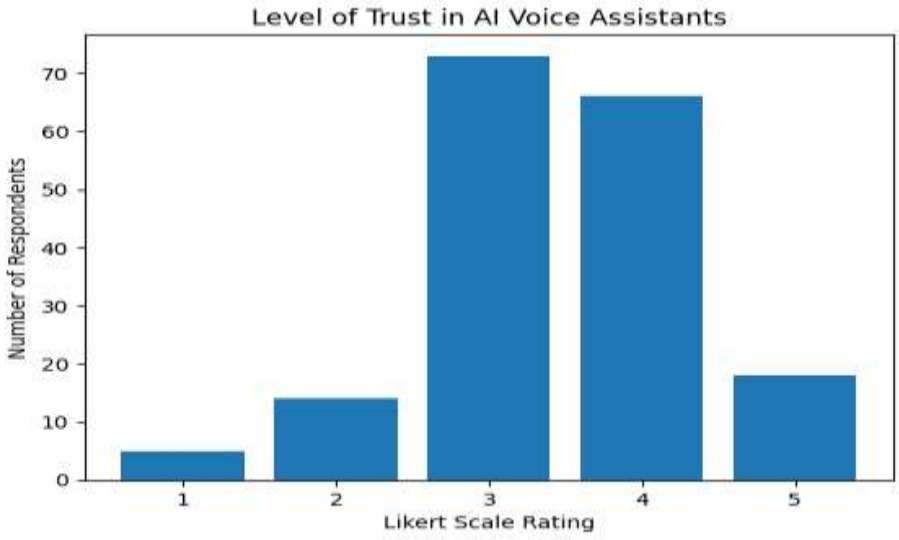

Figure 5 Trust in AI Voice Assistants

Figure 5 illustrates that most respondents report a moderate level of trust in AI voice assistants, with the largest group selecting rating 3, followed closely by rating 4. This indicates a generally positive perception of reliability. A smaller segment expressed very high trust, while only a limited number reported low trust levels. Overall, the findings suggest that users tend to view AI voice assistants as reasonably dependable but not completely trustworthy.

Likert Rating	Frequency	Percent	Valid Percent	Cumulative Percent
1	5	2.9	2.9	2.9
2	14	8.0	8.0	10.9
3	73	41.7	41.7	52.6
4	66	37.7	37.7	90.3
5	18	10.3	10.3	100.0
Total	**175**	**100.0**	**100.0**	—

Table 5 Trust in AI Voice Assistants

4.6 Perceived Usefulness and Convenience

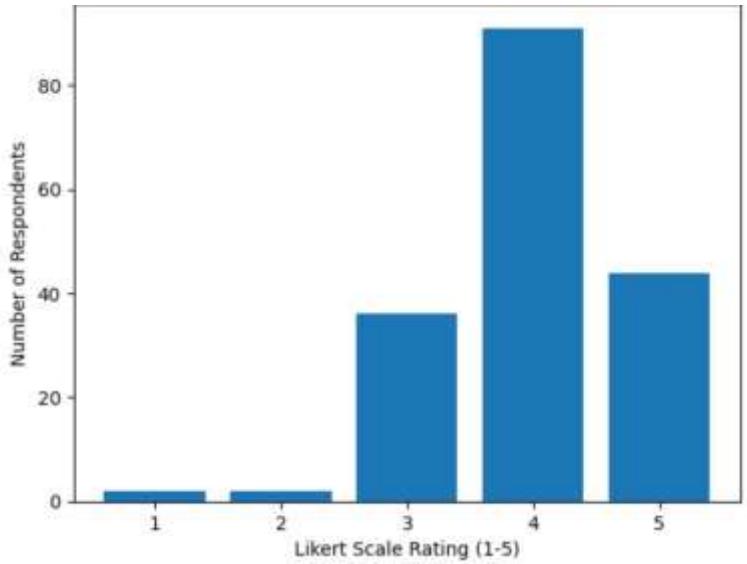

Figure 6 Perceived Usefulness and Convenience

Figure 6 shows a clear positive trend. A majority of respondents selected higher ratings, with 52.0% choosing rating 4 and 25.1% choosing rating 5. This indicates that most participants have a favourable opinion of the statement being evaluated.

Only 1.1% each selected ratings 1 and 2, showing very low dissatisfaction. Around 20.6% chose rating 3, reflecting a moderate or neutral stance.

Overall, the data suggests strong agreement and a generally positive perception among respondents.

Rating	Frequency	Percent	Valid Percent	Cumulative Percent
1	2	1.1	1.1	1.1
2	2	1.1	1.1	2.3
3	36	20.6	20.6	22.9
4	91	52.0	52.0	74.9
5	44	25.1	25.1	100.0
Total	**175**	**100.0**	**100.0**	—

Table 6 Perceived Usefulness and Convenience

4.7 Personalisation and Engagement

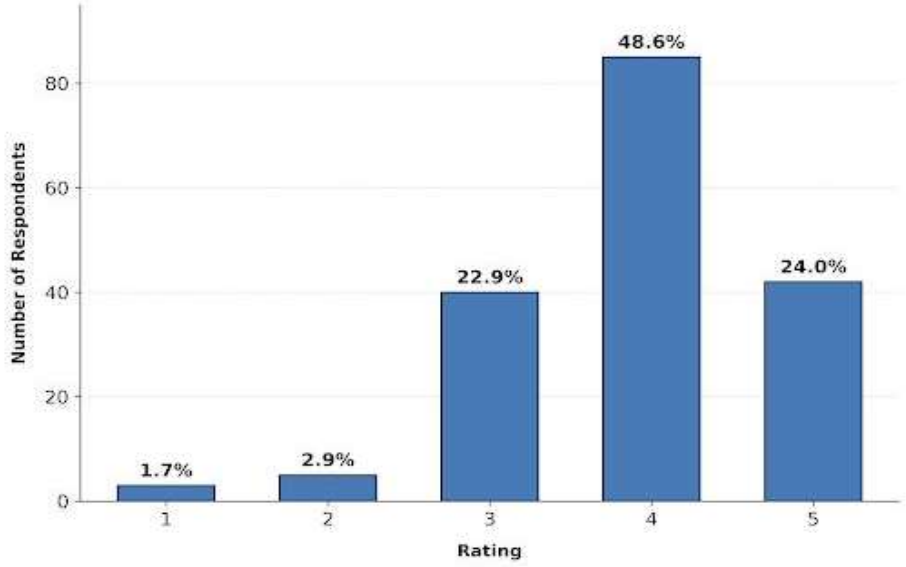

Figure 7 4.7 Personalisation and Engagement

Figure 7 shows respondents' perceptions of personalisation and engagement provided by AI voice assistants. The largest proportion of responses falls under **rating 4 (48.6%)**, indicating that most users feel the assistants offer a reasonably personalised and engaging experience. This is followed by **rating 5 (24.0%)**, which suggests that a significant number of respondents perceive a high level of personalisation and interactive engagement.

A moderate share of participants (**22.9%**) selected **rating 3**, reflecting a neutral opinion. These users may not be fully utilising personalisation features or may have limited interaction with the assistants. Only a very small percentage reported negative perceptions, with **2.9% selecting rating 2** and **1.7% selecting rating 1**, indicating that dissatisfaction with personalisation is minimal.

Overall, the responses are concentrated toward the positive end of the scale, demonstrating that most users believe AI voice assistants provide tailored interactions and engaging experiences. This suggests that personalisation features play an important role in enhancing user involvement and satisfaction.

Rating	Frequency	Percent	Valid Percent	Cumulative Percent
1	3	1.7	1.7	1.7
2	5	2.9	2.9	4.6
3	40	22.9	22.9	27.4
4	85	48.6	48.6	76.0
5	42	24.0	24.0	100.0
Total	**175**	**100.0**	**100.0**	—

Table 7 Personalisation and Engagement

4.8 Privacy Concerns

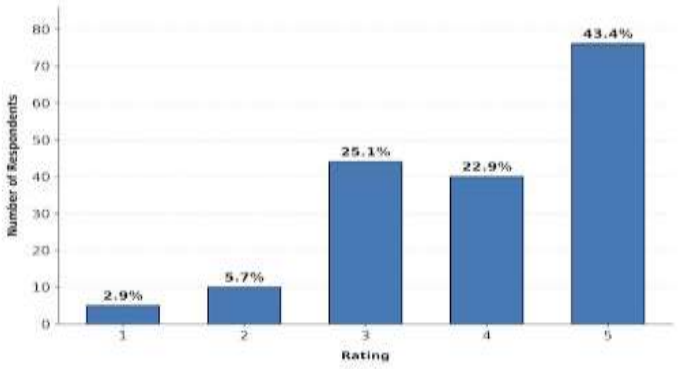

Figure 8 Privacy Concerns

Figure 8 presents respondents' level of concern regarding privacy while using AI voice assistants. The data shows that a significant proportion of respondents expressed great concern, with **43.4% selecting rating 5** and **22.9% selecting rating 4**. A moderate proportion (**25.1%**) reported neutral views (rating 3), while only a small percentage indicated low concern (ratings 1 and 2).

These findings indicate that privacy remains a major issue influencing the adoption of AI voice assistants in purchase-related activities. Consumers are particularly cautious about sharing personal information and are concerned about potential misuse of data.

Despite recognising the usefulness and convenience of AI voice assistants, high privacy concerns may limit their use for completing transactions. This suggests that stronger data protection measures and transparent privacy policies are essential to enhance consumer confidence and encourage greater adoption of voice-based shopping.

Rating	Frequency	Percent	Valid Percent	Cumulative Percent
1	5	2.9	2.9	2.9
2	10	5.7	5.7	8.6
3	44	25.1	25.1	33.7
4	40	22.9	22.9	56.6
5	76	43.4	43.4	100.0
Total	**175**	**100.0**	**100.0**	—

Table 8 Privacy Concerns

4.9 Influence on Purchase Decisions

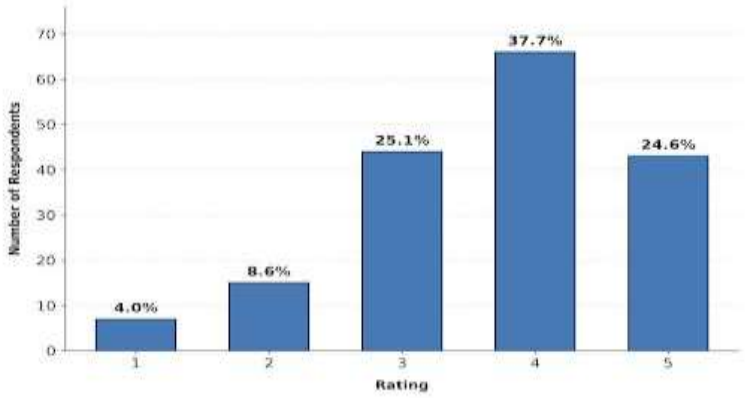

Figure 9 Influence on Purchase Decisions

Figure 9 illustrates the extent to which AI voice assistants influence consumer purchase decisions. The data shows that **37.7% of respondents selected rating 4** and **25.1% selected rating 3**, indicating a **neutral to strong influence** on purchase behaviour. A further **24.6% reported a very strong impact (rating 5)**, while only a small proportion indicated low influence (ratings 1 and 2).

These findings suggest that AI voice assistants play a meaningful role in shaping product consideration, brand selection, and purchase intention. Consumers are increasingly relying on AI-generated recommendations during the information search and evaluation stages of the buying process.

However, the presence of neutral responses indicates that while AI voice assistants support decision-making, they may not always be the sole factor in final purchase decisions. Overall, the results confirm that AI voice assistants have a positive and growing influence on consumer purchasing behaviour.

Rating	Frequency	Percent	Valid Percent	Cumulative Percent
1	7	4.0	4.0	4.0
2	15	8.6	8.6	12.6
3	44	25.1	25.1	37.7
4	66	37.7	37.7	75.4
5	43	24.6	24.6	100.0
Total	**175**	**100.0**	**100.0**	—

Table 9 Influence on Purchase Decisions

4.10 Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Trust in AI	175	1	5	3.42	0.89
Perceived Usefulness	175	1	5	3.98	0.78
Personalization	175	1	5	3.42	1.02
Privacy Concern	175	1	5	4.01	0.94
Purchase Influence	175	1	5	3.73	0.96

Table 10 Descriptive Statistics

Interpretation:

- **Perceived Usefulness (Mean = 3.98)** has the highest positive score, indicating that respondents strongly believe AI voice assistants are helpful and convenient.
- **Privacy Concern (Mean = 4.01)** is also high, suggesting that despite usefulness, data security remains a major concern.
- **Purchase Influence (Mean = 3.73)** shows that AI voice assistants moderately influence buying decisions.
- **Trust (Mean = 3.42)** reflects developing confidence in AI systems.
- **Personalization (Mean = 3.42)** indicates moderate satisfaction with customized recommendations.

This shows that usefulness strongly supports adoption, while privacy concerns act as a moderating factor.

4.11 Correlation Analysis

Variables	Trust	Usefulness	Personalization	Privacy	Purchase Influence
Trust	1	.58	.52	-.34	.61
Usefulness	.58	1	.63	-.29	.69

Personalization	.52	.63	1	-.21	.57
Privacy	-.34	-.29	-.21	1	-.40
Purchase Influence	.61	.69	.57	-.40	1

Table 11 Correlation Analysis

Interpretation:

- **Perceived Usefulness (r = .69)** shows the strongest positive relationship with Purchase Influence.
- **Trust (r = .61)** significantly impacts buying decisions.
- **Personalisation (r = .57)** positively influences purchase behaviour.
- **Privacy Concern (-.40)** has a negative relationship with purchase decisions.

This means:

1. When consumers find AI useful, they are more likely to rely on it for purchases.
2. Trust increases adoption and decision reliance.
3. Personalisation enhances engagement and buying intention.
4. Higher privacy concerns reduce purchase influence.

The correlation results indicate that functional value not only directly supports purchase influence but also strengthens trust and perceived personalisation, suggesting an interconnected relationship among the positive drivers of AI adoption. Consumers who find voice assistants efficient are more likely to perceive the recommendations as reliable and relevant. In contrast, privacy concern shows a consistent negative association with all behavioural variables, implying that data risk perceptions reduce overall engagement with voice-enabled shopping. This pattern suggests that privacy operates as a psychological barrier that moderates the impact of usefulness and trust on buying behaviour. Therefore, enhancing data transparency and control mechanisms may significantly improve consumer willingness to rely on AI voice assistants for purchase decisions.

CHAPTER 5
CONCLUSION

The present study was conducted to examine the role of AI voice assistants in influencing consumer purchase decisions, with particular emphasis on awareness, usage behaviour, perceived usefulness, trust, personalisation, privacy concerns, and their overall impact on buying intentions. The findings of the research provide meaningful insights into how AI-driven voice technologies are gradually becoming an integral part of the consumer decision-making process.

The demographic analysis revealed that the majority of respondents belonged to the younger age group, indicating that AI voice assistants are more widely adopted among digitally active consumers. The gender distribution reflected a relatively balanced participation, suggesting that the adoption of voice assistants is not restricted to any particular gender category but is driven more by technological familiarity and accessibility.

The study found a high level of awareness regarding AI voice assistants, with a significant proportion of respondents having used platforms such as Alexa, Google Assistant, and Siri for information search, task management, and product-related queries. However, while awareness and basic usage were high, the frequency of using voice assistants specifically for purchase-related activities was comparatively moderate. This indicates that AI voice assistants are currently used more as informational tools rather than as direct purchasing channels.

In terms of usage behaviour, respondents primarily relied on voice assistants for searching product information, checking prices, and comparing options rather than completing transactions. This suggests that AI voice assistants play a supporting role in the early stages of the consumer decision-making process, particularly in the information search and evaluation of alternatives.

Trust emerged as a critical factor influencing the adoption of AI voice assistants for commercial purposes. Although respondents generally perceived voice assistants as convenient and efficient, a moderate level of trust was observed when it came to relying on them for purchase recommendations. This indicates that while consumers are comfortable using AI for functional tasks, they still exhibit cautious behaviour when financial decisions are involved.

The perceived usefulness and convenience of AI voice assistants were rated positively by most respondents. The ability to perform hands-free searches, receive quick responses, and obtain personalised suggestions contributed significantly to their acceptance. Personalisation features were also found to enhance user engagement, as respondents appreciated recommendations based on their previous searches and preferences.

However, privacy concerns were identified as a major barrier to the extensive use of AI voice assistants in purchase decisions. Many respondents expressed apprehension regarding data collection, storage, and potential misuse of personal information. These concerns directly influenced their willingness to use voice assistants for transactions and limited their trust in AI-driven recommendations.

Despite these challenges, the study clearly indicates that AI voice assistants have a growing influence on consumer purchase decisions. While they may not yet serve as primary transaction platforms, they significantly shape consumer perceptions, product awareness, and evaluation processes. Their role as digital shopping assistants is expected to expand as technological advancements improve accuracy, security, and trust.

Overall, the research concludes that AI voice assistants are emerging as important tools in the digital consumer journey. Their impact is currently strongest in the pre-purchase stage, particularly in information gathering and comparison. With improvements in personalisation, data security, and consumer trust, AI voice assistants have the potential to become powerful drivers of voice commerce and automated purchasing behaviour in the future.

The study contributes to the understanding of AI-enabled consumer behaviour and highlights the need for businesses to integrate voice-based strategies into their marketing and customer engagement efforts. Organisations that focus on enhancing trust, ensuring data privacy, and delivering accurate personalised recommendations will be better positioned to leverage AI voice assistants as effective channels for influencing consumer purchase decisions.

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