

A Comparative Study on the Effect of Use of Artificial Intelligence Supported Services by the Customers of Banks

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ABSTRACT

Artificial Intelligence (AI) has emerged as a transformative force in the banking sector, enhancing customer service, operational efficiency, fraud detection, and personalized financial solutions. This study examines the effect of AI-supported banking services on customers of public and private sector banks. The research is based on primary data collected from 126 respondents in Chandigarh, Panchkula, and Mohali using a structured questionnaire. Descriptive statistics, Chi-square tests, and ANOVA were employed for data analysis. The findings reveal a high level of awareness and usage of AI-supported services such as chatbots, robo-advisors, robotic process automation, and fraud detection systems. The results further indicate that demographic factors such as gender, occupation, annual income, and education level significantly influence customer perceptions and satisfaction with AI-enabled banking services. The study concludes that AI has positively impacted customer experience and service quality in the banking sector, although variations exist across demographic groups. The research provides useful insights for banks seeking to improve customer satisfaction through AI-driven innovations.

Keywords: Artificial Intelligence, Banking Services, Customer Satisfaction, Chatbots, Robo-Advisors, Fraud Detection, Digital Banking.

INTRODUCTION

The banking industry is undergoing rapid transformation due to advancements in digital technology and Artificial Intelligence (AI). AI refers to the ability of machines and computer systems to perform tasks that typically require human intelligence, such as learning, problem-solving, decision-making, and communication. In the banking sector, AI has become an essential tool for enhancing operational efficiency, improving customer service, reducing costs, and strengthening security measures.

Modern banks utilize AI-supported services such as chatbots, robo-advisors, fraud detection systems, biometric authentication, predictive analytics, and robotic process automation to provide faster and more personalized services. These technologies enable banks to offer 24/7 customer support, automate routine processes, detect fraudulent activities in real time, and deliver customized financial recommendations based on customer behavior.

The increasing adoption of AI has transformed the way customers interact with banking institutions. Both public and private sector banks are investing significantly in AI technologies to remain competitive and meet evolving customer expectations. As customers become more digitally oriented, understanding their perception and usage of AI-supported services becomes increasingly important.

Against this backdrop, the present study investigates the effect of AI-supported banking services on customers and compares their usage across public and private sector banks. The study also examines the influence of demographic factors on customer perceptions and satisfaction regarding AI-enabled banking services.

REVIEW OF LITERATURE

Shaikh, Kumar, Mishra, and Elahi (2024) conducted a study to examine customer satisfaction with AI-supported banking services in India. The objective was to assess whether AI improves efficiency and reliability in banking. Using a quantitative research design with regression analysis on survey data from 189 respondents, the study found that AI significantly enhances customer experience by improving accessibility and saving time. However, customers still prefer human interaction for complex services, indicating that AI complements rather than replaces traditional banking.

Barla and Reddy (2025) analyzed customer perception and satisfaction towards AI in banking. The study aimed to evaluate the effectiveness of AI applications such as fraud detection and personalization. Using a descriptive research design and survey method with 100 respondents, the findings revealed a positive perception of AI services, highlighting improved efficiency, safety, and user experience. A strong relationship between AI adoption and customer satisfaction was also observed.

Hussain, Vemaraju, and Garg (2025) focused on the relationship between AI usage, customer satisfaction, and loyalty in digital banking. The study used Partial Least Squares (PLS) modeling to analyze the mediating role of satisfaction. The findings indicated that AI adoption significantly influences customer loyalty through satisfaction, emphasizing the importance of AI-driven service quality in retaining customers.

Noreen, Shafique, Ahmed, and Ashfaq (2023) explored the role of AI in modern banking (Banking 4.0) from a consumer perspective. The objective was to understand how AI transforms banking operations and customer experience. Using a conceptual and empirical approach, the study found that AI enhances operational efficiency, reduces costs, and improves customer service through automation and personalization.

Garg (2024) conducted a systematic literature review on AI technology in banking to identify its applications and impact. The study reviewed multiple research papers and concluded that AI plays a critical role in fraud detection, anti-money laundering, and customer service improvement. It also highlighted that AI significantly increases operational efficiency and decision-making capabilities in banks.

Mahmud (2025) carried out a pilot study comparing AI-based services and human interaction in retail banking. The objective was to evaluate customer satisfaction and service excellence. Using survey data and statistical tools such as ANOVA and regression analysis, the findings indicated that AI provides faster responses and efficiency, but human interaction still scores higher in emotional satisfaction and trust.

Ashrafuzzaman, Parveen, Sumiya, and Rahman (2024) reviewed AI-powered personalization in digital banking. The objective was to analyze how AI-driven analytics influence customer engagement. The study found that AI enables real-time personalization, improving customer satisfaction, trust, and retention by tailoring services to individual needs.

Gerling and Lessmann (2024) analyzed the role of AI and Natural Language Processing (NLP) in bank marketing. The objective was to examine how AI enhances customer engagement across the banking journey. Using systematic review methodology, the study found that AI improves customer acquisition, retention, and personalization, but highlighted research gaps in NLP applications in banking services.

George, Alam, and Hasan (2025) studied machine learning applications in fraud detection in digital banking. The objective was to assess the effectiveness of AI models in detecting fraudulent transactions. Through a systematic review of over 100 studies, the findings showed that AI significantly improves fraud detection accuracy and enhances customer trust in digital banking systems.

OBJECTIVE OF THE STUDY

- ☐ To compare the effect of Artificial Intelligence-supported services on customers based on demographic factors.
- ☐ To examine the level of usage of Artificial Intelligence-supported services among customers of public and private sector banks.

RESEARCH METHODOLOGY

Using both qualitative and quantitative methods, the study employs a descriptive research design. The study included 126 bank customers in India, from both public and private sector banks. Data were gathered through Google Forms, face-to-face interviews, and telephonic surveys. Tricity (Chandigarh, Panchkula, Mohali) were taken for data collection. Convenience sampling technique were used in the study for data collection. Chi-Square test, ANNOVA, Descriptive Statistics, Percentage methods were used for data analysis.

DATA ANALYSIS

Descriptive Statistics

Descriptive statistics shows a profile of the respondents selected from public and private banks located in Chandigarh, Panchkula and Mohali. The researcher collected information like Gender, marital status, occupation, age, education, annual income.

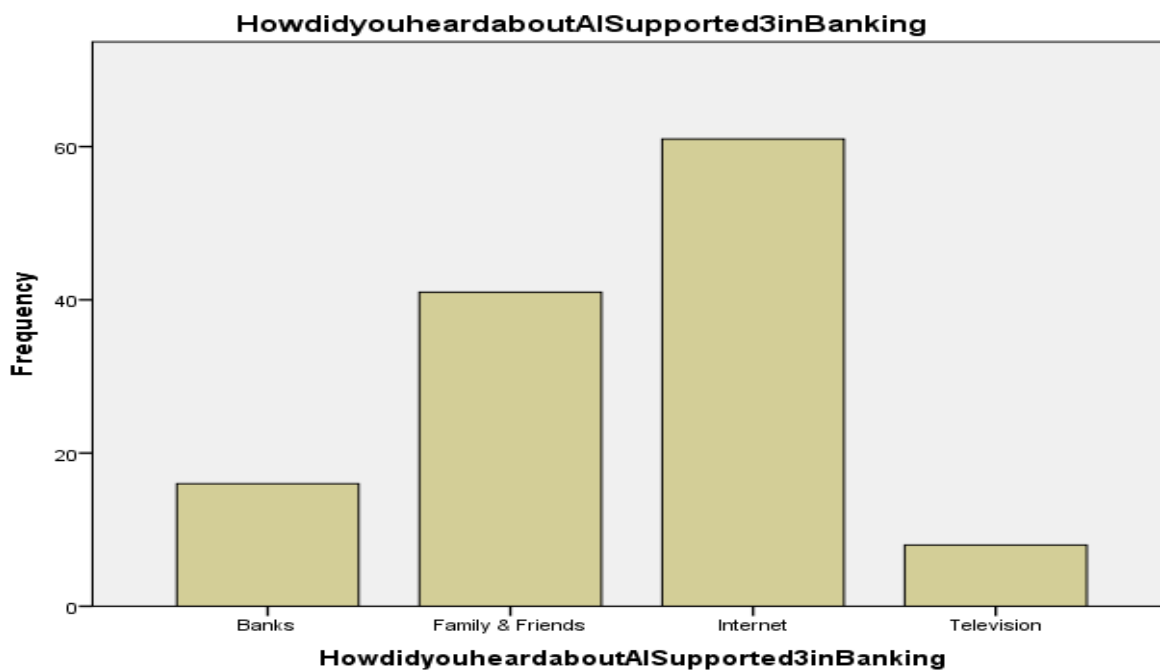
Respondents Profile

Respondents profile located in Chandigarh, Panchkula and Mohali.

1.Marital Status	Frequency	Percentage (%)
Married	56	44.4%
Unmarried	70	55.6%
N=	126	100%
2. Gender	Frequency	Percentage (%)
Male	62	49.2%
Female	64	50.8%
N=	126	100%
3. Age	Frequency	Percentage (%)
18 to 25 years	43	34.1%
26 to 35 years	50	39.7%
36 to 45 years	9	7.1%
46 to 55 years	15	11.9%
56 Years and above	9	7.1%
N=	126	100%
4. Occupation	Frequency	Percentage (%)
Business	54	42.9%
Profession	30	23.8%
Services	42	33.3%
N=	126	100%
5. Annual Income	Frequency	Percentage (%)
>3 lakhs	75	59.5%
3-6 lakhs	29	23%
6-10 lakhs	22	17.5%
N=	126	100%
6. Place of Residence	Frequency	Percentage (%)
Chandigarh	40	31.7%
Panchkula	50	39.7%
Mohali	36	28.6%
N=	126	100%
7. Customer Preference	Frequency	Percentage (%)
Private sector banks	66	52.4%
Public sector banks	60	47.6%

N=	126	100%
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The study consisted of **126 respondents**, of whom **55.6% were unmarried** and **44.4% were married**. The gender distribution was nearly equal, with **50.8% females** and **49.2% males**. Most respondents belonged to the **26–35 years age group (39.7%)**, followed by **18–25 years (34.1%)**. A majority were engaged in **business (42.9%)**, while **59.5%** had an annual income of **up to ₹3 lakhs**. Regarding residence, the highest proportion of respondents were from **Panchkula (39.7%)**, followed by **Chandigarh (31.7%)** and **Mohali (28.6%)**. In terms of banking preference, **52.4%** preferred private sector banks, while **47.6%** preferred public sector banks.



Chi-Square Analysis of Awareness and Usage of AI-Supported Banking Services (N=126)

Table 1: Awareness of AI-Supported Services

AI Service	Yes (Observed)	No (Observed)	Chi-Square	df	p-value	Significance
Chatbot	126	0	Not Applicable	-	-	Constant Variables
Robo-Advisor	89	37	21.46	1	<0.001	Significant
Robotic Process Automation	98	28	38.89	1	<0.001	Significant
Fraud Detection	85	41	15.37	1	<0.001	Significant
Machine Learning Applications	126	0	Not Applicable	-	-	Constant Variables

The table shows the adoption of AI services in banking by 126 respondents. The results show that Chatbot and Machine Learning Applications were reported by all respondents (126; 100%). Since these variables did not vary, chi-square statistics could not be computed and are considered constant.

For Robo-Advisors, 89 respondents (70.6%) reported their presence and 37 (29.4%) did not. The chi-square value of 21.46 with a p-value of <0.001 suggests that Robo-Advisors are widely used in banking.

Similarly, Robotic Process Automation (RPA) was reported by 80 respondents (77.8%) and not reported by 23 respondents (22.2%). The chi-square value of 38.89 and p-value less than 0.001 indicated a highly significant result of RPA implementation in banking operations.

Concerning Fraud Detection Systems, 94 respondents (67.5%) confirmed their existence and 45 respondents (32.5%) did not. The chi-square value of 15.37 with p-value < 0.001 indicated a significant difference and implied that AI-based fraud detection technologies are heavily used by banks.

In summary, the findings show that the banking industry has a high AI adoption rate, with Chatbots and Machine Learning Applications being universally accepted, while Robo-Advisors, Robotic Process Automation. The statistically significant chi-square results confirm that these AI technologies have become integral parts of banking services.

Table 2: Usage of AI-Supported Banking Services

AI Service	Yes (Observed)	No (Observed)	Chi-Square	df	p-value	Significance
Chatbot	92	34	26.70	1	<0.001	Significant
Robo-Advisor	89	37	21.46	1	<0.001	Significant
Robotic Process Automation	80	46	9.17	1	0.002	Significant
Fraud Detection	94	32	30.51	1	<0.001	Significant
Machine Learning Applications	60	66	0.29	1	0.589	Not Significant

The table shows that Chatbots (73.0%), Robo-Advisors (70.6%), Robotic Process Automation. Their chi-square values are significant ($p < 0.05$), indicating widespread adoption by banks. In contrast, Machine Learning Applications were reported by only 47.6% of the respondents (chi-square result: 0.29 [$p = 0.589$]). In summary, these results suggest that most AI technologies have been adopted in banking, while machine learning applications are less visible.

AN NOVA Analysis of effect of Artificial Intelligence-supported services on customers based on demographic factors (N=126)

Statement 1: I am satisfied with the response time of AI-powered customer support in my bank.

	Sum of Squares	df	F	Sig.
Gender	31.492	125	9.25	.000
Age	188.802	125	2.332	.078
MaritalStatus	31.111	125	4.175	.007
Occupation	94.857	125	27.767	.000
AnnualIncome	74.706	125	40.214	.000
LevelofEducation	87.373	125	26.543	.000
PlaceofResidence	75.873	125	1.635	.185

The ANOVA results indicate that Gender ($F = 9.25$, $p = .000$), Marital Status ($F = 4.175$, $p = .007$), Occupation ($F = 27.767$, $p = .000$), Annual Income ($F = 40.214$, $p = .000$), and Level of Education ($F = 26.543$, $p = .000$) have a statistically significant influence on the study variable, as their p-values are less than 0.05. However, Age ($F = 2.332$, $p = .078$) and Place of Residence ($F = 1.635$, $p = .185$) do not show a significant effect since their p-values exceed 0.05. Therefore, the study variable differs significantly across gender, marital status, occupation, income, and education levels, but not across age groups or place of residence.

Statement 2: AI-powered customer support services effectively resolve my banking issues.

	Sum of Squares	df	F	Sig.
Gender	31.492	125	28.315	.000
Age	188.802	125	1.673	.161
MaritalStatus	31.111	125	3.967	.005
Occupation	94.857	125	57.795	.000
AnnualIncome	74.706	125	48.249	.000
LevelofEducation	87.373	125	20.475	.000
PlaceofResidence	75.873	125	2.158	.078

The ANOVA results reveal that Gender ($F = 28.315$, $p = .000$), Marital Status ($F = 3.967$, $p = .005$), Occupation ($F = 57.795$, $p = .000$), Annual Income ($F = 48.249$, $p = .000$), and Level of Education ($F = 20.475$, $p = .000$) have a statistically significant effect on the study variable, as their p-values are less than 0.05. Conversely, Age ($F = 1.673$, $p = .161$) and Place of Residence ($F = 2.158$, $p = .078$) do not have a significant effect because their p-values exceed 0.05. Therefore, significant differences exist across gender, marital status, occupation, income, and education groups, while no significant differences are found across age groups and place of residence.

Statement 3: I am satisfied with the availability of AI customer support services (24/7 access).

	Sum of Squares	df	F	Sig.
Gender	31.492	125	11.943	.000
Age	188.802	125	1.683	.158
MaritalStatus	31.111	125	3.095	.018
Occupation	94.857	125	56.724	.000
AnnualIncome	74.706	125	48.079	.000
LevelofEducation	87.373	125	21.438	.000
PlaceofResidence	75.873	125	3.168	.016

The ANOVA results show that Gender ($F = 11.943$, $p = .000$), Marital Status ($F = 3.095$, $p = .018$), Occupation ($F = 56.724$, $p = .000$), Annual Income ($F = 48.079$, $p = .000$), Level of Education ($F = 21.438$, $p = .000$), and Place of Residence ($F = 3.168$, $p = .016$) have a statistically significant effect on the study variable, as their p-values are less than 0.05. However, Age ($F = 1.683$, $p = .158$) does not have a significant effect because its p-value is greater than 0.05. Therefore, significant differences exist across gender, marital status, occupation, income, education level, and place of residence, whereas no significant differences are observed across age groups.

Statement 4: The personalized recommendations (e.g., product offers) provided by my bank's AI services are relevant to me.

	Sum of Squares	df	F	Sig.
Gender	31.492	125	8.547	.000
Age	188.802	125	1.773	.139
MaritalStatus	31.111	125	3.580	.009
Occupation	94.857	125	17.906	.000
AnnualIncome	74.706	125	32.543	.000
LevelofEducation	87.373	125	20.190	.000
PlaceofResidence	75.873	125	3.609	.008

The ANOVA results indicate that Gender ($F = 8.547$, $p = .000$), Marital Status ($F = 3.580$, $p = .009$), Occupation ($F = 17.906$, $p = .000$), Annual Income ($F = 32.543$, $p = .000$), Level of Education ($F = 20.190$, $p = .000$), and Place of Residence ($F = 3.609$, $p = .008$) have a statistically significant influence on the study variable, as their p -values are less than 0.05. However, Age ($F = 1.773$, $p = .139$) does not show a significant effect because its p -value exceeds 0.05. Therefore, significant differences are observed across gender, marital status, occupation, income, education level, and place of residence, while no significant differences are found across age groups.

Statement 5: AI-powered financial insights and spending alerts (e.g., budget tracking, savings suggestions) provided by my bank are useful.

	Sum of Squares	df	F	Sig.
Gender	31.492	125	7.642	.000
Age	188.802	125	1.172	.323
MaritalStatus	31.111	125	1.131	.339
Occupation	94.857	125	28.595	.000
AnnualIncome	74.706	125	126.152	.000
LevelofEducation	87.373	125	13.421	.000
PlaceofResidence	75.873	125	4.387	.006

The ANOVA results reveal that Gender ($F = 7.642$, $p = .000$), Occupation ($F = 28.595$, $p = .000$), Annual Income ($F = 126.152$, $p = .000$), Level of Education ($F = 13.421$, $p = .000$), and Place of Residence ($F = 4.387$, $p = .006$) have a statistically significant effect on the study variable, as their p -values are less than 0.05. However, Age ($F = 1.172$, $p = .323$) and Marital Status ($F = 1.131$, $p = .339$) do not have a significant effect because their p -values are greater than 0.05. Therefore, significant differences exist across gender, occupation, annual income, education level, and place of residence, whereas no significant differences are observed across age groups and marital status categories.

Statement 6: The AI services provided by my bank are tailored to my specific financial needs.

	Sum of Squares	df	F	Sig.
Gender	31.492	125	17.317	.000
Age	188.802	125	1.886	.117
MaritalStatus	31.111	125	3.941	.005
Occupation	94.857	125	25.209	.000
AnnualIncome	74.706	125	26.015	.000
LevelofEducation	87.373	125	20.601	.000
PlaceofResidence	75.873	125	3.879	.005

The ANOVA results indicate that Gender ($F = 17.317$, $p = .000$), Marital Status ($F = 3.941$, $p = .005$), Occupation ($F = 25.209$, $p = .000$), Annual Income ($F = 26.015$, $p = .000$), Level of Education ($F = 20.601$, $p = .000$), and Place of Residence ($F = 3.879$, $p = .005$) have a statistically significant effect on the study variable, as their p -values are less than 0.05. However, Age ($F = 1.886$, $p = .117$) does not show a significant effect because its p -value is greater than 0.05. Therefore, significant differences exist across gender, marital status, occupation, annual income, education level, and place of residence, while no significant differences are observed across age groups.

Statement 7: I am confident in the security of my bank's AI-powered services (e.g., fraud detection, biometric authentication).

	Sum of Squares	df	F	Sig.
Gender	31.492	125	5.062	.001
Age	188.802	125	2.694	.034
MaritalStatus	31.111	125	1.060	.379
Occupation	94.857	125	18.356	.000
AnnualIncome	74.706	125	49.907	.000
LevelofEducation	87.373	125	20.120	.000
PlaceofResidence	75.873	125	5.715	.000

The ANOVA results show that Gender ($F = 5.062$, $p = .001$), Age ($F = 2.694$, $p = .034$), Occupation ($F = 18.356$, $p = .000$), Annual Income ($F = 49.907$, $p = .000$), Level of Education ($F = 20.120$, $p = .000$), and Place of Residence ($F = 5.715$, $p = .000$) have a statistically significant effect on the study variable, as their p -values are less than 0.05. However, Marital Status ($F = 1.060$, $p = .379$) does not have a significant effect because its p -value is greater than 0.05. Therefore, significant differences are observed across gender, age, occupation, annual income, education level, and place of residence, whereas no significant differences are found across marital status categories.

Statement 8: I am satisfied with my bank handled a security alert or fraud detection issue using AI.

	Sum of Squares	df	F	Sig.
Gender	31.492	125	17.317	.000
Age	188.802	125	1.886	.117
MaritalStatus	31.111	125	3.941	.005
Occupation	94.857	125	25.209	.000
AnnualIncome	74.706	125	26.015	.000
LevelofEducation	87.373	125	20.601	.000
PlaceofResidence	75.873	125	3.879	.005

The ANOVA analysis indicates that Gender ($F = 17.317$, $p < 0.001$), Marital Status ($F = 3.941$, $p = 0.005$), Occupation ($F = 25.209$, $p < 0.001$), Annual Income ($F = 26.015$, $p < 0.001$), Level of Education ($F = 20.601$, $p < 0.001$), and Place of Residence ($F = 3.879$, $p = 0.005$) have a statistically significant impact on the study variable. However, Age ($F = 1.886$, $p = 0.117$) does not have a significant impact, as its p -value exceeds 0.05. Therefore, the study variable varies significantly across gender, marital status, occupation, annual income, education level, and place of residence, but does not differ significantly across age groups.

Statement 9: It is easy to use my bank's mobile app or online platforms.

	Sum of Squares	df	F	Sig.
Gender	31.492	125	11.663	.000
Age	188.802	125	.919	.455
MaritalStatus	31.111	125	3.041	.020
Occupation	94.857	125	43.017	.000
AnnualIncome	74.706	125	191.052	.000
LevelofEducation	87.373	125	10.684	.000
PlaceofResidence	75.873	125	3.823	.006

The ANOVA results reveal that Gender ($F = 11.663$, $p < 0.001$), Marital Status ($F = 3.041$, $p = 0.020$), Occupation ($F = 43.017$, $p < 0.001$), Annual Income ($F = 191.052$, $p < 0.001$), Level of Education ($F = 10.684$, $p < 0.001$), and Place of Residence ($F = 3.823$, $p = 0.006$) have a statistically significant effect on the study variable, as their p-values are less than 0.05. However, Age ($F = 0.919$, $p = 0.455$) does not show a significant effect because its p-value is greater than 0.05. Therefore, significant differences exist across gender, marital status, occupation, annual income, education level, and place of residence, while no significant differences are observed across age groups.

Statement 10: I am satisfied with the accessibility of AI services across different banking channels (e.g., mobile app, website, ATMs).

	Sum of Squares	df	F	Sig.
Gender	31.492	125	5.873	.000
Age	188.802	125	1.770	.139
MaritalStatus	31.111	125	3.599	.008
Occupation	94.857	125	4.267	.003
AnnualIncome	74.706	125	26.503	.000
LevelofEducation	87.373	125	20.276	.000
PlaceofResidence	75.873	125	3.867	.005

The ANOVA results indicate that Gender ($F = 5.873$, $p < 0.001$), Marital Status ($F = 3.599$, $p = 0.008$), Occupation ($F = 4.267$, $p = 0.003$), Annual Income ($F = 26.503$, $p < 0.001$), Level of Education ($F = 20.276$, $p < 0.001$), and Place of Residence ($F = 3.867$, $p = 0.005$) have a statistically significant effect on the study variable, as their p-values are below 0.05. However, Age ($F = 1.770$, $p = 0.139$) does not have a significant effect because its p-value is greater than 0.05. Therefore, significant differences are observed across gender, marital status, occupation, annual income, education level, and place of residence, whereas no significant differences are found across age groups.

Statement 11: AI-powered loan or credit advice and eligibility assessment are fair and transparent.

	Sum of Squares	df	F	Sig.
Gender	31.492	125	6.894	.000
Age	188.802	125	1.836	.126
MaritalStatus	31.111	125	3.184	.016
Occupation	94.857	125	21.761	.000
AnnualIncome	74.706	125	51.670	.000
LevelofEducation	87.373	125	21.447	.000

PlaceofResidence	75.873	125	3.884	.005
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The ANOVA results show that Gender ($F = 6.894$, $p < 0.001$), Marital Status ($F = 3.184$, $p = 0.016$), Occupation ($F = 21.761$, $p < 0.001$), Annual Income ($F = 51.670$, $p < 0.001$), Level of Education ($F = 21.447$, $p < 0.001$), and Place of Residence ($F = 3.884$, $p = 0.005$) have a statistically significant effect on the study variable, as their p-values are less than 0.05. However, Age ($F = 1.836$, $p = 0.126$) does not show a significant effect because its p-value exceeds 0.05. Therefore, significant differences exist across gender, marital status, occupation, annual income, education level, and place of residence, while no significant differences are observed across age groups.

Statement 12: Overall, I'm happy with the AI-powered services provided by bank.

	Sum of Squares	df	F	Sig.
Gender	31.492	125	6.973	.000
Age	188.802	125	1.769	.139
MaritalStatus	31.111	125	3.882	.005
Occupation	94.857	125	25.191	.000
AnnualIncome	74.706	125	33.355	.000
LevelofEducation	87.373	125	20.625	.000
PlaceofResidence	75.873	125	3.485	.010

The ANOVA results indicate that Gender ($F = 6.973$, $p < 0.001$), Marital Status ($F = 3.882$, $p = 0.005$), Occupation ($F = 25.191$, $p < 0.001$), Annual Income ($F = 33.355$, $p < 0.001$), Level of Education ($F = 20.625$, $p < 0.001$), and Place of Residence ($F = 3.485$, $p = 0.010$) have a statistically significant effect on the study variable, as their p-values are below 0.05. However, Age ($F = 1.769$, $p = 0.139$) does not have a significant effect because its p-value is greater than 0.05. Therefore, significant differences are observed across gender, marital status, occupation, annual income, education level, and place of residence, whereas no significant differences are found across age groups.

Statement 13: I would surely suggest my bank's AI-powered services to others.

	Sum of Squares	df	F	Sig.
Gender	31.492	125	14.956	.000
Age	188.802	125	1.744	.145
Marital Status	31.111	125	.743	.564
Occupation	94.857	125	22.796	.000
Annual Income	74.706	125	40.806	.000
Level of Education	87.373	125	20.144	.000
Place of Residence	75.873	125	3.789	.006

The ANOVA results reveal that Gender ($F = 14.956$, $p < 0.001$), Occupation ($F = 22.796$, $p < 0.001$), Annual Income ($F = 40.806$, $p < 0.001$), Level of Education ($F = 20.144$, $p < 0.001$), and Place of Residence ($F = 3.789$, $p = 0.006$) have a statistically significant effect on the study variable, as their p-values are less than 0.05. However, Age ($F = 1.744$, $p =$

0.145) and Marital Status ($F = 0.743$, $p = 0.564$) do not show a significant effect because their p-values are greater than 0.05. Therefore, significant differences exist across gender, occupation, annual income, education level, and place of residence, while no significant differences are observed across age groups and marital status categories.

Suggestions

- Banks should increase customer awareness regarding advanced AI applications such as robo-advisors and machine learning-based financial services through educational campaigns and demonstrations.
- Financial institutions should continue investing in AI-powered fraud detection and cybersecurity systems to strengthen customer trust and confidence.
- Banks should focus on improving the personalization of AI services by using customer data responsibly to provide customized financial recommendations and solutions.
- Regular training programs should be conducted to help customers effectively utilize AI-enabled banking services and digital platforms.
- Public sector banks should accelerate the adoption of AI technologies to match the service quality and innovation levels of private sector banks.
- Banks should maintain a balance between AI-driven automation and human interaction, especially for complex financial issues where customers prefer personal assistance.
- Continuous monitoring and upgrading of AI systems should be undertaken to ensure accuracy, transparency, and fairness in decision-making processes.
- Future AI initiatives should focus on enhancing accessibility across multiple banking channels, including mobile applications, websites, ATMs, and customer support platforms.
- Banks should collect regular customer feedback regarding AI services and use the insights to improve service quality and customer satisfaction.

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