

“Guest Attitudes to the Use of Smart Technology in Hospitality- A Study on Bangladesh”

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ABSTRACT

It is thought that firms in the twenty-first century who do not adapt to the present technology revolution are more likely to experience a decline in their development. Industries all across the world have come to understand how important smart technology is to achieving ongoing growth and profitability. The globe has undergone significant changes and advancements in the previous ten years related to digitization. Artificial Intelligence, Robotics, and Service Automation are just a few of the smart technologies that have emerged as a result of the evolution and development of digitalization. These technologies have led the way to higher productivity, greater economy, greater efficiency, improved safety, and greater convenience. Understanding how customers feel about the adoption of artificial intelligence, robotics, and service automation in the hotel business is crucial at this point. The extended AIDUA Model was used in this study to survey the guests who will be using Artificial Intelligence, Robotics, and Service Automation services in the hotels to learn how they would and would not like to see in terms of the adoption of these technologies in hotel services of Bangladesh. The study concentrated on different smart technology methods that are applied globally in the hotel business. In a broader sense, automation might be seen as a physical replacement for human workers.

Keywords: Smart Technology, AIDUA Model, Hotel industry

INTRODUCTION

The cornerstone of the hospitality industry's offering has always been providing a fantastic guest experience. With the advent of technological innovation, what has changed is how and who provides this wonderful visitor experience. Technology has not only provided the industry with new tools to help guests receive better service, but it has also opened up the market to new intermediary platforms and aggregator sites that enable customers to avoid the hosting provider and shop around for their leisure needs. Non-traditional challengers like Airbnb have also entered the market. However, the use of smart technology and artificial intelligence (AI) is poised to further transform the face of the hospitality business as we move into a more advanced data-driven environment (Ivanov et al., 2017). By giving these businesses, a competitive edge over their rivals through service automation and taking advantage of information and communication technologies, smart technology raises their level of competitiveness (Gretzel et al., 2015). Specific goods and services that concretely improve tourist experiences by promoting greater connection, co-creation, and personalization are referred to as "smart technologies" (Gretzel et al., 2015). This definition is based on the concept of "smart tourism," a phenomenon that is firmly rooted in technology and depends on cloud computing, sensors, and the Global Positioning System (GPS), as well as the widespread use of artificial intelligence, virtual reality, and augmented reality, as well as the full adoption of social media and mobile technologies. The intelligent hotel business is currently developing algorithms that computers and robots may learn to use as decision-support systems to supplement or augment human intelligence and carry out human duties. This is a sort of skill transfer. In addition to helping to provide more precise insights into guests' needs, the use of robust computer systems and algorithms that can mine and analyze enormous amounts of data can also be used to predict seasonal activity, allowing for more precise service provision, as well as train machines to carry out simple tasks. In particular, the hotel sector is demonstrating that it is a fruitful field for such AI innovation. AI is being used more frequently and extensively in everyday items, including TVs, smart TVs, smart boxes, refrigerators, and other home appliances. After adjusting the temperature, the smart refrigerator can also suggest recipes, and food

components, and even use its touch screen to make ingredient purchases (Lee, 2018). The most popular item on the website is Amazon's Echo Dot smart speaker, which was the greatest Christmas present of 2017. While learning the preferences of user use and searching, AI TV can handle voice commands and suggest shows automatically, enabling more accurate interaction. From smart rooms that are better suited to guests' needs to AI-powered chatbots and robot concierges made to offer guests a more seamless check-in experience, real-time pricing, or respond to questions about nearby dining and sightseeing options, these innovations help free up human staff for more complex guest-related tasks and requirements (Hill et al., 2015).

Bangladesh hospitality having 85 Three-star hotels, 27 Four-star hotels, 17 Five-star hotels, and many budget hotels is vibrant, competitive, and prone to volatility (EJBM, Online-www.iiste.org). A good number of the rooms currently available in Bangladesh, especially in Dhaka are in the upper middle to upmarket price range, in establishments like the Radisson Blu, Le Meridien, Westin, Pan Pacific, Four Points by Sheraton, Ruposhi Bangla, and the recently opened Renaissance Dhaka. Over the following five years, a supply of 2,600 rooms has been envisaged (The Dark Horse, HVS.com). However, this hospitality sector has only recently begun to adopt smart technology. The hospitality industry in Bangladesh is vibrant, competitive, and prone to volatility. Customer awareness and expectations have therefore increased as a result. In line with these advancements, the hospitality industry in Bangladesh is gradually using AI and smart technology to provide better client experiences. Notwithstanding the advantages of AI, it is likely that if the shift is made without a good grasp of what encourages customers' willingness to accept AI; it will cause unprecedented amounts of disruption in the industry. This study thus addresses the growing calls for research into the variables influencing the adoption of AI in the context of the Bangladeshi hotel industry. As a result, this would make it easier to develop reliable processes that increase and facilitate Bangladesh hotel customers' readiness to employ AI-based smart technology.

Objectives of the Study:

The aim of the study is to test and validate the AIDUA model in the hospitality context and integrate the trust factor as an appraisal for finding key antecedents of consumer attitude toward AI device use in hospitality service delivery. The specific objectives of this study are:

1. To examine the consumer perception towards the uses of artificial intelligence devices in hospitality service delivery;
2. To identify the consumer's willingness to accept or decline the use of AI devices in hospitality service areas;
3. To validate the artificial intelligence device use acceptance (AIDUA) model in the Bangladesh hospitality context.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT:

According to studies (Cronan et al., 2018), people's actual behaviors are typically determined by their intentions. Understanding the variables that affect guests' goals and attitudes, however, is a difficult procedure. The elements that can affect a customer's desire to adopt new technology have been highlighted in the previous studies that looked at the guest's willingness to adapt to smart technology (AI-enabled) in service delivery, Examples include perceived usefulness and usability (Ozturk et al., 2016; Wang et al., 2018), social influence and cognitive process (Venkatesh and Davis, 2000a; Venkatesh and Davis, 2000b), prior experiences (Morgan-Thomas and Veloutsou, 2013), and hedonic motivations (Venkatesh et al., 2012).

While many of the variables considered in technology adoption models can also be used to predict how likely customers are to use smart technology (AI-enabled), According to Lu et al. (2019), because these characteristics concentrate on how consumers learn about new technologies, several of the fundamental notions of technology acceptance models, such as perceived usefulness and ease of use, may not be appropriate to the setting of AI device usage intention. In the context of using smart technology, customers are likely to focus on whether a product can deliver the same quality of service as human workers, if not better. Lu et al. (2019) identified six key drivers of consumers' propensity to incorporate AI-enabled technology into service

delivery through a series of qualitative and quantitative studies: performance effectiveness, hedonistic motivation, anthropomorphism, social influence, trust, and emotion (Lu et al., 2019).

Drawing upon the previous discussion on variables and hypothesis framing, we propose the following extended AIDUA framework. The validation of this model would be useful in understanding consumers' attitudes towards smart technology adoption in Bangladesh. Actual use of smart technology will be assessed through behavioral intentions to adopt it. Lazarus' (1991a) cognitive-motivation-emotion framework is used in the current investigation. Adopting Lazarus' paradigm, the current study suggests that a three-step approach, which includes the primary appraisal, secondary appraisal, and outcome stage, can be used to gauge a customer's willingness to accept the use of smart technology (AI-enabled).

Primary appraisal

Consumers will first assess the applicability and compatibility of AI gadgets themselves before deciding whether to integrate those into their service delivery process (Lazarus, 1991b). Based on the research of Lu et al. (2019), the suggested AIDUA (Artificial Intelligence Devices Uses of Acceptance) model identifies three elements as crucial characteristics that can affect consumers' initial assessments of AI devices.

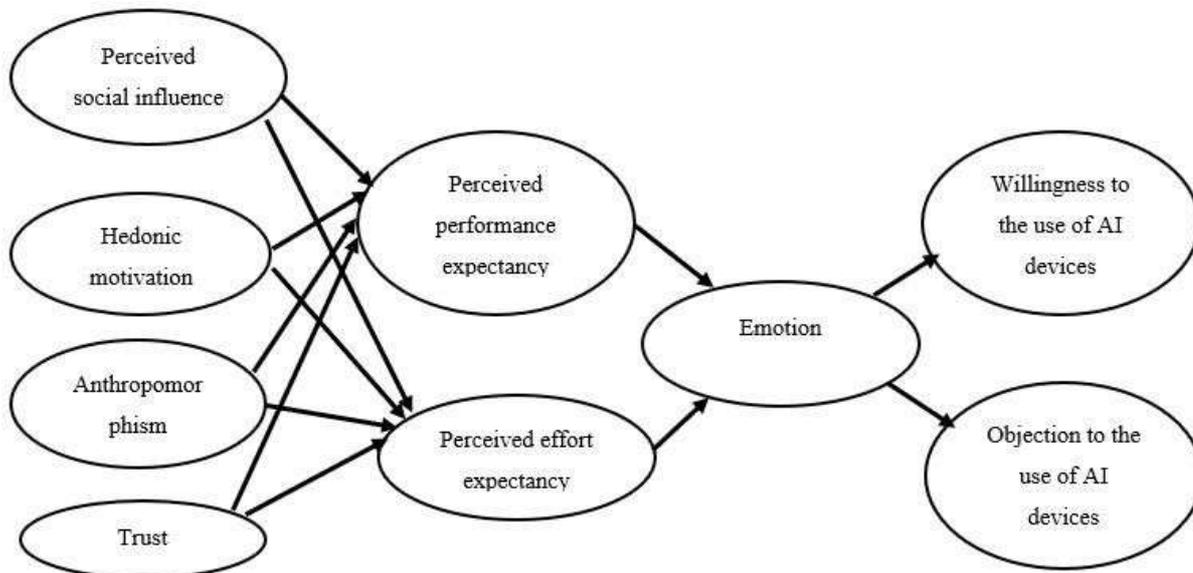


Figure 1.1: Modified AIDUA Model

They are social influence (Chou et al., 2015; Venkatesh et al., 2012), hedonic motivation (Allam et al., 2019; Venkatesh et al., 2012), and anthropomorphism (van Doorn et al., 2017; Lu et al., 2019). Consumers' assessments of the employment of AI devices in service delivery during the initial evaluation phase are dependent on their level of anthropomorphism, hedonistic motivation, and social group norms. They are likely to proceed to the second stage of evaluation, where they will conduct a deliberate appraisal of the costs and benefits of using AI devices if their initial assessment shows that the use of AI devices in service delivery is pertinent, consistent with their norms, and compatible with their social networks. (Lazarus, 1991a).

Social influence:

The level to which a customer's social circle (such as family, friends, etc.) considers the use of AI devices in service delivery to be appropriate and consistent with group norms is referred to as social influence. For instance, according to Gursoy et al. (2017), family and friends are one of the most important sources of information when a consumer is making a decision. Due to hotel Given the diversity and intangibility of hospitality services (Gursoy et al., 2018) and the fact that hospitality clients are unfamiliar with AI devices, the industry may lack the knowledge and judgment necessary to determine whether utilizing AI service devices is appropriate (Lu et al., 2019). Therefore, employing AI devices will enhance a visitor's social identity if their social network (such as friends, coworkers, and family members) has good ideas and attitudes toward the use

of AI devices in service delivery. The following theory was created based on the previous theoretical and empirical discussions:

H1: Social influence is positively related to the performance expectancy of smart technology devices.

The concept of effort expectation, which refers to how users perceive the difficulty of utilizing AI technologies, is another aspect of guest attitude. Social norms are hypothesized to affect effort expectancy based on Lazarus' paradigm. The likelihood that a guest will consider an AI gadget to be difficult to use decreases if the guest's social groups have favorable impressions of the AI device and think it is simple to use. Accordingly, based on the preceding theoretical and empirical discussions from the literature, the following hypothesis is proposed:

H 2: Social influence is negatively related to the effort expectancy of smart technology devices.

Hedonic motivation:

When applying AI in service delivery, an individual expects to feel delight or enjoyment. This is known as hedonic motivation. When a visitor has a hedonic drive for AI gadgets, using AI will help the client by gratifying his or her interest or demand for novelty and enjoyment (Fryer et al., 2017). Therefore, users of AI gadgets who have hedonic motives are more likely to have favorable sentiments toward utilizing them. Accordingly, the following hypothesis is proposed:

H 3: Hedonic motivation is positively related to the perceived performance expectancy of smart technology devices.

Studies have confirmed a link between task-related motivation and perceived difficulty and effort expectations (Capa et al., 2008; Wright and Kirby, 2001). We generalize from the discussion above to suggest that highly motivated consumers are less likely to believe that using AI gadgets to execute activities is challenging. Thus, the following hypothesis is proposed:

H 4: Hedonic motivation is negatively related to the perceived effort expectancy of smart technology devices.

Anthropomorphism

Anthropomorphism is the term for these human-like characteristics of a product (Kim and McGill, 2018). Consumers' initial assessment of self-relevance and whether the design of an AI device is consistent with their preexisting views about the technology employed for service interactions are immediately triggered by the physical and intellectual presence of AI devices. Since human-like features of AI devices can pose a threat to customers' human identity (Ackerman, 2016; Gursoy, 2019), Customers may try to rationalize their opposition by reasoning that these AI products won't likely deliver on their promises.

H 5: Anthropomorphism is negatively related to the perceived performance expectancy of smart technology devices.

The identity of being a humanoid suggests effort coming from two sources: the effort required to interact with a real human and the effort needed to learn a technological device. As a result, human traits might alter how consumers perceive the effort needed to use AI products (e.g., effort related to interacting with humans and machines).

H 6: Anthropomorphism is positively related to the perceived effort expectancy of smart technology devices.

Trust:

Trust is one of the important antecedents of consumers' decision-making process when it comes to evaluating the usage of AI devices in hospitality service delivery (Chi et al., 2020). In the context of hospitality service, trust enhances consumers' perceived performance expectancy and influences overall consumer attitude to choose AI devices during service delivery. Hence, humanoid AI devices are likely to benefit the initial trust

formation (Omrani et al., 2022). Prior research investigates the effect of trust on customer attitude during voice-based technology usage (Pal et al., 2022). Consumers' attitudes are influenced by trust within two contexts such as trust in humanoid technology and trust in the social context (Chi et al., 2020). Thus, trust works as a primary appraisal in developing the performance expectancy of the consumer in the context of hospitality services. For this reason, perceived performance is positively influenced by the trust factor. Hence, hypothesis 7 can be posited from the above discussion:

H7: performance expectancy of AI devices is significantly influenced by trust.

People who are new to using AI devices and have no proper knowledge about AI device systems may create potential misuse of this device which will decrease trust in AI (Hasan et al., 2020). Thus, perceived risk initiates perceived difficulty or effort expectancy. As a result, when trust forms based on several attributes of the object, perceived risk will be demolished, and are less likely to effort expectancy needed for using this object. Based on this discussion, hypothesis 8 can be developed as:

H8: the effort expectancy of AI devices is significantly influenced by trust

Secondary appraisal

Performance, effort expectancy, and Emotion

During the secondary appraisal stage, individuals mainly consider the options and results of each decision in terms of emotions. Customers will assess the costs and benefits of using AI devices in service delivery based on perceived performance and effort expectations when determining their willingness to accept their use in a setting (Venkatesh et al., 2012) of AI devices, and then shape their feelings toward the employment of AI devices for service delivery. The secondary appraisal process will result in the deliberate assessment of the costs and benefits of utilizing AI devices, which will lead to the development of emotion toward the use of AI devices in service delivery. If users of AI devices think that using them will benefit them by offering swift, accurate, precise, and consistent services (Lu et al., 2019; West et al., 2018), and thus result in improved service quality (e.g., high-performance expectancy), positive emotions will be generated.

H 9: Performance expectancy has a positive impact on the generation of positive emotions toward the use of smart technology devices.

There may be considerable communication barriers between clients and AI devices as a result of the employment of AI devices in service delivery (Lu et al., 2019) or require more cognition to understand the confusing and complex design of AI devices (Thompson et al., 1991), which may increase the amount of effort required. Customers would therefore feel uneasy and lose trust if they think using AI products will be too difficult (Lazarus, 1991b).

H 10: Effort expectancy harms the generation of positive emotions toward the use of smart technology devices.

Outcome stage

After the complex appraisal process, the development of emotions toward the usage of AI devices will affect the customer's readiness to accept the use of AI devices and/or objection to their use during service interactions. Positive emotions like eagerness, satisfaction, delight, and surprise have been shown to affect consumption-related behaviors. (Watson and Spence, 2007). Customers with these good emotions for AI devices will be more willing to accept their use during the service delivery process, according to the Cognitive Appraisal Theory. Accordingly, the following hypothesis is proposed:

H 11: Emotion is positively related to a guest's willingness to accept the use of smart technology devices during service delivery.

When making decisions with AI technology, emotions may be present that are not always good. These include dissatisfaction, fear, feelings of uncertainty and anxiety, and worry (Raghunathan and Pham, 1999; Rucker and

Petty, 2004). According to the Cognitive Appraisal Theory's hypothesis, these feelings are likely to cause consumers to reject particular goods or services. Based on the preceding theoretical and empirical evidence, the following hypothesis is proposed:

H 12: Emotion is negatively related to a guest's objection to accepting the use of smart technology devices during service delivery.

METHODOLOGY

Research Design, Sample and Data Collection

The present study is based on a descriptive and explanatory design. This research study is quantitative, with objectives focused on the experiences and attitudes of guests towards the adoption of SMART technologies in the hospitality industry in Bangladesh. To collect information conveniently from the 100 guests who have stayed at star hotels in Bangladesh, a structured questionnaire was designed. With a survey tool, the study was able to collect these constructs at the individual level from hotel customers and guests. The study contacted 14 luxury hotels in Bangladesh for this purpose, including the Westin Dhaka, Radisson Blu Water Garden Hotel, Dhaka Regency Hotel & Resort, Hotel Sarina, Hotel Orchard Plaza, Best Western La Vinci, Lake Shore Hotel & Apartments, Platinum Suites, Royal Park Residence, and Ascott the Residence, etc.

The 110 visitors who had already stayed at and visited hotels provided the primary data for this study, which also included secondary data. Ten of the questionnaires were rejected because they were unfinished. However, data from 100 questionnaires was analyzed. The gathering of the data took six months. The secondary data mainly consists of data and information collected from records, websites, and published materials. Secondary data was also collected from journals, magazines, and books.

Questionnaire Design and Scaling Technique

There are two sections to the questionnaire. Data on the respondents' age, gender, average yearly family income, marital status, and how frequently they visited high-end hotels were all gathered in the first section of the questionnaire. There are six questions in Part One with the main focus on the socio-demographic characteristics (Gender, Age, Education, Income, etc.) of the guests. Part two of the survey includes 36 questions to gauge customer attitudes toward smart technology, and these 36 statements of the questionnaire are divided into 9 constructs of the smart technology that is developed following the AIDUA Model.

Questionnaire:

Part 2: Intention or Objection to the use of Smart Technology

A. Perceived social influence

1. Using Smart technology enhances my social status with people in my social network (For example, family, friends, and colleagues).
2. People who are utilizing Smart Technologies have a high profile in society.
3. People who are influencing my decisions, motivated me to utilize Smart Technologies during service transactions.
4. I will suggest Smart Technologies that I utilized to people in my social network.
5. People who are using AI-based hospitality services have more prestige than others.
6. I will prefer Smart Technologies to traditional technologies during hospitality services transactions.

B. Hedonic Motivation

1. Interacting with Smart Technologies is enjoyable.
 2. I have fun using Smart Technologies in hospitality services transactions.
 3. Smart Technologies have more fun than traditional devices.
 4. I feel that Smart Technologies are more realistic.
 5. AI device utilization in services is more pleasant.
- C. Anthropomorphism (humanoid characteristics)
1. Smart Technologies have an artificial cognition system which is a like real mind.
 2. Smart Technologies work based on their own free will.
 3. Smart Technologies have experience emotion and implied it in work.
 4. Smart Technologies work as if they have consciousness.
- D. Trust
1. The device performs the task with the expected privacy.
 2. I feel confident while using the Smart technology.
 3. The uses of the smart devices are trustworthy.
- E. Performance expectancy
1. Using Smart Technologies ensures more accuracy than a human being.
 2. Smart Technologies have more consistency than traditional technology.
 3. Smart Technologies perform more accurately than humans and traditional technology.
 4. Smart Technologies are more dependable than human beings.
- F. Perceived effort expectancy
1. Interactions with Smart Technologies are difficult to understand.
 2. Smart Technologies are intimidating to me.
 3. It will take too much time to use Smart Technologies.
- G. Emotion
1. Using Smart Technologies feel like: Melancholic/Contented.
 2. Using Smart Technologies feel like: Bored-relaxed.
 3. Using Smart Technologies feel like: unsatisfied-satisfied.
 4. Using Smart Technologies feel like: despairing-hopeful.
 5. Using Smart Technologies feel like: annoyed- enjoyable.
-

H. Willingness to the use of Smart Technologies

1. I am willing to use Smart Technologies during services transaction.
2. Interaction with Smart Technologies will make me happy.
3. I will happily accept Smart Technologies.

I. Objection to the use of Smart Technologies

1. Smart Technologies work in a less humanize manner.
2. I will prefer humans during services transaction.
3. Interacting with Smart Technologies lacks emotional contact.

The guests' level of perception and level of satisfaction were gauged using a five-step "Likert" scale. The respondents' replies were divided into five groups and weighted from 1 to 5, with 1 being allocated for "strongly disagree," 2 for "disagree," 3 for "neutrals," 4 for "agree," and 5 for "strongly agree." If someone strongly agrees with a statement, it means they are really happy with that particular criterion. On the other hand, if someone strongly disagrees with a certain statement, it means they don't agree with that criterion and have a bad attitude about it.

Data Analysis

A descriptive analysis is performed on the survey data. The data and information were utilized to investigate the cooperation primary data using SPSS. The data from the first phase of the investigation were processed and presented as percentages in this study. This study was then used to analyze the frequency of the demographic factors and the descriptive analysis of the attitudinal statements of hotel consumers obtained in Part Two. To determine the outcome, the researcher analyzed the collected data. Various kinds of statistical models have been used to analyze the collected data. The researcher employed both correlation and regression analysis. In addition, the researcher used the ANOVA and T-test to test Hypotheses.

DATA ANALYSIS AND DISCUSSION

Introduction

For the sake of determining the results of the research, the study presents analyses and discuss the data that was collected from primary sources. The study has used various types of statistical methods – Regression analysis, correlation analysis, ANOVA, and graphical analysis to discuss the results. The analyzed results are deliberated following two sections: one is demographics and another is data interpretation.

Data Presentation of Section-A (Demographic profile of the respondent)

Table 4.1: Frequency of respondents' gender status (source: Survey)

Gender					
		Frequency	Percent	Valid Percent	CumulativePercent
Valid	Male	61	61.0	61.0	61.0
	Female	39	39.0	39.0	100.0
	Total	100	100.0	100.0	

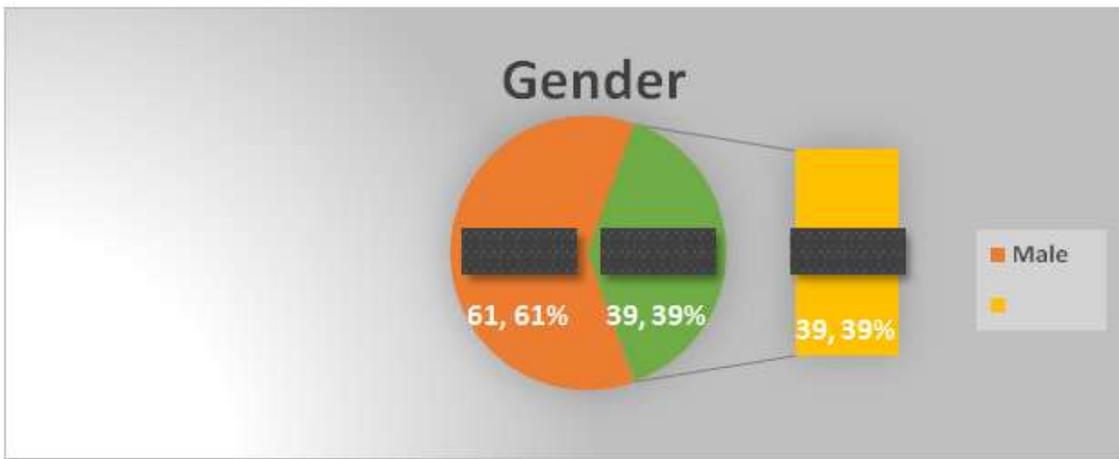


Figure 4.1: Pie Chart of Gender Status of Respondents (source Survey)

Gender: The above chart and table demonstrate that in this research from 100 respondents- 61% of the respondents are male and 39% of the respondents are female.

Table 4.2: Frequency of respondents' Age group status (source: Survey)

		Age			
		Frequency	Percent	Valid Percent	CumulativePercent
Valid	20-30	42	42.0	42.0	42.0
	30-40	45	45.0	45.0	87.0
	40-50	7	7.0	7.0	94.0
	50-Above	6	6.0	6.0	100.0
	Total	100	100.0	100.0	

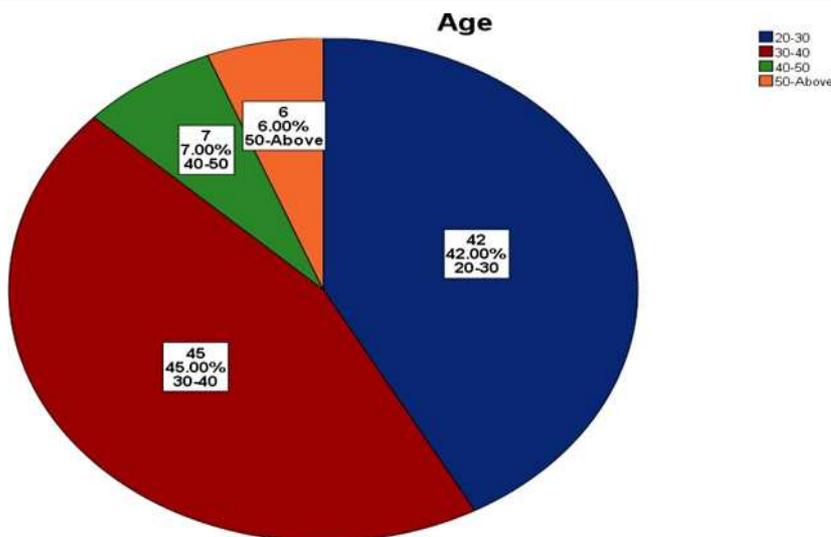


Figure 4.2: Pie chart of Age group status of respondents (Source: Survey)

Age: The above chart explores that, 42% of the respondents are 20-30 age group, 45% of the respondents are 30-40 age group, 7% of the respondents are 40-50 group, and 6% of the respondents are 50-Above.

Table 4.3: Frequency of respondents' marital status (source: Survey)

Marital status					
		Frequency	Percent	Valid Percent	CumulativePercent
Valid	single	60	60.0	60.0	60.0
	Married	39	39.0	39.0	99.0
	others	1	1.0	1.0	100.0
	Total	100	100.0	100.0	



Figure 4.3: Pie chart of marital status of respondents (Source: Survey)

Marital Status: The above chart shows that 60% of the respondents are single, 39% of the respondents are married, and 1% are other.

Table 4.4: Frequency of respondents Occupation status (source: Survey)

Occupation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	29	29.0	29.0	29.0
	Government Employee	33	33.0	33.0	62.0
	Private Service	21	21.0	21.0	83.0
	Home Maker	5	5.0	5.0	88.0
	Business Person	10	10.0	10.0	98.0
	Other Professionals	2	2.0	2.0	100.0
	Total	100	100.0	100.0	

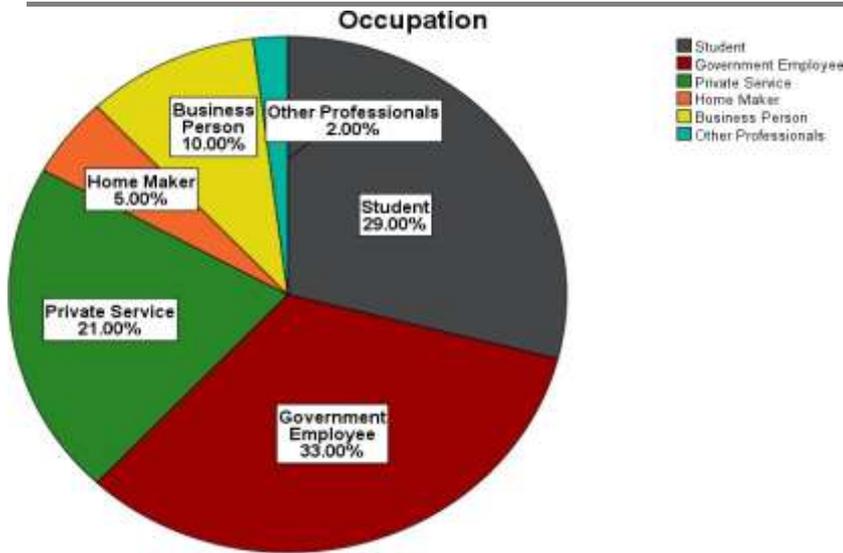


Figure 4.4: Pie chart of occupation status of respondents (Source: Survey)

Occupation: The above chart demonstrates that 29% of the respondents are students, 33% of the respondents are government employees, 21% of the respondents are private service holders, 5% of the respondents are homemakers, 10% of the respondents are business person and 2% are other professionals.

Table 4.5: Frequency of respondents Education level status (source: Survey)

Education					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary level	1	1.0	1.0	1.0
	Higher secondary level	30	30.0	30.0	31.0
	university level	67	67.0	67.0	98.0
	others	2	2.0	2.0	100.0
	Total	100	100.0	100.0	

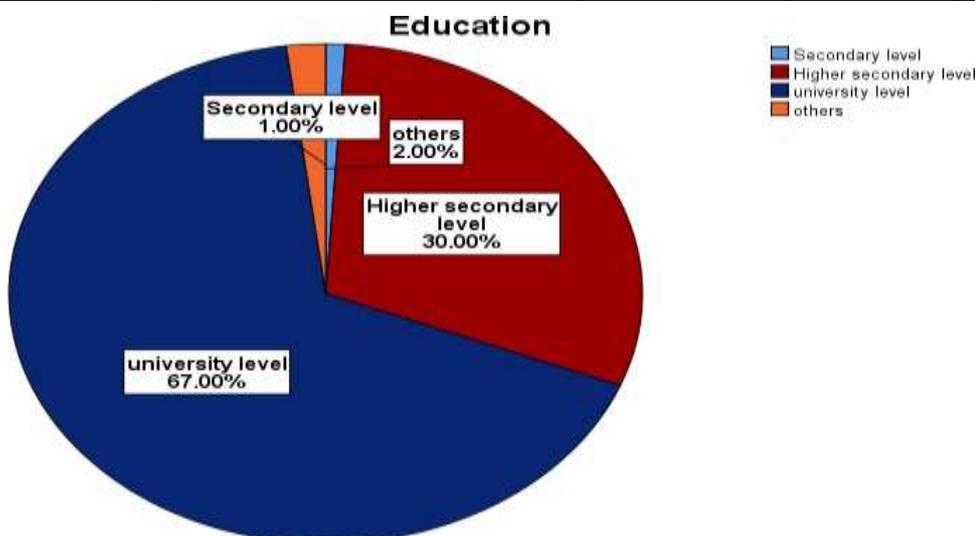


Figure 4.5: Pie chart of education level status of respondents (Source: Survey)

Education: the above chart demonstrates that 1% of the respondents are respondents at the secondary level, 30% of the respondents are respondents at the higher secondary level, 67% of the respondents are at the university level, and 2% are responses at other level.

Table 4.6: Frequency of respondents' income status (source: Survey)

		Income			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 20,000	28	28.0	28.0	28.0
	20,000- 39,999	30	30.0	30.0	58.0
	40,000-59,999	20	20.0	20.0	78.0
	60,000-79,000	22	22.0	22.0	100.0
	Total	100	100.0	100.0	

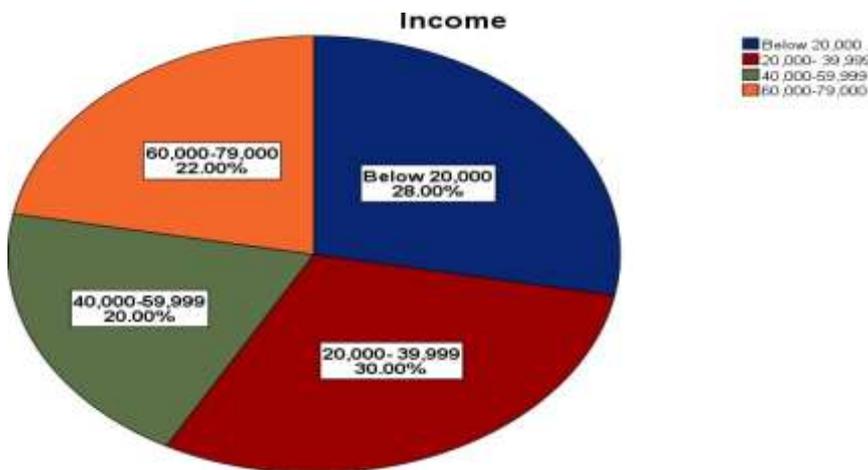


Figure 4.6: Pie chart of income status of respondents (Source: Survey)

Income: the above chart shows that 28% of the respondents belong to below 20000 level, 30% of the respondents are respondents in 20000-39000 level, 20% of the respondents are belong in 40000-59000, and 22% are responses in 60000-79000 income level.

Data Analysis of Section-B (Correlation, Regression, and Hypotheses Testing)

With a view to the table-4.7 demonstrates that the Pearson correlation (r) is .735. The result implies a positive and strong relationship between perceived social influence and willingness to use AI devices, which means that consumers' social networks significantly influence willingness to use AI devices during hospitality service encounters, i.e., as the social group's belief, norm, and behavior.

As per the above table-, the result of the second variable's Pearson correlation (r) is .916. The result demonstrates a very strong and significant relationship between hedonic motivation and willingness to use AI devices which means hedonic motivation is one of the key antecedents of consumers' attitudes toward evaluating AI devices during hospitality service encounters.

However, the Pearson correlation (r) is .804 depicts that, a perfect positive and strong relationship between anthropomorphism and willingness to use AI devices, which explores that anthropomorphism significantly influences consumers' attitudes toward choosing AI devices.

Whereas, the analyzed result explored the Pearson correlation (r) is .811 which implies a perfect positive and strong relationship between trust and willingness to use AI devices, which explores that trust works as an important antecedent of consumers' attitude toward choosing AI devices.

The Pearson correlation (r) is .839. The result expresses a perfectly positive and strong relationship between perceived performance expectancy and willingness to use AI devices, i.e., consumers expect consistency, accuracy, timeliness, and dependable service from AI devices in hospitality service encounters. Since the Pearson correlation (r) is .812 the result depicts a positive and strong relationship between perceived effort expectancy and willingness to use AI devices, which means that consumers prefer easy and useful AI device encounters.

Table 4.7: Result of correlation analysis

Result of Correlation Analysis		
Variables	r	Strength of Association
Perceived Social Influence and Willingness to The Use of AI Devices	.735 ^a	Strong
Hedonic Motivation and Willingness to The Use of AI Devices	.916 ^a	Very Strong
Anthropomorphism and Willingness to The Use of AI Devices	.804 ^a	Very strong
Trust and Willingness to The Use of AI Devices	.811 ^a	Very Strong
Perceived Performance Expectancy and Willingness to The Use of AI Devices	.839 ^a	Very Strong
Perceived Effort Expectancy and Willingness to The Use of AI Devices	.812 ^a	Very Strong
Emotion and Willingness to The Use of AI Devices	.914 ^a	Very Strong
Perceived Social Influence and Objection to The Use of AI Devices	.276 ^a	Poor
Hedonic Motivation and Objection to The Use of AI Devices	.718 ^a	Strong
Anthropomorphism and Objection to The Use of AI Devices	.431 ^a	Moderate
Trust and Objection to The Use of AI Devices	.456 ^a	Moderate
Perceived Performance Expectancy and Objection to The Use of AI Devices	.686 ^a	Strong
Perceived Effort Expectancy and Objection to The Use of AI Devices	.457 ^a	Moderate
Emotion and Objection to The Use of AI Devices	.715 ^a	Strong

Whereas the Pearson correlation (r) is .914. The result implies a very strong and significant relationship between emotion and willingness to use AI devices, i.e., consumers feel satisfied, happy, and relaxed from using AI devices in hospitality service encounters.

Hence, table- demonstrates that the Pearson correlation (r) is .276, .718, 431, .456, .686, .457, and .715. The

result implies a poor, moderate, and strong relationship between perceived social influence, hedonic motivation, anthropomorphism, trust, perceived performance expectancy, perceived effort expectancy, emotion, and objection to the use of AI devices, which means that consumers' social networks significantly influence willingness to the use of AI devices during hospitality service encounter but anthropomorphic traits motivate the customer to object to the use of AI devices. Moreover, difficult and complex AI devices which need more effort motivate consumers to object to the use of AI devices in hospitality service encounters.

Regression Analysis:

According to Table 4.8, the value of r^2 is .540, which means 54% of the variation in the dependent variable (willingness to use AI devices) has been explained by the independent variable (perceived social influence). Moreover, a 51.1% variance of the dependent variable can be caused by the independent variable due to an additional r square.

Moreover, the second value of r^2 is .839, which means 83.9% of the variation in the dependent variable (willingness to use AI devices) has been explained by the independent variable (hedonic motivation). Moreover, an 83% variance of the dependent variable can be caused by the independent variable due to an additional r square.

Meanwhile, the third value of r^2 is .647, which means 64.7% of the variation in the dependent variable (willingness to use AI devices) has been explained by the independent variable (anthropomorphism). Moreover, a 63.2% variance of the dependent variable can be caused by the independent variable due to an additional r square.

However, the fourth value of r^2 is .657, which means 65.7% of the variation in the dependent variable (willingness to use AI devices) has been explained by the independent variable (Trust). Moreover, a 64.7% variance of the dependent variable can be caused by the independent variable due to an additional r square.

Moreover, the fifth value of r^2 is .703, which means 70.3% of the variation in the dependent variable (willingness to use AI devices) has been explained by the independent variable (perceived performance expectancy). Moreover, a 79% variance of the dependent variable can be caused by the independent variable due to an additional r square.

Table 4.8: Model summary of regression analysis

Variables	r^2	Adjusted r^2	Std. error of the estimate
Perceived Social Influence and Willingness to The Use of AI Devices	.540	.511	.9140
Hedonic Motivation and Willingness to The Use of AI Devices	.839	.830	.4206
Anthropomorphism and Willingness to The Use of AI Devices	.647	.632	.6527
Trust and Willingness to The Use of AI Devices	.657	.647	.7767
Perceived Performance Expectancy and Willingness to The Use of AI Devices	.703	.691	.5675
Perceived Effort Expectancy and Willingness to The Use of AI Devices	.660	.649	.7740

Emotion and Willingness to The Use of AI Devices	.836	.827	.4246
Perceived Social Influence and Objection to The Use of AI Devices	.076	.016	1.344
Hedonic Motivation and Objection to The Use of AI Devices	.516	.490	.9191
Anthropomorphism and Objection to The Use of AI Devices	.186	.151	1.323
Trust and Objection to The Use of AI Devices	.208	.183	1.225
Perceived Performance Expectancy and Objection to The Use of AI Devices	.470	.448	.9562
Perceived Effort Expectancy and Objection to The Use of AI Devices	.209	.184	1.224
Emotion and Objection to The Use of AI Devices	.511	.485	.9234

Meanwhile, the sixth value of r^2 is .660, which means 66% of the variation in the dependent variable (willingness to use AI devices) has been explained by the independent variable (perceived effort expectancy). Moreover, a 64.9% variance of the dependent variable can be caused by the independent variable due to an additional r square.

Moreover, the seventh value of r^2 is .836, which means 83.6% of the variation in the dependent variable (willingness to use AI devices) has been explained by the independent variable (emotion). Moreover, an 82% variance of the dependent variable can be caused by the independent variable due to an additional r square.

Hence, the value of r^2 indicates 0.76%, 51.6%, 18.6%, 20.8%, 47%, 20.9%, and 51.1% of the variation in the dependent variable (objection to the use of AI devices) has been explained by the independent variable (social influence, hedonic motivation, anthropomorphism, trust, perceived performance expectancy, perceived effort expectancy, and emotion).

Hypothesis testing:

The following hypotheses are tested which are represented in the following:

- H1: the performance expectancy of AI devices is significantly influenced by social influence.
- H2: the effort expectancy of AI devices is significantly influenced by social influence.
- H3: the performance expectancy of AI devices is significantly influenced by hedonic motivation.
- H4: the effort expectancy of AI devices is significantly influenced by hedonic motivation.
- H5: performance expectancy of AI devices is significantly influenced by anthropomorphism.
- H6: the effort expectancy of AI devices is significantly influenced by anthropomorphism.
- H7: performance expectancy of AI devices is significantly influenced by trust.
- H8: the effort expectancy of AI devices is significantly influenced by trust.
- H9: performance expectancy has significantly influenced the positive emotions toward the use of AI devices.
- H10: Effort expectancy has significantly influenced the emotions toward the use of AI devices.

H11: Emotion has a significant influence on consumer willingness to use AI devices.

H12: Emotion has a significant influence on consumer objection to the use of AI devices.

Table 4.9 demonstrates that all have positive T-value which is more than the critical value ($t > 1.976$ -critical value) and Emotion has the highest β ($\beta = 2.326$; which means emotion has a significant impact on willingness to use AI devices in the hospitality service encounter. Moreover, the result demonstrates that all the significant value is .000 which are less than .05. Thus, H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, and H11 are supported. Hence, H12 is not supported ($1.976 > t = .353$), and its significant value is .725 which did not show a significant association between emotion and objection to the use of AI devices and represents that consumers do not support the objection to the use of AI devices during hospitality service encounter.

Table 4.9: Hypothesis testing

Result of T-test (hypotheses testing)						
Hypothesis	B	T statistic	Sig	Result	VIF	Remarks
H1	1.269	3.191	.000	3.191 > 1.976	1.111	Supported
H2	.651	2.432	.000	2.432 > 1.976	1.214	Supported
H3	.858	2.161	.000	2.161 > 1.976	1.047	Supported
H4	.724	2.678	.000	2.678 > 1.976	1.096	Supported
H5	.976	2.538	.000	2.538 > 1.976	1.014	Supported
H6	.773	2.823	.000	2.823 > 1.976	1.067	Supported
H7	.618	2.268	.000	2.268 > 1.976	1.216	Supported
H8	2.029	4.325	.000	4.325 > 1.976	1.111	Supported
H9	2.156	5.055	.000	5.055 > 1.976	1.096	Supported
H10	2.326	5.516	.000	5.516 > 1.976	1.067	Supported
H11	.618	2.268	.000	2.268 > 1.976	1.216	Supported
H12	.209	.353	.725	1.976 > .353	1.212	Not supported
$\alpha = 0.05$; $df = 94$, Critical Value-1.976						

FINDINGS AND CONCLUSION

Major Findings

This study has constructed a correlation coefficient of every factor and the table represents that all items ranged from 0.735 to 0.914 which means all items are accepted (except H12; items of objection to the use of AI devices ranged from .276 to .718). These results represent a significant validity and reliability of the measurement model which indices a support with recommended measurement model cutoff (Lin et al., 2019; Chi et al., 2020). Hence, the result has been quadrated to the result of (ranged from 0.55 to 0.94; (Lin et al., 2019)). This study investigated consumers' attitudes toward willingness to use AI devices in hospitality service delivery. The results of this study supported most of the proposed hypotheses. First, the result of this study

finds that consumers' perception is influenced by social influence, hedonic motivation, and anthropomorphism ($r=.73, .91, .81$), which is resembled previous studies (Lin et al., 2019), (Lu et al., 2019) and AIDUA theory (Gursoy et al., 2019).

Hence, findings indicate that trust is also an important appraisal of consumers' attitudes toward choosing AI devices in hospitality service delivery which corresponds with the SSRIT scale (Chi et al., 2020). Moreover, hypothetical relations among performance expectancy and effort expectancy have been measured in this study and results supported these relationships which resembled previous studies (Venkatesh et al., 2012). Thus, H10 represents a hypothetical relation between emotion and willingness to use AI devices in hospitality service delivery. Results show that this relationship is valid due to the support of H10 which is resembled the AIDUA theory (Gursoy et al., 2019) and cognitive theory (Watson and Spence, 2007).

Furthermore, the findings of this study indicate that antecedents of consumers' attitudes significantly influence consumers' willingness to use AI devices in hospitality services and negatively impact the objections to using AI devices in hospitality services. This result support validity and reliability which is resembled previous studies (Gursoy et al., 2019; Lazarus, 1991; Lu et al., 2019).

Theoretical Implication

Based on the AIDUA framework (Gursoy et al., 2019) this study evolves and tests the conceptual model and incorporates the customers' trust issue from the SSRIT scale (Chi et al., 2020) to determine the key antecedents of consumers' attitudes toward using AI devices in hospitality service deliver. From various theoretical contributions, one is- the significance of consumers' appraisal; hedonic motivation, social influence, performance expectancy, emotion, and effort expectancy to the AI devices which prior studies primarily ignored. This study also examines the integration of AI devices in the context of hospitality services.

This study has constructed a correlation coefficient of every factor which shows that all items ranged from 0.735 to 0.914 which means all items are accepted (except H12; items of objection to the use of AI devices ranged from .276 to .718). These results represent a significant validity and reliability of the measurement model which indices support with recommended measurement model cutoff (Lin et al., 2019; Chi et al., 2020). Hence, the result has been quadrated to the result of ranged from 0.55 to 0.94 (Lin et al., 2019).

The results of this study supported most of the proposed hypotheses. First, the result of this study finds that consumers' perception is influenced by social influence, hedonic motivation, and anthropomorphism ($r=.73, .91, .81$), which resembles previous study (Lin et al., 2019) and AIDUA theory (Gursoy et al., 2019). Hence, findings indicate that trust is also an important appraisal of consumers' attitudes toward choosing AI devices in hospitality service delivery which corresponds with the SSRIT scale (Chi et al., 2020).

Moreover, hypothetical relations among performance expectancy and effort expectancy have been measured in this study and results supported these relationships which resembled previous studies (Venkatesh et al., 2012).

Thus, H10 represents a hypothetical relation between emotion and willingness to use AI devices in hospitality service delivery. Results show that this relationship is valid due to the support of H10 which resembles AIDUA theory (Gursoy et al., 2019) and cognitive theory (Watson and Spence, 2007).

Furthermore, the findings of this study indicate that antecedents of consumers' attitudes significantly influence consumers' willingness to use AI devices in hospitality services and negatively impact the objections to using AI devices in hospitality services. This result supports validity and reliability which is resembled previous studies (Gursoy et al., 2019; Lin et al., 2019; Lazarus, 1991; Lu et al., 2019).

Conclusion

In Bangladesh, the hospitality service sector has a great prospect to develop. Hospitality companies should enhance service quality besides profitability by integrating AI devices in service delivery. Understanding consumers' attitudes toward AI devices is very necessary for the hospitality service sector. Because the

consumer is the king of business. Overall, this study should have a great contribution to the Bangladeshi hospitality service sector. Finally, due to the development and integration of AI devices in hospitality services, more and more research is required. Though this research has limitations to fit another country because the analysis was conducted on Bangladeshi respondents only, in the future author will conduct research considering the other countries perspective.

The empirical result indicates that hedonic motivation, performance expectancy, emotion, trust, and social influence have a strong influence on consumers' decision-making process when it comes to evaluating the usage of AI devices in service delivery. Due to this, the development and integration of AI devices in hospitality services gained momentum in the present situation. Moreover, hospitality companies have to focus on consumers' perceived performance regarding hedonic motivation (e.g., fun, relaxation, happiness, and surprise), anthropomorphism, and emotional issues. The respondents of this research preferred all are the factors as significant influencers. The researcher recommends that hospitality companies should balance their profit margin and liquidity by integrating AI devices into service encounters and considering consumers' preferences. The service of AI devices should also need to maintain the trust factor by ensuring secure and safe services.

One of the major constraints is limited resources which have been influenced negatively. Moreover, critical statistical tools created complexity and time-consuming procedures. Further analysis of this study should test the reliability and validity of the data. In the meantime, in data collection, the researcher also faced the problem of respondent scarcity and unavailability, related data not being found properly, and secondary data accessibility was not easy. The personal development of the researcher is the learning and experience in the research field about the pros and cons of research as like as methods and techniques, observation of real scenarios of AI devices usage, systems and management in business environments, and service marketing.

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