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Green information system: Good for planet, good for you and good for organization – respondent's behavior and attitude toward conference applications

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Abstract---The conference whether scientific, academic, industry, medical, or any type is carbon intensive. The air travel by the participants of the conference will emit enormous global green gas emissions. The green information system i.e. embracing the conference through Zoom, Blue jeans, Teams, and other available conference technologies and apps can significantly reduce greenhouse emissions (GHS). The participants also use local transport to commute from the conference center to the Airport and back also adds the emission of carbon dioxide to the GHS. Apart from reducing the GHS emissions the system also contributes to the environment by saving paper, food wastage, diesel/petrol, electricity, water, etc. The researchers have carried out an empirical study to investigate the conference attendee's attitudes and behavior to adopt such technologies as part of green information systems from an ecological point of view, in and around Hyderabad Metro, India. The data was collected by publishing a 34-item questionnaire on google forms and the link was provided to the respondent. A total of 424 responses were subjected to multivariate general linear model analysis using SPSS version 28 to predict the dependent variables behavior intent and

attitude and mindset of the respondents to use the said conference applicant the eight independent variables significantly predicted the behavior intent and mindset of respondents to use the conference applications.

Keywords---Conference applications, Zoon, Blue jeans, Teams, Green Information System.

Introduction

The technological revolutions and inventions during this decade have significantly impacted the developing and developed countries and the conference industry sector is growing very fast, a main area of the hospitality sector (Qi et al., 2019). Irrespective type of conference that requires several logistical arrangements such as transport (air, road, and train) for commuting the conference attendees, hospitality arrangements for attendee's lunch and dinner, venue arrangements, conference tool kits, audio/video arrangements, live conference sessions through internet/TV are required (Wang et al., 2019). The conference also has a significant impact on the tourism sector with its economic outputs. The revenue of the organized events industry was estimated to be more than 100 billion Indian rupees in the financial year 2021 (Statistica, 2022) with more than 300 million people participating in the business and conference events, with average spending of 30,000 Indian rupees. India has plenty of opportunities when it comes to event management and many aspiring managers wonder if there is a good scope of event management such as conventions, meetings, and conferences as a career in India (IIM Skills, 2022). There is an expected increase of 8% during the decade 2020-2030 with continuous demand (Occupational Outlook Handbook, 2022). However, there is widespread criticism of the conference industry due to the resource intensity of the areas and not complying with ethical environmental practices.

India is one of the countries, where the government banned the manufacture, sale and use of identified single-use plastic items like plates, cups, straws, trays, and polystyrene from July 1, 2022. A new international survey was conducted across G20 countries. About 70 percent of Indian citizens are worried about the state of nature and over 90 percent feel that they should do more to protect it. The majority of Indians believe that the country should do more to protect the planet due to growing environmental concerns among consumers and want to promote sustainability. Urbanization eased carbon dioxide levels by more than 33%, adding deforestation, automobile emissions, industry and manufacturing sector industry contributing their share to the CO₂ levels (Trudel, 2018). However, there are some consumers who can forgo their needs to sustain the environment to protect the planet. India has bold new climate targets which are ambitious and a challenge for the world. An already low-emitter, India's new commitments to fight climate change force the historical emitters and China to commit to bolder emission-reduction pathways (DownToEarth). India will get its non-fossil energy capacity to 500 gigawatt (GW) by 2030 India will meet 50 per cent of its energy requirements from renewable energy by 2030; India will reduce the total projected carbon emissions by one billion tones from now onwards till 2030; By 2030, India

will reduce the carbon footprint of its economy by less than 45 per cent; Therefore, by 2070, India will achieve the target of Net Zero (Down to Earth). Environment-friendly practices and having a green venue to sustain the environment and enhance profitability is need of the hour (Wang et al., 2019). An estimated global cardboard and paper production of 420 million tons, with a third of production graphic paper and other writing material consumed globally.

The research and academic conferences are carbon intensive. The air travel is the one of the major contributor to the greenhouse emissions across the world. If the attendees participate the conference virtually the emissions will reduce about 30% and multi-site conference with more than two video-linked locations further reduces the greenhouse emissions up to 75% or more to 82% by shifting to land transport (Ewjik and Hoekman, 2020). The virtual conference will yield no emissions. The Covid-19 pandemic forced to many such virtual conferences and an analysis was presented by (Burtscher et al., 2020). Many lessons learnt from the Covid-19 pandemic, and intricacies if in person attended conferences are well documented. The virtual conferences are cost-effective to both the employee and employer, reduce travel and time related stress. The information and scientific know-how can be disseminated to developing countries, poorly funded educational institutions. The institutes that cannot afford to travel due to funding and other reasons like bad health, personal reasons can attend the conference virtually through conference apps like Zoom, Teams, Blue jeans and other applications. However, this requires minimum resources with mobile, laptop or desktop. The conference recordings can be made available online for viewing and the recording is more helpful in parallel running sessions to enhance value and accessibility. Therefore, the virtual conferences have huge impact on environment and save time and cost.

Arsenault et al. (2019) reported that an attendee travels about 8500 kms per year (mostly by air) with high of 34000 kms which is significantly impacting the environment. An estimated carbon dioxide emission by an international attendee ranges from 850 to 1900 kg from farther , distant areas. (Spinellis et al., 2013; Fraser et al., 2017). The individual total carbon dioxide emission amounts to individual total emissions. Therefore, the virtual conference significantly reduces the carbon footprint (Sharma, 2020 and Reai, 2003) and enhances the accessibility and inclusivity (Sarabipour, 2020; Vervoort et al., 2020). Due Covid-19 Pandemic and other reasons most of the researchers and academicians cut down their respective air travel to along with reality of climate change to protect the planet. However, there is an urgent need that conference industry to adopt both hybrid and virtual modes of conferences embracing efficient digital communication technology for conference delivery (Hamm et al., 2018). However, the hybrid mode of conference to have some challenges which can be easily overcome by the organizers motivating the attendees towards adoption of technologies. There is a need for developing appropriate strategies and policies to influence the attitude and behavioral change.

Digital technologies like mobile apps will be a sustainable option in conferences and will reduce the prints/copies, and reduce carbon dioxide emissions. The conference app UNEA-2 is an example can be a case study for the conference organizers (UNEP 2019). However, the adoption of mobile conference apps is still

low and is a bottleneck for sustainability efforts. There are certain factors that influence the adoption of the conference apps even though free for personal use and information systems adoption (Xu et al. 2016).

Research Question

There is any correlation between the behavior intent and aptitude towards to use conference applications and the 8 predictor variables of the study?

Research gap

Several studies reported the outcomes on green information systems, green human resources, however, there is very limited research is available on virtual conference applications. Thus, this empirical study concentrates on understanding technology (green information systems) adoption behavior and conference attendee attitude from an ecological perspective using Zoom, Blue jeans, Teams, and other conference applications. Further, to understand the technology behavior for green information systems (GIS), there is a need to dissect the elements that influence conference attendee's adoption attitude and behavior intentions. There is a need to understand the relationship between the factors that influence the behavior intent of conference attendee on conference apps. The researchers believe that persons' ecological beliefs, ecological perspective plays an important role on the behavioral attitude that is needed for GIS adoption.

Theoretical Framework

It is evident from the literature, the adoption of GIS like Zoom, Teams, Blue jeans will be influenced by altruistic values like ecological beliefs, and attitudes that benefit and sustain the environment. This research makes a sincere attempt to attend the Modified Unified Theory of Acceptance and Use of Technology (UTAUT-2) to scrutinize the adoption attitudes for Green IS lie Zoom, Teams, Blue jeans and other conference apps. The theoretical framework is based on the model Nripendra Singh et al. (2022).

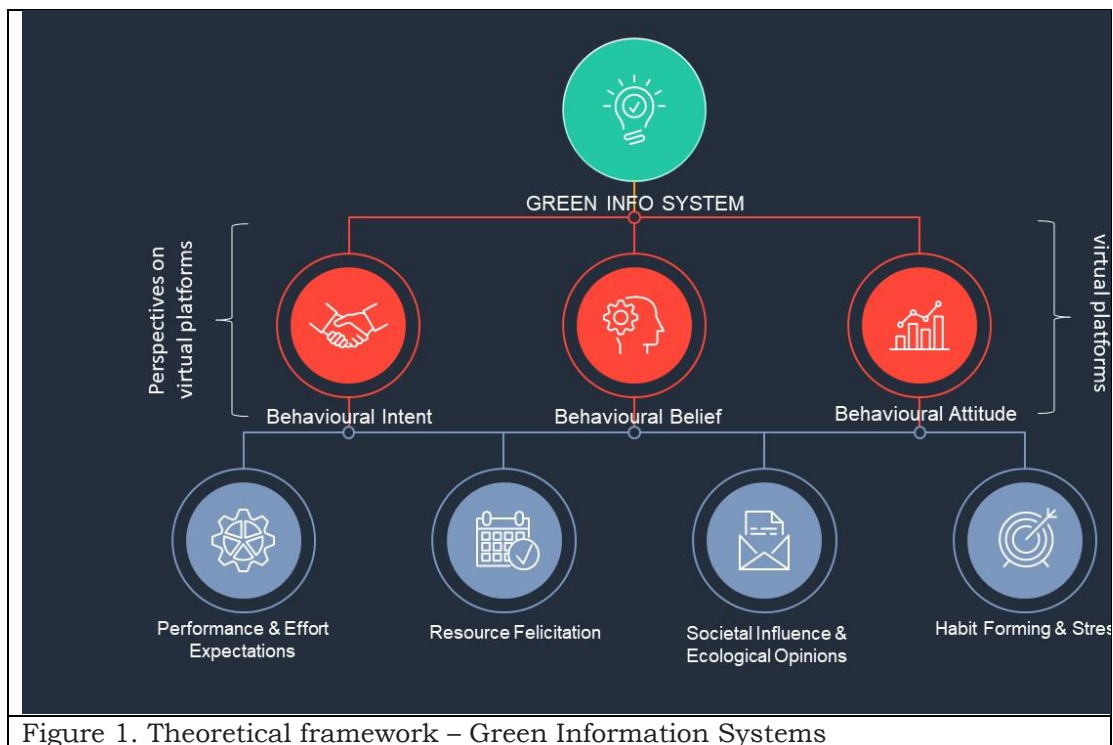


Figure 1. Theoretical framework – Green Information Systems

Adoption attitude

An individual adoption intention depends on four important factors – organizational environment, social principles, efforts of the individuals, and performance expectations. The resource availability and user's adoption intention also effects the green information system's success. There is a need to modify and expand the UTAUT-2 model integrating users' perspectives. The factors behind behavioral attitudes and intents need to be integrated in this model. The behavioral intent to use conference apps like Zoom, Blue jeans, Teams and other conference applications helps in evaluating the adoption intentions of the respondents. The respondent's actual behavior towards the conference applications which their contributions to the environment good can be assessed. This results in the respondent's/users intention to adopt the said conference applications and contribution towards the environment good (Dodds et al., 1991)

Description of study variables

Performance Expectation (PE): performance expectation is the belief of the responder and his/her intent that conference applications like Zoom, Teams, Blue jeans enhances their performance at work. In the cognitive behavioral perspective and the adoption intentions will be affected if the technology is helpful to a user tilting towards using the said apps. This will affect the behavior intent of the user/respondent.

H1: PE do not have statistically significant impact on behavioral intent to use conference applications

Effort Expectation (EE): The level of easiness in using the conference applications. The user intentions are also affected by the easiness in the use of technology. The mobile users use and adopt the provided technologies as they are easy to use. Therefore the green information systems viz Zoom, Blue jeans, Teams and other conference applications are easy to use. Therefore, the assumption is EE would affect the BI.

H2: EE will positively affect the BI to use conference applications

Resource Felicitation (RF): To the extent/level to which the conference attendee feels that he/she receives the technical and organizational support in using conference applications. This includes providing/installing the conference applications like Zoom, Teams, Blue jeans and other applications. Mobile users have some concerns on the battery life of his/her smartphone may seek easy-to-use charging facilities. The assumption is RF would influence the BI.

H3: RF will positively influence BI to use conference applications

Societal Influence (SI): SI is the level that user/individual perceive that people close to him/her consider that they should use the said conference applications. The social influence will effect of the use of conference applications as reported by (Venkatesh et. al., 2003 and Davis et. al., 1989). The individuals have their respective opinions to use and influence the use of conference applications in their way and the use of voluntary. The assumption is SI will influence the BI.

H4: Societal influence has stimulating effect on BI to use conference applications

Habit Forming: HF is the level of conference attendees influenced by the conference app with minimal training prior to its use. Habits do change in a short time. In a short-time individuals change their habits to form the new habits. The habit is affected by the behavioral intentions and advantages of using conference applications. If an attendee believes that the conference applications save time and useful one can observe change the behaviors to form habit to use such technologies. Therefore, HB assumed to affect BI.

H5: HB will have a positive impact on BI to use conference applications

Hedonic stimulus (HS): The extent of pleasure to be associated with the said conference applications and feeling to have fun is HM. The mobile uses are amused to observe the excitement using some mobile applications which affect their behavioral intentions. Implementing the gaming environment in non-gaming contexts will affect the hedonic intentions of the conference attendee. Several studies reported that hedonic motivations have found to affect the behaviors of an individual (Brown and Venkatesh 2005; Heijden, 2004) Therefore, the HM will influence the BI.

H6: HM will have a positive impact on BI to use conference applications

Behavioral Intent (BI): The BI is level of interest to use the conference application with adoption behaviors. The intentions are good faith to help and sustain the environment making his/her contribution to reduce the carbon footprint and greenhouse emissions.

Attitude towards conference apps (ATCA): The ATCA is an emotional attachment toward said conference applications. This is based on the theory “attitude toward any consent” towards interest or uninterested opinion of an individual towards the conference app as reported by (Ajzen and Fishbein, 1980). Therefore, ATCA will influence the BI to use and adopt conference applications.

H7: ATCA will positively influence the BI to use conference applications

Ecological Opinions (EO): This construct is based on the consequences using conference applications and the environmentalism theory proposed by (Stren, 2000). The human opinion, values, and beliefs affect behavioral intents from the environmental perspective and reported by (Schwartz, 1977). Therefore, the EO will influence BI.

H8: EO will have influence positively on behavioral intention to use conference applications

Stress: The job stress is harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Job stress can lead to poor health and even injury. The theory is that having few resources will affect the psychological behavior of an individual. Stress plays a mediate role in causing several performance deficits. The author also reported how green human resource is protecting the environment through pro-environment behavior of employees (Prasad et al., 2015, 2016, 2018, 2020, 2022). The assumption is that using conference apps will reduce the stress related to time, emotion, anxiety, panic, information overload, role conflict of conference attendee. Therefore, the use of conference applications will influence the BI

H9: Stress positively influences the behavioral intentions to use conference applications

Estimation of sample size: As the population is infinite and unknown, the Cochran (1977, 1989) to estimate the sample size is used for this study

$$n_o = \frac{Z^2pq}{e^2}$$

where n_o = sample size

z = selected critical value of described confidence level

p = estimation proportion of an attribute that is presented in the population

$$q = 1 - p$$

e = desired level of precision

taking 95% confidence level with $\pm 5\%$ precision, the required sample size is

$$p = 0.5; q = 1 - 0.5 = 0.5; e = 0.05; z = 1.96$$

$$\frac{(1.96)^2(0.5)(0.5)}{(0.05)^2} = 384.16 = 384$$

Therefore, we have chosen a sample size of 424 which is > 384

The demography and description of the sample are presented in Tables 1 and 2

Table 1. Demography of the sample		
Gender	Frequency	Percent
Male	221	52.13
Female	203	47.87
Total	424	100
Source: Primary data		

Table 2. Sample description		
Age group	Gender	Number of respondents
20-30	Male	44
	Female	46
31-40	Male	82
	Female	58
40-50	Male	73
	Female	55
51 and more	Male	46
	Female	20
Source: Primary data		

Table 3. Study variables		
Factor	Description	Number of items
	Independent factors	
1	Performance Expectations	3
2	Effort Expectation	3
3	Resource Felicitation	4
4	Societal Influence	3
5	Habit Forming	3
6	Hedonic stimulus	3
7	Ecological Opinions	3
8	Stress	3
	Dependent factors	7
9	Behavioral intent	3
10	Aptitude towards the use of conference applications	3

Research instrument

A standard undisguised research instrument based on a 7-point Likert-type scale was used. The instrument is a modified version of existing scales (UTAUT-2). The instrument was tested with 120 respondents before the final study. For the final survey the research instrument/ questionnaire was published on Google Forms (Link <http://shorturl.at/ajnS1>) and the link was provided to respondents. The questionnaire was 34 items scale ranged from Strongly disagree (1) to Strongly agree (7). A total of 464 responses were received and 40 responses were not considered for data analysis as the responses were incomplete. A total 424 responses were used for data analysis

Data Analysis

Relevant statistical techniques that suits the study were applied to draw inferences and final conclusions from the primary data. The primary data was subjected to statistical methods like descriptive statistics, reliability methods, general linear model (multivariate) method and results were reported.

Reliability methods

The internal consistency and reliability of the research instrument, the questionnaire was assessed by measuring the Cronbach alpha values, split-half correlation and spearman brown prophecy values. The reliability indices are presented in Table 4.

Table 4. Reliability indices for the study variables

Factor	Description	Cronbach alpha	Split-half (odd even) correlation	Split half with Spearman Brown adjustment
1	Performance Expectations	0.84	0.78	0.88
2	Effort Expectation	0.74	0.66	0.80
3	Resource Felicitation	0.63	0.56	0.71
4	Societal Influence	0.70	0.56	0.72
5	Habit Forming	0.84	0.76	0.86
6	Hedonic stimulus	0.90	0.84	0.92
7	Ecological Opinions	0.67	0.69	0.81
8	Stress	0.91	0.82	0.90
9	Aptitude towards to use conference applications	0.91	0.88	0.94
10	Behavioral index	0.88	0.80	0.89

Source: Primary data

Results

General linear model (GLL) multivariate analysis: In this empirical study the dependent variables Behavioral Intent(BI) and Aptitude towards to use conference applications (ATCA) measured using the independent variables – Performance Expectations, Effort Expectation, Resource Felicitation, Societal Influence, Habit Forming, Hedonic stimulus, Ecological Opinions and Stress. The General Linear Model multivariate analysis measures effect of the independent variable on each item of Behavioral intent (BI-3 items) and Attitude towards to use conference application (ATCA-4 items). The model allows to predict more than one dependent variable using the said 8 independent variables. The GLM reveals statistically significant gender and age differences in the study.

Test of homogeneity of variances

The null hypothesis for this test is that the observed covariance matrices for the dependent variables are equal across the groups. As the estimated result is non-significant (one with p-value 0.721) indicates that the covariance matrices are equal (Table 5).

Table 5. Box's Test of Equality of Covariance Matrices ^a	
Box's M	454.907
F	21.256
df1	21
df2	145627.018
Sig.	0.721

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.	
Design: Intercept + PE + EE + SI + HS + HB + EO + STRESS + FC + Gender + Age + Gender * Age	

The Bartlett's test (Snedecor and Cochran, 1989) was used to test all the samples have equal homogeneity of variances to carry out the GLM analysis. The results indicate Bartlett's test of Sphericity significant (0.00) indicates the matrices for all the three variables are not an identity matrix (Table 6), so the null hypothesis is rejected. The data generated through the responses are fit for carrying our further analysis

Table 6 KMO and Bartlett's Test statistic of independent factors	
Bartlett's test of sphericity ^a	
Likelihood ratio	0.000
Approx. Chi-Square	1275.923
Df	20
Sig.	0.000
Test the null hypothesis that the residual covariance matrix is proportional to an identity matrix	
^a Design: Intercept + PE + EE + SI + HS + HB + EO + STRESS + FC + Gender + Age + Gender * Age	

The homogeneity of variance in the same is measured using Levene's test of equality of error variances. The significance of Levene's test is > 0.05, which suggests that the equal variances assumption is not violated (Table 7)

Table 7. Levene's Test of Equality of Error Variances ^a				
	F	df1	df2	Sig.
BI	6.545	7	416	0.180
ATCA	8.071	7	416	0.614
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.				
a. Design: Intercept + PE + EE + SI + HM + HB + EB + STRESS + FC + Gender + Age + Gender * Age				

Table 8. General Linear Model - Multivariate Tests ^a							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.436	157.552 _b	2.000	407.000	<.001	.436
	Wilks' Lambda	.564	157.552 _b	2.000	407.000	<.001	.436
	Hotelling's Trace	.774	157.552 _b	2.000	407.000	<.001	.436
	Roy's Largest Root	.774	157.552 _b	2.000	407.000	<.001	.436
PE	Pillai's Trace	.135	31.762 _b	2.000	407.000	<.001	.135
	Wilks' Lambda	.865	31.762 _b	2.000	407.000	<.001	.135
	Hotelling's Trace	.156	31.762 _b	2.000	407.000	<.001	.135
	Roy's Largest Root	.156	31.762 _b	2.000	407.000	<.001	.135
EE	Pillai's Trace	.017	3.572 _b	2.000	407.000	.029	.017
	Wilks' Lambda	.983	3.572 _b	2.000	407.000	.029	.017
	Hotelling's Trace	.018	3.572 _b	2.000	407.000	.029	.017
	Roy's Largest Root	.018	3.572 _b	2.000	407.000	.029	.017
SI	Pillai's Trace	.108	24.697 _b	2.000	407.000	<.001	.108
	Wilks' Lambda	.892	24.697 _b	2.000	407.000	<.001	.108
	Hotelling's Trace	.121	24.697 _b	2.000	407.000	<.001	.108
	Roy's Largest Root	.121	24.697 _b	2.000	407.000	<.001	.108
HS	Pillai's Trace	.056	11.972 _b	2.000	407.000	<.001	.056
	Wilks' Lambda	.944	11.972 _b	2.000	407.000	<.001	.056
	Hotelling's Trace	.059	11.972 _b	2.000	407.000	<.001	.056
	Roy's Largest Root	.059	11.972 _b	2.000	407.000	<.001	.056
HB	Pillai's Trace	.001	.107 _b	2.000	407.000	.898	.001
	Wilks' Lambda	.999	.107 _b	2.000	407.000	.898	.001

	Hotelling's Trace	.001	.107 ^b	2.000	407.000	.898	.001
	Roy's Largest Root	.001	.107 ^b	2.000	407.000	.898	.001
EO	Pillai's Trace	.146	34.843 ^b	2.000	407.000	<.001	.146
	Wilks' Lambda	.854	34.843 ^b	2.000	407.000	<.001	.146
	Hotelling's Trace	.171	34.843 ^b	2.000	407.000	<.001	.146
	Roy's Largest Root	.171	34.843 ^b	2.000	407.000	<.001	.146
STRESS	Pillai's Trace	.160	38.843 ^b	2.000	407.000	<.001	.160
	Wilks' Lambda	.840	38.843 ^b	2.000	407.000	<.001	.160
	Hotelling's Trace	.191	38.843 ^b	2.000	407.000	<.001	.160
	Roy's Largest Root	.191	38.843 ^b	2.000	407.000	<.001	.160
RF	Pillai's Trace	.171	42.102 ^b	2.000	407.000	<.001	.171
	Wilks' Lambda	.829	42.102 ^b	2.000	407.000	<.001	.171
	Hotelling's Trace	.207	42.102 ^b	2.000	407.000	<.001	.171
	Roy's Largest Root	.207	42.102 ^b	2.000	407.000	<.001	.171
Gender	Pillai's Trace	.026	5.476 ^b	2.000	407.000	.004	.026
	Wilks' Lambda	.974	5.476 ^b	2.000	407.000	.004	.026
	Hotelling's Trace	.027	5.476 ^b	2.000	407.000	.004	.026
	Roy's Largest Root	.027	5.476 ^b	2.000	407.000	.004	.026
Age	Pillai's Trace	.152	11.185	6.000	816.000	<.001	.076
	Wilks' Lambda	.852	11.306 ^b	6.000	814.000	<.001	.077
	Hotelling's Trace	.169	11.426	6.000	812.000	<.001	.078
	Roy's Largest Root	.133	18.103 ^c	3.000	408.000	<.001	.117
Gender * Age	Pillai's Trace	.141	10.316	6.000	816.000	<.001	.071
	Wilks' Lambda	.861	10.564 ^b	6.000	814.000	<.001	.072

	Hotelling's Trace	.160	10.811	6.000	812.000	<.001	.074
	Roy's Largest Root	.146	19.836 ^c	3.000	408.000	<.001	.127
a. Design: Intercept + PE + EE + SI + HS + HB + EB + STRESS + FC + Gender + Age + Gender * Age							
b. Exact statistic							
c. The statistic is an upper bound on F that yields a lower bound on the significance level.							
PE: Performance Expectations; EE: Effort Expectation; RF: Resource Felicitation; SI: Societal Influence; HF: Habit Forming; HS Hedonic stimulus; EO: Ecological Opinions; Stress							

From the results of multivariate tests, it is evident that all the independent factors PE: Performance Expectations; RF: Resource Felicitation; SI: Societal Influence; HF: Habit Forming; HS Hedonic stimulus; EP: Ecological Opinion and stress are statistically significant and contributing to the model. The Wilks Lambda values for performance expectations $\lambda=0.865$, (F2, 407). $P<0.001$, $\eta^2=0.135$; Societal influence

$\lambda=0.892$, (F2, 407). $P<0.001$, $\eta^2=0.108$; Hedonic stimulus $\lambda=0.944$, (F2, 407). $P<0.001$, $\eta^2=0.056$; Habit forming $\lambda=0.944$, (F2, 407). $P<0.001$, $\eta^2=0.104$; Ecological opinions $\lambda=0.854$, (F2, 407). $P<0.001$, $\eta^2=0.146$; Stress $\lambda=0.840$, (F2, 407). $P<0.001$, $\eta^2=0.160$; Resources felicitation $\lambda=0.829$, (F2, 407). $P<0.001$, $\eta^2=0.171$; Gender $\lambda=0.974$, (F2, 407). $P<0.004$, $\eta^2=0.026$ and Age $\lambda=0.852$, (F2, 407). $P<0.001$, $\eta^2=0.117$; gender * age $\lambda=0.861$, (F2, 407). $P<0.001$, $\eta^2=0.071$ are influencing the Behavior Intention and Attitude towards to use of conference applications.

A separate ANOVA was run for each dependent variable and with each independent factor and the results are: The Effort expectation is not statistically significant against behavior intention; Habit forming is not statistically significant with behavior intent and attitude towards to use conference application; Resource felicitation is not statistically significant with attitude towards to use conference applications, and finally gender is not statistically significant with behavior intention of the conference attendees. All the significant results are present in the Table 9.

Table 9. General Linear Model - Tests of Between-Subjects Effects							
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	BI	222.643 ^a	15	14.843	54.613	<.001	.668
	ATCA	180.938 ^b	15	12.063	16.687	<.001	.380
Intercept	BI	8.165	1	8.165	30.044	<.001	.069

	ATCA	172.184	1	172.184	238.192	<.001	.369
PE	BI	13.356	1	13.356	49.142	<.001	.107
	ATCA	3.834	1	3.834	5.304	.022	.013
EE	BI	.083	1	.083	.305	.581	.001
	ATCA	5.176	1	5.176	7.161	.008	.017
SI	BI	8.075	1	8.075	29.713	<.001	.068
	ATCA	7.611	1	7.611	10.529	.001	.025
HS	BI	4.508	1	4.508	16.589	<.001	.039
	ATCA	2.434	1	2.434	3.367	.067	.008
HB	BI	.035	1	.035	.128	.721	.000
	ATCA	.034	1	.034	.047	.829	.000
EO	BI	18.605	1	18.605	68.456	<.001	.144
	ATCA	5.855	1	5.855	8.100	.005	.019
STRESS	BI	1.310	1	1.310	4.819	.029	.012
	ATCA	45.345	1	45.345	62.728	<.001	.133
RF	BI	.310	1	.310	1.139	.286	.003
	ATCA	54.915	1	54.915	75.967	<.001	.157
Gender	BI	.221	1	.221	.812	.368	.002
	ATCA	6.239	1	6.239	8.630	.003	.021
Age	BI	13.637	3	4.546	16.725	<.001	.110
	ATCA	10.975	3	3.658	5.061	.002	.036
Gender * Age	BI	15.071	3	5.024	18.484	<.001	.120
	ATCA	4.309	3	1.436	1.987	.115	.014
Error	BI	110.887	408	.272			
	ATCA	294.934	408	.723			
Total	BI	11983.309	424				
	ATCA	2646.063	424				
Corrected Total	BI	333.530	423				
	ATCA	475.872	423				

a. R Squared = .668 (Adjusted R Squared = .655)

b. R Squared = .380 (Adjusted R Squared = .357)

PE: Performance Expectations; EE: Effort Expectation; RF: Resource Felicitation; SI: Societal Influence;

HF: Habit Forming; HS Hedonic stimulus; EP: Ecological Opinions; stress (Independent factors)

BI: Behavioral Intent; ATCA: Aptitude towards to use conference applications

Table 10. Results of ANOVA for all the independent factors against dependent factors (behavior intent and attitude towards to use of conference applications – *only significant results are presented*)

Independent factor	Dependent factor	ANOVA results
Performance Expectation	BI	F(1, 408)=49.142, p=<0.001, $\eta^2=0.107$
	ATCA	F(1, 408)=5.304, p=<0.001, $\eta^2=0.013$
Effort Expectation	ATCA	F(1, 408)=74.161, p=0.008, $\eta^2=0.017$
Societal influence	BI	F(1, 408)=29.713, p=<0.001, $\eta^2=0.068$
	ATCA	F(1, 408)=10.529, p=0.001, $\eta^2=0.025$
Hedonic stimulus	BI	F(1, 408)=, p=<0.001, $\eta^2=0.039$
Ecological opinions	BI	F(1, 408)=68.456, p=<0.001, $\eta^2=0.144$
	ATCA	F(1, 408)=8.100, p=0.005, $\eta^2=0.019$
Stress	BI	F(1, 408)=4.819, p=0.029, $\eta^2=0.012$
	ATCA	F(1, 408)=67.728, p=<0.001, $\eta^2=0.133$
Resource Felicitation	ATCA	F(1, 408)=75.967, p=<0.001, $\eta^2=0.157$
Gender	ATCA	F(1, 408)=8.630, p=<0.003, $\eta^2=0.021$
Age	BI	F(1, 408)=16.725, p=<0.001, $\eta^2=0.110$
	ATCA	F(1, 408)=5.061, p=0.002, $\eta^2=0.120$
Gender * Age	BI	F(1, 408)=18.484, p=<0.001, $\eta^2=0.120$

Therefore, based on the GLM results in Table 10, we reject the null hypothesis H1: PE does not have a statistically significant impact on behavioral intention to use conference apps.

And accept that PE is statistically significant and influences the behavior intent and attitude towards the use of conference applications.

H2: EE will positively affect the BI to use conference applications – *partially accepted as EE results* are statistically significant only on ATCA (attitude towards to use of conference applications

H3: RF will positively influence BI to use conference applications – *accepted as the results are* statistically significant

H4: Societal influence has a stimulating effect on BI to use conference applications – *accepted as the results are* statistically significant

H5: HB will have a positive impact on BI to use conference applications – *partially accepted* statistically significant

H6: HS will have a positive impact on BI to use conference applications – partially accepted statistically significant

H7: EO will have statistically significant influence positively on behavioral intention to use conference applications –accepted statistically significant

H8: Stress positively influences the behavioral – accepted statistically significant

Conclusions

The traditional technology adoption Unified Theory of Acceptance and the use of Technology and Technology Acceptance Model are not enough in forecasting the green information system and its adoption behavior. These theories can be used modifying to suit the researcher's needs. Our present results are in accordance with the earlier studies carried out by Nripendra Singh et al. (2022), (Todd, 2022) suggesting the expanding the model and inclusion of behavior intentions, values and beliefs of individuals (Bagozzi et al., 1999) to assess the behavior and attitudes. Our study further enhances the scope and characteristics of green information systems and able to understand the behavior significantly.

Limitations of the study

The literature in the area of green information systems and conference attendee's behavior is very limited. The authors try to extend the research of Nripendra singh (2022) adding a stress component to the model. There is a need to study moderating effects of age, gender, stress. It is essential to mention the reason for this study while collecting the responses though the responder can spend significant time in answering the questions. Though the data collected from in and around Hyderabad, India can be generalized. To strengthen our opinion, the research construct was validated using reliability statistics Cronbach's alpha and split-half reliability metrics. The researchers should concentrate and guide the policymakers to strengthen and test the communication strategies to stimulate the ecological beliefs and behavior intents of the individual creating a positive attitude towards the conference applications. This further strengthens the conference attendee's contribution making the planet green.

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