

Customer Intention Towards E-Grocery Shopping Apps Using TAM And UGT

V. Anitha,

Research Scholar, SRM College of Management, SRM Institute of Science and Technology, Kattankulathur,
anitha_ve@srmuniv.edu.in.

Dr. A.R Krishnan,

Professor, SRM College of Management, SRM Institute of Science and Technology Kattankulathur,
Krishnar1@ktr.srmuniv.ac.in.

Abstract

The purpose of this study is to understand the customer intention towards e-grocery shopping apps using Technology Acceptance Model (TAM) and Uses and Gratifications Theory (UGT). The dimensions of TAM and UGT are perceived ease of use, perceived usefulness, entertainment, web irritation, informativeness, attitude towards e-grocery and intention towards e-grocery shopping apps. For this study, the chosen area was Chennai city and primary data was collected using survey method. The sample size for the study is 205. The collected data was processed using AMOS and SPSS software. The statistical tools used is descriptive statistics, T-test, reliability and validity test, correlation, regression and structural equation modeling. From the findings, we found that TAM and UGT variables have a positive impact on attitude and attitude towards e-grocery have a positive impact on customer intention to use e-grocery. Hence, we would like to conclude that the technology advancement and faster communication helped the customers to adopt the e-grocery shopping apps.

Keywords: Technology Acceptance Model and Uses and Gratifications Theory, Perceived Ease of Use, Perceived Usefulness, Entertainment, Apps Irritation, Informative, Attitude, and Intention towards e-grocery shopping apps.

1. Introduction

Indian retail sector majorly depends on food and grocery products, with an estimated market size of US \$ 321 Billion, this category accounts for about 58% of the total retail market. This category is expected to grow 3.5 times and to be capped at US \$ 1,150 Billion by 2025. There has always been a challenge in food retail business. Today's business scenario also there is no exception with new competition every day, new business formats like online retailers. This has set a huge impact on the present retail industry. Earlier from the consumer view point, there were hesitations regarding the online grocery shopping but with the evolving digitalization consumer adoption in the enterprise is currently experiencing a boom as consumers are able to analyze benefits of online grocery shopping. Thus many researchers started showing more interest on e-grocery. Because of the relative convenience to the consumer, it gives the consumers to shop groceries they needed from the comfort of their home or office and at any given time hence it started gaining momentum. According to **Nguyen** et al. [1], the mobile phone era has created a lot of opportunities for retailers to increase sales online.

According to **Kolesar and Galbraith** [2], e-retailer comprehends three key activities; a) a product search activity provides the detailed information about the products under evaluation, this usually referred to as a product-evaluation or information gathering step; b) an online shopping decision that facilitates consumer interaction by plummeting the transaction costs; and c) the final products distribution to consumers through product delivery capability.

2. Review of Literature

1.1. Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM), developed by Davis (1987) [3], provides a basis for research on why user accept or reject information technology (IT) and what are the ways to improve user acceptance by thoughtful choice of system design features. He coined two elements based on his previous research such as perceived ease of use (PEU) and perceived usefulness (PU). From the original TAM model, perceived usefulness (PU) was defined as the degree to which an individual believe in a particular system that would enhance their job performance (Davis, 1989) [4]. With respect to online grocery shopping context, we can analogically adopt that the individual behavioral intention of e-grocery consumers believe that the use of the system is useful in their individual life. From the original TAM model, perceived ease of use (PEU) was defined as the degree to which an individual believes that using a specific system would be free of effort. With respect to online grocery shopping context, we can analogically adopt that the individual behavioral intention of e-grocery consumers shopping through e-grocery explains the confidence that using app to order groceries online is easy.

According to John et al. the Internet requires high customer participation due to its interactive nature, to provide a better understanding of electronic consumers Uses and Gratification Theory (UGT) application required as mentioned in many researches and several researches have used UGT to ascertain customer experience associated with websites (Chen et al. (1999)) [5]. The fundamental variables of UGT used to find out whether customers' website experiences are multiplied but according to the literature, the most significant and robust dimensions include entertainment, informative and app irritation.

Therefore, we hypothesize as follows:

H1: Perceived usefulness will significantly impact attitude towards e-grocery app.

H2: Perceived ease of use will significantly impact attitude towards e-grocery app.

2.2. Uses and Gratification Theory (UGT)

Whiting and Williams (2013) [6] recognized ten motivations for using social media: entertainment, passing time, information seeking, social interaction, convenience utility, communication utility, relaxation, information sharing, expression of opinion, and surveillance or knowledge about others. Stanley (2015) [7], compared Facebook and Snapchat establishes that undergraduates use Snapchat more frequently than Facebook and their motivations to increase networking when joining Facebook and peer pressure and content appeal that opposed from using Snapchat. He also found there is a difference between genders in Uses and Gratifications Theory (UGT) among these social networking sites. Males join Facebook to network and meet new people while females join to monitor friends and families.

2.3. Attitude and Intention

Fishbein and Azjen (1980) [8], was first to propose Theory of Reasoned Action (TRA), to understand the factors determining attitude and behaviour. Fishbein and Azjen (1975) [9], TRA's main objective is to find the behavioural intention and attitude of an individual in a particular situation while performing the target behaviour. Many researchers have successfully applied Theory of Reasoned Action (TRA) to understand the acceptance of technology to predict the behavioural intention [10,11,12,13]. TRA tries to predict people's intention to accomplish a specific behaviour.

Therefore, we hypothesize as follows:

H3: Application entertainment will significantly impact attitude towards e-grocery app.

H4: Application informativeness will significantly impact attitude towards e-grocery app.

H5: Application irritation will significantly impact attitude towards e-grocery app.

H6: The attitude will significantly impact intention towards e-grocery app.

3. Research Objectives

- a) To identify the impact of demography variable on e-grocery app.
- b) To access the TAM factors that influence the e-grocery app.

- c) To understand the uses and gratification of consumers shopping using e-grocery app.
- d) To evaluate the attitude that influence the consumer intention towards e-grocery app.

4. Research Methodology

4.1. Research Design

The study adopted quantitative research design method using structured questionnaire. Self-administered questionnaire developed using in-depth literature review which was pretested through the pilot study. For the research study both primary and secondary data were collected. Primary data was collected using online survey method for both initial and final phase of the study. For this study, the chosen area was Chennai city and primary data was collected using online survey method. The sample size for the study is 205.

4.2. Questionnaire Design

The study adopted five-point Likert scale for the dependent variable (Intention to Use E-Grocery App) and independent variables are Perceived Usefulness, Perceived Ease of Use, Application Entertainment, Application Informativeness and Application Irritation. Suggestion from two subject knowledge experts has been taken for validating the questionnaire (Tull & Hawkins, 1994) [14].

4.3. Data Collection

Questionnaire was sent to 250 respondents out of which 215 responded and after rectification of incomplete survey only 205 resulted in functional response. A snowball sampling method adopted for the final study.

4.4. Data Analysis Method

Statistical software package used for the study were SPSS, AMOS and MS-Excel. Statistical tools used for the study were percentage analysis, t-test, correlation, regression, reliability and validity analysis, discriminant analysis, and structural equation modeling.

5. Conceptual Framework

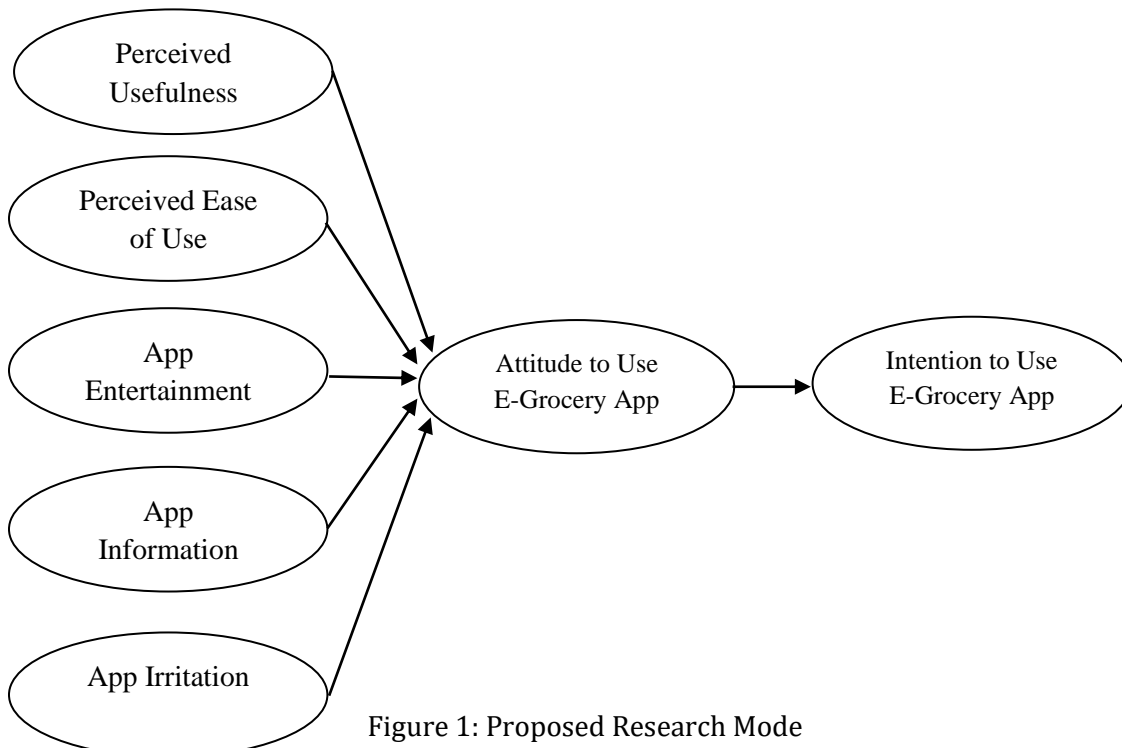


Figure 1: Proposed Research Mode

6. Constructs taken for the study

Table 1: Constructs Used

Latent variables	Items	Item Description
Perceived Usefulness	PU1	Using the E-Grocery App would enable me to make shopping decisions more quickly
	PU2	Using the E-Grocery App would make it easier to make shopping decisions.
	PU3	Using the E-Grocery App improves my performance in making shopping decisions.
Perceived Ease of Use	PEU1	Learning to use the E-Grocery App was easy for the first time user.
	PEU2	I find it easy to use the E-Grocery App to do what I want it to do.
	PEU3	It was easy for me to become skilful at using the E-Grocery App.
Application Entertainment	AENT1	I find it entertaining to use E-Grocery App.
	AENT2	I find that E-Grocery App is fun to use.
	AENT3	I feel excited when I use E-Grocery App.
Application Informativeness	AINFO1	It is important that E-Grocery App is able to give me information that is of interest to me.
	AINFO2	Accurate information in E-Grocery App improves my shopping effectiveness.
	AINFO3	Timely information in E-Grocery App improves my shopping performance.
Application Irritation	AIRRI1	I often feel irritated when browsing through E-Grocery App.
	AIRRI2	I feel that most E-Grocery App are confusing.
	AIRRI3	I find that most E-Grocery App are messy.
Attitude to use E-Grocery Application	ATT1	E-Grocery App makes it easy for me to build a relationship with this Online grocer.
	ATT2	I'm satisfied with the information provided by the E-Grocery App.
	ATT3	I feel comfortable in surfing the E-Grocery App.
Intention to use E-Grocery Application	INT1	I intend to join this E-Grocery App.
	INT2	I would like to visit this E-Grocery App again in the future.
	INT3	It was likely that I will join this E-Grocery App.

7. Data Analysis

7.1. Descriptive Statistics

Table 2: Demographic Profiles of Customers

S. No	Demography Variable	Category	Frequency	Percentage (%)
1	Gender	Male	119	58
		Female	86	42
2	Age	18-26	135	66

		27-34	33	16
		35-42	18	8
		43-50	12	5
		Above 50	8	3
3	Marital status	Married	93	45
		Unmarried	112	55
4	Occupation	Private	157	77
		Government	25	12
		Entrepreneur	16	8
		Others	7	3
5	Income	Less than Rs.10K	39	19
		Between Rs.10,001 to Rs.20,000	47	23
		Between Rs.20,001 to Rs.30,000	59	29
		Between Rs.30,001 to Rs.40,000	45	22
		Between Rs.40,001 to Rs.50,000	12	6
		More than Rs.50,000	4	2
6	Usage of E-Grocery apps	Once in day	66	32
		Twice in a day	10	5
		Thrice in a day	8	4
		Weekly once	103	50
		Monthly once	18	9
7	Location	Urban	86	42
		Semi urban	92	45
		Town	22	11
		Village	6	3
8	Reason for using E-Grocery apps	Cheaper price	57	28
		Food variety	82	40
		Save time	16	8
		Fun	51	25

From Table 2, for the final study total number of respondents considered was 205. 58 percent (N = 119) were men and 42 percent (N = 86) were female. The age groups of 66 percent respondents were 18-26 years, 16 percent belonged to age group of 27-34 years, 8 percent belonged to age group of 35-42 years, 5 and 3 percent belonged to age group of 43-50 and above 50 years respectively. 55 percent respondents were unmarried and 45 percent were married. Occupation of respondents belongs to Private sector were 77 percent, Government were 12 percent and 8 percent of respondents has their own businesses. 29 percent of respondents' income was between Rs.20001 to Rs.30000, 23 percent of respondents income was 10001 to 20000, and 22 percent of respondents income was 30001 to 40000, and 19 percent less than 10000 because of student group and 8 percent were above 40000. 50 percent of respondents do online purchase through e-grocery app every week, 32 percent of respondents do online purchase through e-

grocery app once in a day, 9 percent of respondents do online purchase through e-grocery app once in a month. 45 percent of respondents purchase through e-grocery app were from semi urban location, 42 percent of respondents purchase through e-grocery app were from urban location, 11 percent from town and 3 percent from village. 40 percent of respondents purchase through e-grocery app for food variety, 28 percent of respondents purchase through e-grocery app for cheaper price, 25 percent of respondents purchase through e-grocery app just for fun and 8 percent of respondents purchase through e-grocery app to save time.

7.2. Reliability and Validity

7.2.1. Items Loading

All the items used in this study have good loadings. All the constructs used in this study have item loading above 0.7. The item AIRRI2 has the highest loading of 0.820. The items PU3, AENT3, AINFO1, and INT1 has the lowest loading of 0.710.

7.2.2. Composite Reliability (CR)

The composite reliability also used to measure internal consistency relationship of the constructs. The value of composite reliability varies between 0 and 1. The constructs having higher composite reliability value indicating higher reliability. The acceptance of composite reliability value for exploratory research is 0.60 to 0.70. In this study, all the constructs have the composite reliability of above 0.7. The construct "Application Irritation" has the highest composite reliability value of 0.780 which is acceptable for the study.

Table 3: Reliability, Validity and Collinearity Statistics

Latent variables	Items	Items Loading	Constructs Reliability And Validity				Tolerance	VIF
			CR	AVE	MSV	Max R(H)		
Perceived Usefulness (PU)	PU1	0.732	0.775	0.535	0.410	0.781	0.830	1.204
	PU2	0.783						
	PU3	0.710						
Perceived Ease of Use (PEU)	PEU1	0.760	0.710	0.510	0.368	0.746	0.790	1.265
	PEU2	0.760						
	PEU3	0.746						
Application Entertainment (AENT)	AENT1	0.769	0.720	0.530	0.386	0.682	0.766	1.306
	AENT2	0.791						
	AENT3	0.710						
Application Informativeness (AINFO)	AINFO1	0.710	0.738	0.569	0.016	0.738	0.989	1.011
	AINFO2	0.763						
	AINFO3	0.746						

Application Irritation (AIRRI)	AIRRI1	0.796	0.78 0	0.526	0.05 0	1.09 1	0.995	1.005
	AIRRI2	0.820						
	AIRRI3	0.720						
Attitude to use E-Grocery Application (ATT)	ATT1	0.817	0.77 0	0.529	0.41 2	0.78 8	0.750	1.333
	ATT2	0.785						
	ATT3	0.791						
Intention to use E-Grocery Application (INT)	INT1	0.710	0.76 1	0.516	0.41 0	0.76 4	0.780	1.282
	INT2	0.724						
	INT3	0.747						

Notes: Constructs items loading, Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Variance (MSV); MaxR(H) = Maximum Reliability, Tolerance and Variance Inflation Factor (VIF)

7.2.3. Average Variance Extracted (AVE)

The Average Variance Extracted is used for examining each constructs convergent validity. The convergent validity shows the degree to which the mean of the items is positively related to other items in the same construct. To achieve construct validity of the constructs all the constructs should have AVE value greater than 0.5. In this study, all the constructs have AVE value 0.5 or greater hence the variable should be reliable (Fornell and Larcker, 1981) [15]. The measurement model established discriminant (divergent) validity as the Maximum Shared Variance (MSV) of all individual constructs have been found to be lower than their respective AVE estimates.

7.2.4. Variance Inflation Factor (VIF)

The multicollinearity in regression analysis is detected by Variance Inflation Factor (VIF). The multicollinearity means high correlation between constructs that affects regression analysis result. The multicollinearity affects relationship with dependents and independent variable in regression analysis. The VIF value of constructs 1 to 5 avoids multicollinearity issues. The constructs having VIF value within the range of 1 to 5, then the constructs are moderately correlated. The constructs having VIF value greater than 5, then the constructs are highly correlated so there will be a multicollinearity issue. In this study, all the constructs have VIF value within the range of 1 to 5, hence constructs are moderately correlated and no multicollinearity issue occurred.

7.3. Discriminant Analysis

Table 3: Discriminant Analysis

	PU	PEU	AENT	AINFO	AIRRI	ATT	INT
PU	0.727						
PEU	0.583	0.731					
AENT	0.595	0.471	0.677				
AINFO	0.714	0.502	0.603	0.608			
AIRRI	-0.01	0.045	-0.028	0.126	0.696		

ATT	0.224	-0.06	0.053	-0.04	-0.06	0.687	
INT	0.596	0.64	0.498	0.469	-0.07	0.205	0.718

Source: Author's compilation from primary data

Discriminant validity shows how a construct is different from the other constructs in the scale. Discriminant validity is established when the value of the square root of an AVE is higher than the values of its correlation coefficient (Fornell & Larcker, 1981) [16]. The values for correlation estimations and the square root of AVE (average variances extracted) as seen in Table 7.3 present the evidence of scale's discriminant validity. The diagonal value in the table shows the square root of AVE value. Consistent with Fornell and Larcker's (1981) [16] guidelines, it evidenced that these results explain adequate evidence for discriminant validity of the measurement model.

7.4. T-Test

Table 4: T-Test

	Gender	N	Mean	Std. Deviation	Std. Error Mean	T Value	Significance
Perceived Usefulness	Male	114	11.1228	2.37666	0.22259	1.048	0.173
	Female	81	10.7407	2.68225	0.29803		
Perceived Ease of Use	Male	114	10.0211	2.6359	0.24687	2.355	0.01
	Female	81	10.8554	2.1272	0.23636		

The t-test assesses whether the means of two groups are statistically different from each other. This analysis is appropriate whenever you want to compare the means of two groups, and especially appropriate as the analysis for the post test-only two-group randomized experimental design. The t test performed for gender and Technology Acceptance Model (TAM) dimensions. The result shows that the group differs in their opinion on TAM dimension, Perceived Ease of Use. The group perception does not differ on TAM dimension, Perceived Usefulness.

7.5. Correlations between Variables

Table 5: Correlations between Variables

Correlations							
	PU	PEU	AENT	AINFO	AIRRI	ATT	INT
PU	1	0.324	0.361	0.044	0.045	0.452	0.499
PEU		1	0.413	-0.02	0.044	0.418	0.387
AENT			1	0.077	-0.007	0.463	0.271
AINFO				1	-0.033	-0.017	-0.054
AIRRI					1	0.172	0.177
ATT						1	0.456
INT							1

The correlation analysis is a measure of association between two continuous variables. Correlation measures relationship between both size and direction of two variables. The correlation value is denoted by r. The r value ranges between +1 to -1. It means there is a positive and negative correlation between constructs. In this study, the constructs "Perceived Ease of Use" and "Attitude to use E-Grocery App" has

highest correlation value of 0.413 and 0.456 respectively. The constructs “Application Entertainment” and “Application Information” has lowest correlation value of 0.077 and -0.033 respectively.

7.6. Regression Analysis

Table 6: Regression Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.607a	0.369	0.352	1.85236
a. Predictors: (Constant), PERCEIVED USEFULNESS, PERCEIVED EASE OF USE, APP ENTERTAINMENT, APP INFORMATIVENESS AND APP IRRITATION				

Model		Unstandardized Coefficients		Standardized Coefficients	t	Significance
		B	Std. Error	Beta		
1	(Constant)	2.579	1.041		2.478	0.01
	PERCEIVED USEFULNESS	0.256	0.058	0.279	4.398	0
	PERCEIVED EASE OF USE	0.192	0.061	0.204	3.14	0
	APP ENTERTAINMENT	0.284	0.066	0.283	4.279	0
	APP INFORMATIVENESS	-0.035	0.049	-0.042	-0.73	0.47
	APP IRRITATION	0.149	0.057	0.151	2.598	0.01

Dependent Variable: Intention to Use E-Grocery App.

Independent Variable: Perceived Usefulness, Perceived Ease of Use, Application Entertainment, Application Informativeness and App Irritation.

Regression analysis is a mathematical measure of the average relationship between two or more variables in terms of the original units of the data. Regression analysis clearly indicates the cause and effect relationship between the variables. Regression analysis shows the relationship between dependent variable and independent variable. In this study, Perceived Usefulness, Perceived Ease of Use, Application Entertainment, Application Informativeness and Application Irritation are the independent variables, Attitude to use and Intention to use are the dependent variables. The result shows that Perceived Usefulness, Perceived Ease of Use, Application Entertainment, Application Informativeness and App Irritation are significant towards Attitude to use and Attitude to use are significant towards Intention to use.

7.7. Structural Equation Modeling

For this study we used two models, Technology Acceptance Model (TAM) and Uses and Gratifications Theory (UGT) which consists of Perceived Usefulness (PU), Perceived Ease of Use (PEU), Application Entertainment (AENT), Application Informativeness (AINFO) and Application Irritation (AIRRI) are the independent variables.

All these five constructs (PU, PEU, AENT, AINFO, and AIRRI) were used as latent variables in SEM construction. Since this model used for analyzing Attitude to use E-Grocery App and determining Intention to use E-Grocery App, these two constructs were also utilized as latent variables and path diagram was constructed as required. Respective observed variables for each construct were inserted and analysis was

carried out. Resulted values were improved by using authorized and systematic procedures and final results were obtained and discussed the same as below.

Chi-square test was considered as most fundamental measure to analyze overall fit. Since chi-square probability value was greater than 0.05, this proposed model was considered as acceptable and consistent model fit with the observed data. Next parameter was RMR (Root Mean Square Residual) value. Small (< 0.05) RMR value indicates better model fit. Since RMR value of this model was 0.048, it was considered as good fit.

Another parameter was GFI (Goodness of Fit Index) which has to be greater than or equal to 0.90 in order to get good model fit. Since GFI value of this model was 0.921, it was considered as good fit. AGFI (Adjusted GFI) was another parameter to justify good model fit with greater than 0.9 values. Since AGFI value of this model was 0.911, it was considered as good fit.

NFI (Normed Fit Index / DELTA1), RFI (Relative Fit Index / RHO1), IFI (Incremental Fit Index / DELTA2 and CFI (Comparative Fit Index) were another few parameters used for justifying the model fit with greater than 0.9 value. Close to one indicates a very good fit and equal to one indicates a perfect fit. Gerbing and Anderson (1993) [17] suggested that RNI, CFI and IFI parameters were used for analyzing good model fit parameters. Analysis of this research model were given the results of NFI = 0.978, RFI = 0.964, and CFI = 0.942. Since all the values were greater than 0.9, justified that arrived model has good model fit. All the above values were given in Table 7 along with standard acceptable values.

RMSEA (Root Mean Square Error of Approximation), was another vital parameter for justifying the good model fit with the four categories of value ranges, viz., from 0.00 to 0.05 indicates close fit, from 0.05 to 0.08 indicates fair fit, from 0.08 to 0.10 indicates mediocre fit, and above 0.10 indicates poor fit. PCLOSE was another parameter which related with RMSEA. Value of PCLOSE has to be greater than or equal to 0.05 for justifying close fit. Table 7 shows both RMSEA and PCLOSE values of model indicate 0.049 and 0.054 respectively. Since RMSEA value was less than 0.05 and PCLOSE value was greater than 0.05, this model categorized under close fit model.

Table 7: Structural Equation Modeling

Model fit parameters	Recommended values	Values obtained
$\chi^2/d.f.$	≤ 3.00	2.716
GFI (Goodness of Fit Index)	≥ 0.90	0.921
AGFI (Adjusted Goodness of Fit Index)	≥ 0.90	0.911
CFI (Comparative Fit Index)	≥ 0.90	0.942
RFI (Relative Fit Index)	≥ 0.90	0.964
NFI (Normed Fit Index)	≥ 0.90	0.978
RMR (Root Mean Square Residual)	≤ 0.05	0.048
RMSEA (Root Mean Square Error of Approximation)	≤ 0.05	0.049
PCLOSE	≤ 0.05	0.054

8. Conclusion

In the last decade, e-commerce was considered as one of the major innovations to the corporate industry. As a part of e-commerce, m-commerce which is gaining popularity among consumers due its flexibility, convenience, easy to use technology, etc. In this study, we have tested the online grocery applications using Technology Acceptance Model and Uses and Gratifications Theory. From the findings, it is clear that consumers are moving towards online shopping with respect to grocery items. As far as the consumer are concern, using the technology at ease helps them to adopt using the e-grocery application. We also found that e-grocery companies are sending too many notifications due to its intense competition, this irritates the consumers in using the application. If online grocery companies limit these notifications

and focus on improving product variety, best price, quick delivery, reward programs, etc., will help consumers to adopt this latest trend.

References:

- [1] Nguyen, D.H.; de Leeuw, S.; Dullaert, W.E. Consumer behaviour and order fulfilment in online retailing: A systematic review. *Int. J. Manag. Rev.* 2018, 20, 255–276.
- [2] Kolesar, M.B.; Galbraith, R.W. A services-marketing perspective on e-retailing: Implications for e-retailers and directions for further research. *Internet Res.* 2000, 10, 424–438.
- [3] John, Eighmey., and LorLa, McCord., (1998), "Adding Value in the Information Age: Uses and Gratifications of Sites on the World Wide Web," *Journal of Business Research*, 41, pp. 187-194.
- [4] Davis, F. D., (1989), "Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology," *MIS Quarterly*, 13(3), pp. 319-340. <http://dx.doi.org/10.2307/249008>
- [5] Chen, Qimei., and William D. Wells., (1999), "Attitude Toward the Site," *Journal of Advertising Research*, (September/October), pp. 27-37.
- [6] Whiting, A., and Williams, D., (2013), "Why people use social media: A uses and gratifications approach," *Qualitative Market Research: An International Journal*, 16, pp. 362–369.
- [7] Stanley, B., (2015), "Uses and gratifications of temporary social media: A comparison of Snapchat and Facebook," Fullerton: California State University, Fullerton.
- [8] Ajzen, I., and Fishbein, M., (1980), "Understanding attitudes and predicting social behaviour," Englewood Cliffs, NJ: Prentice-Hall.
- [9] Fishbein, M., and Ajzen, I., (1975), "Belief, attitude, intention and behavior: An introduction to theory and research," Reading, MA: Addison Wesley.
- [10] Davis, F. D., Bagozzi, R. P., and Warshaw, P. R., (1989), "User acceptance of computer technology: A comparison of two theoretical models," *Management Science*, 35(8), pp. 982-1003.
- [11] Bobbitt, L. M., and Dabholkar, P. A., (2001), "Integrating attitudinal theories to understand and predict use of technology-based self-service: The internet as an illustration," *International Journal of Service Industry Management*, 12(5), pp. 423-450.
- [12] Sheppard, B. H., Hartwick, J., and Warshaw, P. R., (1998), "The Theory of Reasoned Action: A meta analysis of past research with recommendations for modifications in future research," *Journal of Consumer Research*, 15(3), pp. 325-343
- [13] Yoh, E., Damhorst, M. L., Sapp, S., and Laczniak, R., (2003), "Consumer adoption of the internet: The case of apparel shopping," *Psychology and Marketing*, 20(12), pp. 1095-1118.
- [15] Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388.
- [17] Gerbing, D. W., and Anderson, J. C., (1993), "Monte Carlo evaluations of goodness-of-fit indices for structural equation models," In K. A. Bollen and J. S. Long (Eds.), *Testing structural equation models*, pp. 40–65, Newbury Park, CA: Sage.