

AN EVALUATION OF ACCEPTANCE OF FOOD DELIVERY APPLICATIONS AMONG HOMEMAKERS: AN INTEGRATED APPROACH OF TAM AND TPB

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ABSTRACT

This study investigates how homemakers use e-commerce and food delivery apps, focusing on what influences their choices. The research combines several theories about technology use to create a comprehensive model. Perceived usefulness, perceived ease of use, subjective norms, perceived behavioural control, trust and attitude are taken as the independent variables where as actual usage is considered as the dependent variable in the proposed model. Behavioural intention to use acts as a mediating variable. The study surveyed 199 homemakers in Chennai, India, asking about their experiences and opinions. Convenience sampling method is adopted for the study. Questionnaire was framed using the 5-point Likert scale. SPSS 25 and AMOS 25 were the statistical tools used. Findings show perceived usefulness, subjective norms, perceived behavioural control and attitude have an influence on actual usage, other variables like perceived ease of use, trust seems to have an insignificant influence. Overall, this study gives valuable insights into what makes homemakers choose and use e-commerce and food delivery apps, which can be useful for both businesses and researchers in this field.

Keywords: E-Commerce, Food Delivery Applications, Homemakers, Technology Acceptance Model (TAM), Theory of Planned Behaviour (TPB).

INTRODUCTION

Global Perspective of E-Commerce App Usage by Homemakers

A global view of e-commerce use among homemakers tapping into e-commerce apps at home offers multiple lenses which in turn shapes a broad spectrum of experiences involving technical availability as well as customer behaviour. As a result, Homemakers have started depending more & more on e-commerce for fulfilling their shopping needs helping them in doing business while sitting at the comfort of home transforming traditional shopping methodology. For the homemakers, it is one more good news because with e-commerce, have great benefits as: global marketing reach, and save on costs. 24-hour service cuts time allocations towards shopping. Homemakers can get access to this and the opportunity to learn proper purchasing so that they can choose without geo boundaries (Triandini et al., 2020). Besides, the customers will have better purchase power and satisfaction with the capability to compare prices and products online (Yusoff et al., 2020). Researchers have found that

customer satisfaction is an important factor that affects the continued use of e-commerce platforms, and perhaps be more for homemakers who are usually placed great quality on convenience and service eminence in their shopping process (Yusoff et al., 2020; Sharma & Lijuan, 2015).

Statistical Studies on Usage Rate

The technology not only improves the holistically online shopping experience but also develops buyer intentions among users in addition which seems interesting to homemakers who are at all times reckoning to make better possible choices (Diana, 2023). Apart from the place, many of the demographic factors have a great result on e-commerce adoption among the homemakers. Emphasis was also given to the fact that their engagement with e-commerce platforms varies depending on income levels, access to technology and educational background (Ünver et al., 2023; Clarke et al., 2015). In 2023, e-commerce applications are surging in terms of usage by homemakers. As an example, a survey found that nearly 75% of homemakers in the urban areas use e-commerce platforms frequently to purchase groceries as well as household supplies. Convenience and security do also have a significant influence on e-commerce use, especially in the case of homemakers. According to research, 68 % of users continue participating with e-commerce applications because they are easy-to-use and security and risk perception (62%) remain concerns for them still (Pramudia et al., 2023).

Factors Influencing Application Usage

Among other aspects ease of use significantly affects homemakers' use of e-commerce applications. Investigations reveal that homemakers are more likely to utilize e-commerce services if the sites are user friendly. Another analysis remarked that the way users navigate e-commerce applications is crucial for their usage (Ghobakhloo et al., 2011). This corresponds to the Technology Acceptance Model (TAM), indicating that the ease with which a system can be used is vital for its application (Awa et al., 2015). When owners of a home sense that e-commerce apps aid their shopping journey, they are more likely to utilize them (Garg & Choeu, 2015).

Another interesting element is Organizational commitment, it refers to the availability of resources, technology and structure in organisation. It was established in a study conducted on Malaysian firms that organizational readiness received a high rating as the factor that could enhance e-commerce among SMEs (Shaharudin et al., 2012). This implies that the same level of readiness in households, for instance adoption of technology like internet, is also crucial if homemakers are to interact with e-commerce platforms. Another reason is that market forces and other social factors predetermine the extent of e-commerce through compelling consumers and firms. For example, when other people in the same group are using e-commerce, homemakers will also be encouraged to do the same. The research by (Ahmad et al., 2015) pointed to the fact that forces from the outside world, such as families and friends, impact the choice of e-commerce applications adoption.

Impact of Behavioural Intention

Besides, behavioural intention is used as an indicator of actual usage behaviour and determines the frequency and effectiveness of the use of e-commerce applications by homemakers for shopping purposes. Therefore, behavioral intention is influenced by factors such as perceived usefulness, perceived ease of use and social influence. A study shows that when homemakers consider the e-commerce applications as useful and easy to use then there will be a very high tendency to use them (Phan et al., 2020). However, trust is influential in

determining behavioural intentions. In a study on food and beverage ordering during the COVID-19 pandemic, customer perception that plays a critical role in trust, determined behavioural intentions (Hamid et al., 2023). Social influence is another important determinant of behavioural intention. Findings have revealed that communication, from and with, other people can influence one's decision and the extent to which they will utilize e-commerce applications. For instance, a work on e-commerce usage among micro, small and medium enterprises (MSMEs) revealed that perceived social norms were influential in determining behavioural intention (Awaluddin et al., 2022) Figure 1.

Conceptual Model

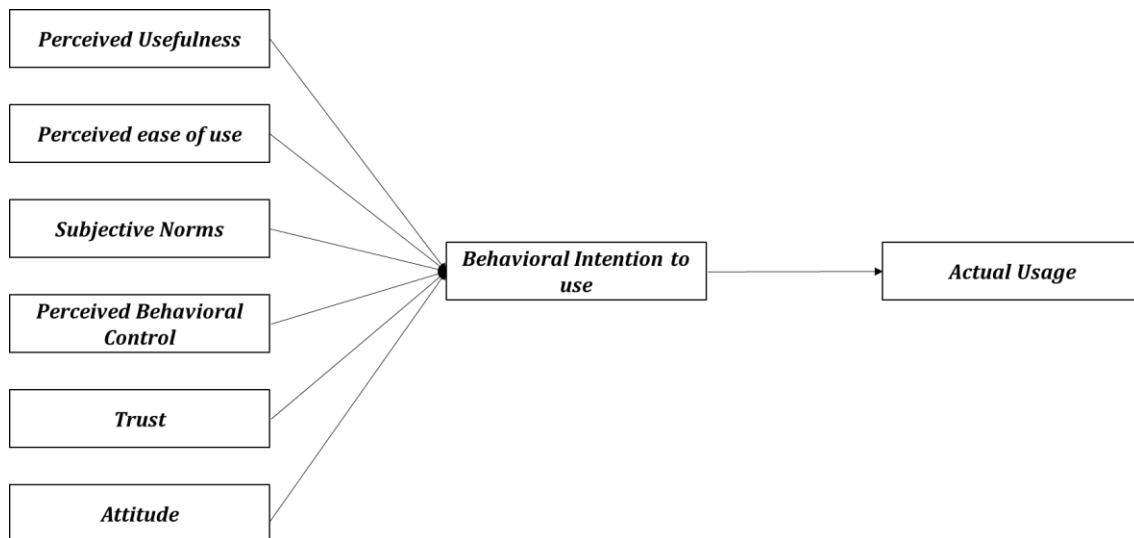


FIGURE 1
RESEARCHER PROPOSED MODEL

Research Questions

- Is there a correlation between the independent variables and Dependent Variables?
- Do the determined aspects have an influence on actual usage of Food delivery applications?
- Does Behavioural Intention to use act as a mediating variable amongst the independent variable and dependent variable?
- Would the users have a Positive behavioural intention in usage of food delivery apps?
- Is there a difference between the behavioural intention and actual usage of food delivery apps among women who are homemakers?

Research Objectives

- To find out the determinants of actual usage of food delivery application.
- To find the relationship between Independent Variables and dependent variable.
- To evaluate the influence of determined aspects on Actual usage.
- To find out the difference between the demographic factors and perception on independent constructs
- To determine whether Behavioral Intention to use serves as a mediating variable between the independent and dependent variables.
- To offer suggestions for the development in actual usage of food delivery apps among homemakers.

LITERATURE REVIEW

Definition

Food ordering applications are a subcategory of "digital disruption" within the technology sector. They alter not just client behaviors but also the operational procedures of restaurants. They play a crucial part in the growth of the food delivery industry. The average annual growth rate for restaurants from 2014 to 2018 was roughly 10%, above the average annual growth rate for all restaurants by 3-4%.

FDAs are classified into two categories: chain restaurants offering online ordering, like as KFC, Domino's, and Pizza Hut, and third-party services such Uber Eats, Zomato, and Baidu Waimai (Roh & Park, 2019). OFD is an innovative paradigm for meal ordering that corresponds to the social and individual needs of consumers. Numerous studies have examined perceived utility (PU) and perceived ease of use (PEOU), along with attitudes and behavioral intentions (BI) about the use of certain technology, based on the Technology Acceptance Model (TAM) (Davis et al., 1989) and/or the Theory of Planned Behavior (TPB) (Ajzen, 1991). In this regard, have analyzed technology adoption using these frameworks.

REVIEW OF CONSTRUCTS

Perceived Usefulness

Beyond the TAM and TPB developed by (Davis, 1989; Ajzen, 1991), other variables also impact behavioral intention. Perceived utility (PU) has an immediate impact on BI, according to the TAM. When someone thinks that using a certain system will help them perform better on the job, that's PU (Davis, 1989). The projected performance of a technology is related to the amount of intention to use it, according to (Roh & Park, 2019). According to PU directly affects BI. Therefore, customers should be more inclined to utilize OFD if they see it as valuable.

Perceived Ease of Use

In the TAM, (Davis, 1985) found two cognitive reactions that predicted ATT: perceived ease of use (PEU) and perceived usefulness. In (Davis, 1989) PEU means "the extent to which a person feels that the use of a given system would be effortless". PEU represents degree of order, food and restaurant selection, and order monitoring in OFD, whereas PU denotes perceived utility and value of app-based food purchases. Some describe how PEU and PU favorably impact ATT towards OFD.

Subjective Norms

Subjective norms also affect delivery of food applications. Found a modest positive connection between SN and BI for online grocery purchasing.

In the TPB, for instance, SNs predict ATT directly. Customers will be more receptive to OFD if they believe their friends, relatives, and other relevant individuals support it. Many research have shown this association to be important in grocery shopping online or on mobile platforms.

Perceived Behavioural Control

Ajzen showed that PBC has two components: Perceived control includes as its aspects self-competence and ability to control situations. Defined self- efficiency as the simplicity with which a user executes a certain behavior. Believe that PBC comes from additional elements such as managing related challenges and the effectiveness in using technology. In their analysis pointed out that there is a solid positive correlation between PEU and PBC.

Trust

Specific actions reaffirmed the prior results indicating that BI in online grocery shopping is significantly driven by consumers' ATT. Additional studies dealing with food applications point out that trust consists of "a party's acceptance of exposure to another's actions due to the hope that the latter will act in a desired way" according to description. Multiple researchers have connected TR with SNs by applying the idea of trust transferability. Show that TR may shift between various environments.

Research reveals that trust (TR) affects ATT and achieving success in food delivery relies heavily on trust in mobile applications. This revealed that TR shaped ATT in the same way the findings were restated by the study. There is a notable effect of TR on ATT.

Attitude

Certain practices reinforced findings about the key role of ATT in predicting BI in online grocery buying. Additional research focusing on the role of apps in food buying agrees with the key role of ATT in anticipating BI (Lee et al., 2017).

In (Troise, 2021) reflect earlier findings that indicate a customer's online food delivery attitude is supremely affected by their desire to shop online. Researchers evaluated the influence of applications on food purchases and how that relates to the intention behind actions.

Behavioural Intention

Based on the TPB model it is suggested that PBC and SNs might shape BI. The concept of PBC indicates the personal feeling of control in carrying out the behaviour. Research, shows that PBC serves as an important predictor for the BI of using online food delivery services. Confirm that analyzing the BI to purchase food online requires the inclusion of PBC.

Behavioural intention correlates with measures of price sensitivity and acquisition alongside information sharing. Once the consumer has an experience with the delivery of goods and services, he reacts in a way that is highly influenced by his buying history. Behavioural intention has been also identified as having an impact on building loyalty towards social media and electronic household goods. In this regard, previous research has reported a positive association of brand awareness with purchase intention concerning social networks and information heuristics. Consumer interactions with MOFDA on the positive side, we assumed that could encourage them to remain consumer of organic food.

Actual Usage

The level of use by users of a specific technology or service after they develop a behavioural intention is called actual utilisation. Reality of usage depends on how users see the convenience (PEU), usefulness (PU), their attitude (ATT), say in behaviour (PBC), and trust (TR) within TAM and TPB models (Davis, 1989; Ajzen, 1991). These components interact to shape users' motivations and then determine how consistently they retain the device.

In online food delivery services customers frequently and regularly utilize digital platforms for ordering meals. Users frequently return to a platform when they view it as accessible and are convinced it increases their food ordering satisfaction according to research. When users have good opinions and trust in the service provider more use occurs. (Hwang et al., 2021).

THEORETICAL FRAMEWORK

(TAM)

Customers respond to evolving technology in a variety of ways. The TAM, a modified version of the TRA, is a well-known theory used by researchers to explain behavioral intention, and it can also be used to study information technology adoption.

H₀₁: PU positively influences BI in the usage of food delivery applications

Individual beliefs regarding the enhancement of operational efficiency by ICT are shaped by the TAM and directly affect the reuse intention. Understanding of the degree of technology acceptance for its purposes and the performance of ICT comes from the TAM. Many previous research projects examined what affects how consumers feel about using food delivery services. For example, the authors analyzed customer attitudes in the process of food-delivery application, and Davis identified two principles of cognitive response for predicting ATT: In this analysis of perceptions are included PEOU and PU as essential constructs. According to Davis's definition PEOU reflects the perceived efficacy with which an individual can manage a system. For FDAs this covers the driving forces behind the choice of a food-ordering application and the selection of an FDA. This term PU signifies the perceived benefit of using applications for ordering food.

H₀₂: PEOU positively influences BI in the usage of food delivery applications.

When customers perceive fast and easy ordering and tracking processes with food delivery apps, they are more likely to continue using them. H₀₂ indicates that the perception of ease of use positively affects behavioural intent.

H₀₃: PBC positively influences BI in the usage of food delivery applications.

The ability to perform actions is influenced by perceived behavioural control (PBC), as shown by (Ajzen, 1991) in the TPB. As users perceive they control the experience with a food delivery app based on their skills and tech access in regards to their willingness to use, the app grows. According to H₀₄ perceived behavioural control will enhance the intent to adopt food delivery services.

H₀₄: Trust positively influences BI towards the usage of food delivery applications.

Trust in OFD apps relates to users' belief that the app is reliable and secure. Trust can influence users' willingness to adopt the technology. Hence, H₀₅ postulates that trust positively influences behavioural intention to use food delivery apps.

Theory of Planned Behaviour (TPB)

H₀₅: SNs positively influences BI towards the usage of food delivery applications.

TPB is a behavioural science theory that explains and explains human behaviour. The study was depending upon on the TRA that was posited by (Ajzen & Fishbein, 1975). It is a theory that orates the conduct of people in the society because people are rational, use information systematically and always look at the consequences of their actions (Ajzen, 1991).

However, noted that the TRA is not very helpful in explaining behaviours that an individual can only partly control. He or she cannot make a choice which action to take, which in turn may lead to other opportunities or resources including monetary, temporal, expertise or social. Expanded the TRA in 1985 with the TPB which included perceived behavioural control as another factor. The theory also stated that people have plans for their actions, and that success is a function of the desire to manage environmental events that interfere with the plan. Most behaviours falls under the volitional control, which consists of three different factors: These are ATT, SNs, and PBC.

In (Troise, 2021), the present research also finds that the most significant determinant of the customer's online food delivery attitude is his/her attitude towards online shopping. The use of apps in the purchase of food in general and attitude (ATT) to predict behavioural intention (BI) was also investigated extensively. SN is defined as "the perceived pressure from others to perform or not to perform the behaviour". It is also a factor that has a connection with the application of FDAs. The authors identified a positive link between BI and SN in rendering the services of food deliveries and online shopping.

Integration of TAM and TPB

H₀₆: ATT positively influences BI towards the use of food delivery apps.

TAM (Davis, 1989) along with TPB (Ajzen, 1991) have origins in the theory of reasoned action. The three frameworks show that a person's inclination or disinclination to perform an act greatly influences user behavior. In both theoretical frameworks TAM and TPB the evaluation of a behaviour (ATT) shapes the readiness to perform that behaviour (BI) (Davis, 1989; Ajzen 1991). In (Ajzen, 1991) describes attitude as indicating how positively or negatively a person views a behavior and may encourage individuals to take that action. The focus of H₀₆ is examining the link between attitude and the intention to act.

H₀₇: BI positively mediates the relationship between the independent variables and actual usage.

Numerous studies have embedded this understanding within the modification of TAM and TPB for OFD. The work enhanced the TAM to incorporate trust and innovativeness effects on views regarding OFD services; in comparison other researchers aimed to analyze different drivers (convenience and hedonic motivations) and benefits. Added various constructs to the TPB model to better grasp what affects consumers' BI in online grocery purchasing. Included constructs linked to users' characteristics to adequately represent motivation in online grocery buying. In 1985 Davis pointed out that researchers must modify the TAM to fit various areas by recognizing the impacts on PU and PEU.

Justification of Model Adoption

In this part of the model, we use both the (TAM) and (TPB) to study the variables affecting user Behaviour Intention (BI) for accessing Food Delivery App (FDA) and real usage of these applications. The TAM framework designed by (Davis, 1989) indicates that the essential predictors of technology acceptance are Perceived Usefulness (PU) and Perceived Ease of Use (PEU). Users who perceive FDAs as beneficial to their performance and straightforward will probably adopt them and this supports the creation of H₀₁ and H₀₂. The TPB model consists of Subjective Norms and Perceived Behavioural Control that improve BI; SN represents social influence on users and PBC assesses how users perceive their skills with the app. It was theorized that SN and PBC have positive effects on BI where H₀₃ and H₀₄ were concern. So, trust being the most commonly added dimension of TAM also comes into play since as users feel safe and secure with use of the application, their intentions to use it goes high forming H₀₅. The plain reason is that both of these models consider Attitude (ATT) as one of the primary determinants of BI and in more direct terms whenever the users have a positive ATT towards the application then the user intention will tend to increase as was put forth in H₀₆.

In the end, BI acts as a bridge between the independent variables; PU, PEU, SN, PBC, trust & attitude and Actual Usage with H7 claiming that actual usage of FDAs is a result of high BI. We conclude, therefore, that this model on the acceptance of food delivery apps is able to integrate and provide relevant behavioural determinants from different theories.

Research Gap

This research gap reveals several critical problems. While past research focused on behavioural intention for food delivery services the elements that significantly impact usage versus simple intention have been largely overlooked. This study aims to link the gap by probing in what way elements such as perceived ease of use and trust influence actual usage behaviour. Even though models such as the Theory of Planned Behaviour (TPB) and the Acceptance Model (TAM) discuss behavioural intention the importance of their mediating effect on actual usage compared to independent variables needs further examination. The researchers will investigate if behavioural intention plays a role in modifying this linkage.

Studies on gender-specific behavioral variations in the use of food delivery apps are also lacking, especially when it comes to homemakers. In order to shed light on this demographic, the purpose of this study is to investigate these variations. Furthermore, although age and income are examples of demographic factors that have been taken into account when it comes to the adoption of technology, nothing is known about how these factors affect how independent variables like trust and perceived behavioral control in meal delivery applications are perceived. This study aims to provide a thorough knowledge of how behavioral intention mediates actual usage by merging TAM and TPB, with an emphasis on homemakers and gender-related inequalities.

RESEARCH METHODOLOGY

Primary Data

The Primary source of data collection was using the survey method. Questionnaire was framed and distributed to the respondents. Care was taken in duly framing the questionnaire in order to match the objective of receiving the perspective of respondents. Data was collected from women of different age group, who are homemakers.

Secondary Data

Published articles, Journals, Official websites were referred for collecting the secondary data. Published data was collected from the sources like dissertation, magazine, bulletins, books and other acceptable/ valid sources.

INSTRUMENTS USED AND CONSTRUCTION OF QUESTIONNAIRE

Type of Instrument

A well balanced, close ended and structured questionnaire (Instrument) was framed. The respondents would select the multiple-choice answers in line with the five-point Likert scale. Each answer was denoted with numbers from 1-5; with 1 being Strongly Disagree and 5 being strongly agree.

Choice of Study Area

Since the researcher is from Chennai and having the researcher's accessibility in mind, Chennai was purposefully selected as the choice of study area. Selective rural areas in Chennai out of 67 were covered for distributing and obtaining the questionnaire.

SAMPLING METHOD

Sampling Technique and Sample Size

In (Deming, 1966) defines sampling as the science and craft of regulating and assessing the accuracy of valuable statistical data using probability theory. Convenience sampling indicates the method of gathering data from a research cohort that the researcher can easily contact (Rahi, 2017). To obtain data promptly and accurately the non-probability sampling technique called convenience sampling is utilized (Alvi, 2016). People opted in based on their accessibility and eagerness (Acharya et al., 2013). Where the population is unclear convenience sampling is the best option. 260 homemakers received 210 completed questionnaires out of 260 distributed. Once the earlier problems were accounted for the sample size stood at 199 Tables 1 & 2.

RESULTS AND DISCUSSION

Table 1		
SURVEY QUESTIONNAIRE		
Perceived Usefulness (PU)	PU1	I see my efficiency in ordering food enhanced using the food delivery apps.
	PU2	I see using the Food delivery apps are so useful for my daily life.
	PU3	I see using food delivery applications saves me time.
	PU4	Food delivery apps offer a wider variety of food options.
	PU5	I see ordering food is so easier by using the food delivery applications.
Perceived Ease of Use (PEU)	PEU1	I see learning to use food delivery applications is easy.
	PEU2	I see the process of ordering food is clear and understandable through applications. .
	PEU3	I see food delivery applications are so flexible to interact.
	PEU4	I believe using food delivery applications to become skilful is so easy for me.
	PEU5	Overall, I find food delivery apps easy to use.
Subjective Norms (SN)	SN1	People who are significant to me believe I should utilize food delivery applications.
	SN2	My family members encourage me to utilize food delivery applications.
	SN3	My friends believe that using food delivery applications is advantageous.
	SN4	I feel social pressure to utilize food delivery apps.
	SN5	Using food delivery apps is considered trendy in my social circle.
Perceived Behavioural Control (PBC)	PBC1	I believe that I have the requisite resources to use food delivery applications.
	PBC2	I believe that possess the requisite understanding to use food delivery applications.
	PBC3	I am certain of my proficiency with food delivery applications.
	PBC4	I can use food delivery apps without any assistance.
	PBC5	Using food delivery apps is entirely within my control.
Trust (TR)	TR1	I trust that food delivery applications will safeguard my personal data.
	TR2	Food delivery applications are reliable in their service.
	TR3	I believe the food quality from delivery apps meets my expectations.
	TR4	I trust the payment systems used by food delivery apps.
	TR5	Overall, I am so confident in using food delivery apps.
Attitude (AT)	AT1	I believe utilizing food delivery apps is a prudent Choice.
	AT2	I have a favourable attitude to use food delivery apps.
	AT3	I believe utilizing food delivery applications is so beneficial for me.
	AT4	I like the concept of using food delivery applications.
	AT5	Using food delivery apps is pleasant.
Behavioural Intention (BI)	BI1	I plan to use food delivery apps in the future.
	BI2	I intend to use food delivery apps frequently.
	BI3	I will recommend food delivery apps to others.
	BI4	I liked using food delivery applications over conventional methods.
	BI5	I will continue to use food delivery applications.
Actual Usage (AU)	AU1	I frequently utilize food delivery applications.
	AU2	I utilize food delivery applications for most of my food orders.

	AU3	I depend on food delivery apps for my daily meals.
	AU4	I use multiple food delivery apps.
	AU5	I have increased my usage of food delivery apps over time.

Source: Author Proposed Survey questionnaire for data collection

Demographic Characteristics	Frequency (n=199)	Percentage (%)
Age		
25-30	52	26.10%
30-39	68	34.20%
40-49	47	23.60%
50-59	32	16.10%
Level of Education		
Secondary School	28	14.10%
Higher Secondary School	45	22.60%
UG	84	42.20%
PG	42	21.10%
Marital Status		
Single	67	33.70%
Married	121	60.80%
Separated	8	4.00%
Widowed	3	1.50%
Family Type		
Nuclear Family	132	66.30%
Joint Family	67	33.70%
Level of Income		
Rs 5001-10000	38	19.10%
Rs 10001-20000	73	36.70%
Rs 20001-30000	52	26.10%
Above 30000	36	18.10%
Geographical Location		
Rural	56	28.10%
Semi Urban	72	36.20%
Urban	71	35.70%
Family Size		
2	31	15.60%
3	58	29.10%
4	79	39.70%
Above 4	31	15.60%

Source: Author's Calculation

According to the table 2, 34% (68) of individuals falls under the age category of 30-39, 26% (52) of individuals fall under the age category of 25-30, 23% of the individuals fall under the category of 40-49 and 16% fall under the category of 50-59.

Regarding the level of education, out of 199 respondents, 84 respondents have completed under graduation (42.2%), 45 respondents have completed their higher secondary school (22.6%), 42 respondents have completed their post-graduation.

In terms of marital status, 121 respondents are married comprising of 60.8% and the remaining percentage fall under the categories; single. Separated or widowed comprising of 39.2%.

When come to family type, 132 respondents fall under the category of nuclear family (66.3%) while 67 respondents fall under the category of joint family (33.7%).

When comes to level of income, 73 respondents fall under the income category of 10,001 – 20,000 (36.7%), 52 respondents fall under the category of 20,001 – 30,000 (26.1%). 38 respondents fall under the income category of 5,001 – 10,000 (19.1%), 36 respondents fall under the income category of above 30,000 (18.1%).

In terms of geographical location, 72 respondents are from the semi-urban category, 71 Individuals are from the urban category and 56 Individuals are from the rural category.

In terms of family size, 79 individuals have responded as they have 4 dependents, where 58 individuals have responded as they have 3 dependents, 31 individuals have responded as they have 2 dependents, 31 individuals have responded as they have above 4 dependents Table 3.

Construct	No of Items	Cronbach's Alpha
Perceived usefulness	5	0.733
Perceived ease of use	5	0.733
Subjective Norms	5	0.699
Perceived Behavioural Control	5	0.781
Trust	5	0.695
Attitude	5	0.757
Behavioural intention	5	0.733
Actual Usage	5	0.753

Source: Author's Calculation

Cronbach's Alpha is termed as in order to analyze an instrument which is expected to provide the same measure of outcomes, when there are repeated measurements, reliability is used (Taber, 2018).

Table 3 shows that, From the Cronbach's alpha reliability levels, values are falling under 0.60 to 0.80 is reliable. From the obtained results, it is seen that all the variables are close to 0.695 to 0.781 Table 4.

Construct	PU	PEU	SN	PBC	TR	AT	BI	AU
Perceived usefulness (PU)	1							
Perceived ease of use (PEOU)	.750**	1						
Subjective Norms (SNs)	.742**	.727**	1					
Perceived Behavioural Control (PBC)	.762**	.742**	.742**	1				
Trust	.748**	.737**	.684**	.767**	1			
Attitude	.769**	.783**	.772**	.791**	.755**	1		
Behavioural intention	.769**	.733**	.738**	.791**	.718**	.762**	1	
Actual Usage	.754**	.727**	.733**	.787**	.721**	.777**	.756**	1

** Correlation is significant at the 0.01 level (2-tailed).

Source: Author's Calculation.

To determine the correlation coefficient for the two variables correlation analysis is employed. When the coefficient value varies from +1 to -1 the relationship is viewed as strong; however, if it is close to 0 a major connection between variables is present.

The correlation between Attitude and Perceived behavioural control is the highest at 0.791 from table 4. The correlation between Behavioural Intention and Perceived behavioural control reaches 0.791. At 0.684 trust and subjective norms exhibit the minimum correlation Table 5.

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.846 ^a	.717	.708	2.00365	.717	80.893	6	192	0.000

a. Predictors: (Constant), AT, TR, SN, PEU, PU, PBC

Source: Author’s Calculation.

From the table 5, the regression model results measuring the correlation coefficient (0.846) is seen. R Squared value is 0.717 which literally explains that almost 71% of the variance was explained by Actual Usage. Adjusted R Square value comes to 0.708 with a standard error approximation of 2.003. The F Value is 80.893. Since the significance of P value (0.000) is less than the alpha value (0.05), thus proving the significance of model Table 6 & Table 7.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1948.528	6	324.755	80.893	.000 ^b
	Residual	770.809	192	4.015		
	Total	2719.337	198			

a. Dependent Variable: AU

b. Predictors: (Constant), AT, TR, SN, PEU, PU, PBC

Source: Author’s Calculation.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.764	.889		.859	.391		
	PU	.172	.074	.166	2.321	.021	.289	3.464
	PEU	.084	.072	.082	1.163	.246	.300	3.337
	SN	.148	.075	.134	1.980	.049	.324	3.089
	PBC	.275	.071	.285	3.856	.000	.270	3.702
	TR	.086	.076	.078	1.137	.257	.313	3.190
	AT	.193	.077	.197	2.523	.012	.241	4.146

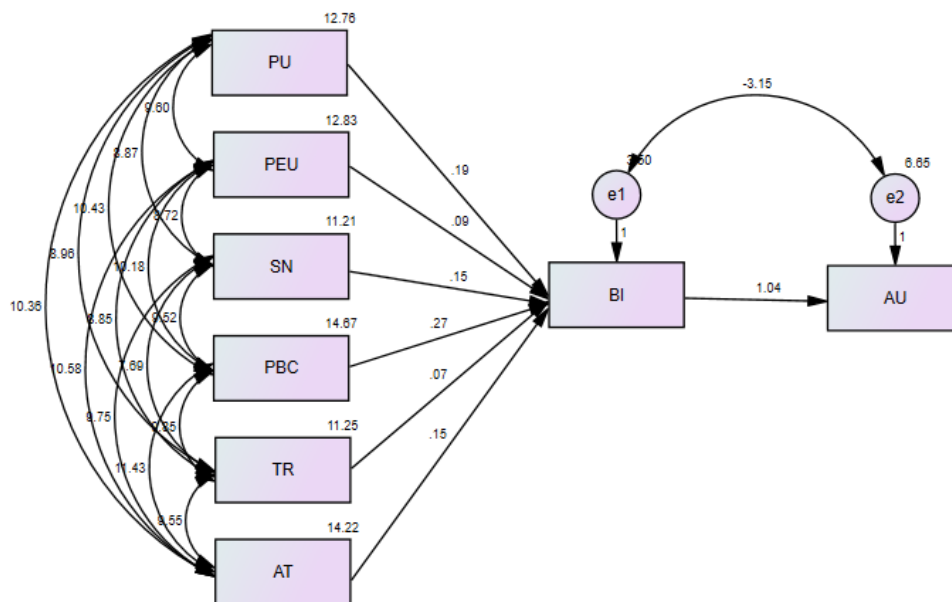
a. Dependent Variable: AU

Source: Author’s Calculation.

A significant association is seen between the majority of external variables and actual usage. Perceived Usefulness ($t=2.321, 0.021$) has a significant relationship followed by perceived ease of use ($t=1.163, 0.246$) which is insignificant. Subjective norms ($t=1.980, 0.49$) has a significant association with actual usage. Perceived Behavioural Control shows a high significance in association over actual usage ($t=3.856, 0.000$). The association of trust over the actual usage seems insignificant ($t=1.137, 0.257$) and attitude has a significant association with actual usage ($t=2.523, 0.012$) Table 8 & Figure 2.

Table 8 HYPOTHESIS TESTING RESULT			
Hypotheses	Hypotheses testing for dependent and independent variables	Type of test	Accept/Reject
H1	PU positively influences BI to use food delivery apps.	Regression	Accepted
H2	PEOU positively influences behavioural intention to use food delivery apps.	Regression	Rejected
H3	SNs positively influences BI to use food delivery apps.	Regression	Accepted
H4	PBC positively influences BI in the usage of food delivery applications.	Regression	Accepted
H5	Trust positively influences BI towards the usage of food delivery applications.	Regression	Rejected
H6	Attitude positively influences BI to use food delivery apps.	Regression	Accepted
H7	BI positively mediates the relationship between the independent variables and actual usage	Regression	Rejected

Source: Author’s Calculation.



**FIGURE 2
SEM MODEL**

Source: Model Proposed by Author’s Own Work.

In table 9 the GFI measures 0.999 which surpasses the minimum recommended value of 0.90. AGFI equals 0.991 and exceeds 0.90. CFI reaches 1.000 exceeding the minimum threshold of 0.90. Reaching 0.999 the Normative Fit Index surpasses the requirement of 0.90. At 0.036 for RMR and 0.000 for the root mean square error of approximation both values fall below 0.05. These results demonstrate that the model is suitable Table 9 & Table 10.

Indices	Value	Suggested Value
Chi-Square Value	0.952	-
DF	5	-
P Value	0.966	> 0.05 (Hair et.al., 1998)
Chi-Square Value/DF	0.190	< 5.00 (Hair et.al., 1998)
GFI	0.999	> 0.90 (Hu and Bentler, 1999)
AGFI	0.991	> 0.90 (Hair et.al., 2006)
NFI	0.999	> 0.90 (Hu and Bentler, 1999)
CFI	1.000	> 0.90 (Daire et.al., 2008)
RMR	0.036	< 0.08 (Hair et.al., 2006)
RMSEA	0.000	< 0.08 (Hair et.al., 2006)

Source: Author's Calculation.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.962
Bartlett's Test of Sphericity	Approx. Chi-Square	1562.941
	df	28
	Sig.	0.000

Source: Author's Calculation.

To evaluate sufficient sampling for analysis the testing of sampling adequacy using KMO and Bartlett's test is performed. The KMO index varies from 0 to 1. For the KMO index to be accepted it should fall within 0.5. When the KMO index falls below 0.5 it becomes unacceptable. The KMO value shown in the table is 0.962 and is deemed beneficial. Analysis shows the sample size meets requirements based on the KMO value and Bartlett's test.

FINDINGS

Features of the Demographics

The age distribution of the respondents shows that the majority (34.2%) are between the ages of 30-39, with 26.1% being between the ages of 25 and 30. This suggests a younger generation that may be more likely to use technology and food delivery services (Faber & Bhatia, 2010).

In terms of education, 42.2% have finished their undergraduate degrees, which is consistent with research showing that increased usage of technology is frequently linked to higher educational achievement (Hoffman & Novak, 2018).

The fact that 60.8% of respondents are married indicates that family dynamics may have an impact on meal delivery usage trends because married people may value convenience over other factors (Kumar et al., 2020).

Nuclear families make up the bulk of respondents (66.3%), which may result in different consumption habits than joint families because nuclear families frequently display higher levels of individualism (Chatterjee et al., 2017)

36.7% of respondents have an income between Rs 10,001 and Rs 20,000, which indicates a middle-class demographic that may prioritise convenience over affordability (Pew Research Centre, 2015).

The respondents are dispersed pretty evenly among urban (35.7%), semi-urban (36.2%), and rural (28.1%) areas geographically, suggesting a varied use of meal delivery applications in various locations (Statista, 2021).

Reliability of Constructs

Good internal consistency is indicated by Cronbach's Alpha values for all constructs in the reliability analysis, which range from 0.695 to 0.781. In (Nunnally, 1978) states that values more than 0.70 are deemed acceptable, so confirming the validity of the survey instruments employed.

Analysis of Correlation

High correlations among the constructs are shown in the correlation matrix. A strong link ($r = 0.791$) appears between attitude and perceived behavioural control. According to (Ajzen, 1991) theory on planned behaviour the influence of perceived control on behavioural intentions is clear.

On the other hand, trust and subjective norms have the lowest connection ($r = 0.684$), suggesting that although individual beliefs are important, they do not always match others' expectations (Bock et al., 2005).

Regression Analysis

With $R = 0.846$, the regression model explains 71.7% of the variance ($R^2 = 0.717$), indicating a strong correlation between the variables and actual usage of food delivery applications. This implies that, given the variables looked at, the model is successful in forecasting usage.

Among the important predictors are:

Perceived utility ($\beta = 0.172$, $p = 0.021$): This is consistent with (Davis, 1989) claim that the adoption of technology is highly influenced by perceived utility.

According to (Fishbein & Ajzen, 1975), subjective norms ($\beta = 0.148$, $p = 0.049$) indicate the impact of social pressure on the adoption of technology.

Perceived Behavioural Control ($\beta = 0.275$, $p = 0.000$): Emphasises how crucial it is for users to feel confident about using the app (Ajzen, 1991).

Attitude ($\beta = 0.193$, $p = 0.012$): Highlights the significance of individual disposition in embracing technology.

There was no evidence of perceived ease of use ($p = 0.246$) or trust ($p = 0.257$).

The lack of substantial connections between perceived ease of use ($p = 0.246$) and trust ($p = 0.257$) suggests that, although significant, they are not the main drivers in this particular situation.

Structural Equation Modeling

An excellent match is indicated by the model fit indices (e.g., GFI = 0.999, CFI = 1.000, RMSEA = 0.000), which supports the suggested associations' structural integrity. These values imply that the model accurately captures the data, according to Hair.

KMO and Bartlett's Test

With a KMO value of 0.962, the sample adequacy is outstanding, above the acceptable criterion of 0.5 (Kaiser, 1970). The sample size is sufficient for factor analysis, as shown by Bartlett's test ($p = 0.000$), supporting the data's validity for additional statistical analysis.

The study's conclusions show that attitudes, subjective standards, perceived behavioural control, and perceived utility all have a big impact on how often people actually utilise meal delivery applications. The findings are consistent with well-established theories on the adoption of technology and have practical significance for marketers and app developers who aim to improve user engagement within this industry.

SUGGESTIONS AND CONCLUSION

Several recommendations can improve the uptake and utilisation of food delivery applications, based on the study's findings. First, marketing plans should concentrate on the 30-to 39-year-old group, emphasising efficiency and convenience that fit their lifestyle choices. With this demographic, highlighting time-saving features and a wide variety of cuisines can be very effective. Furthermore, given that a sizable proportion of respondents are married, food delivery apps ought to include family-friendly features like group catering or family meal packages, which would address the significance of convenience for families. Apps may increase personalisation and boost user satisfaction by using data analytics to make customised recommendations. They can also engage users with loyalty programs and referral bonuses that create a sense of community.

Furthermore, creating a trustworthy brand image is still important even when there are less correlations between perceived ease of use and real usage and trust. Improved perceived behavioural control can be achieved by implementing transparent processes related to food procurement, delivery schedules, and sanitary standards. Additionally, users' confidence in utilising the app can be bolstered by providing lessons or frequently asked questions. By utilising connections with local food bloggers and influencers to leverage subjective norms, one may generate favourable word-of-mouth and social proof, thereby encouraging potential users to test the app based on recommendations from their peers. Affordability should also be a top priority because a sizable percentage of respondents make between Rs 10,001 and Rs 20,000. Food delivery apps might offer affordable options, reductions during off-peak hours, or subscription models that address this.

Ultimately, given the heterogeneous distribution of participants among urban, semi-urban, and rural regions, food delivery applications ought to tailor their services according to users' specific needs and preferences by adjusting their offerings accordingly. This may involve forming partnerships with nearby eateries to provide exclusive menu items. In line with the conclusions drawn from the study, food delivery apps can raise customer happiness, increase user engagement, and eventually increase usage rates by putting these recommendations into practice.

As a result, this study concludes that attitudes, perceived behavioural control, perceived benefit, and subjective norms all play important roles in determining the use of meal delivery services. The significance of user confidence in navigating the application is highlighted by the substantial association observed between perceived behavioural control and actual usage. Although perceived trust and simplicity of use have less of an impact, they

are still important for user happiness. The results of the demographic research point to a younger, middle-class user base that places a high value on convenience, indicating that marketing techniques ought to target their preferences. Personalised recommendations and family-friendly meal alternatives are two features that can increase user engagement. Developing a reliable brand and making sure that it is affordable are also essential for drawing in a larger audience. All things considered, the results provide insightful guidance for app developers and marketers.

LIMITATIONS AND SCOPE FOR FURTHER STUDY

The sample size of this study may not be representative of all users of meal delivery apps, which is one of its drawbacks. Future research should aim to include a bigger and more varied sample. Because cross-sectional studies limit the scope of causal inferences, longer-term research may yield more insightful results. Furthermore, the user-focused approach ignores the perspectives of service providers; therefore qualitative methodologies are necessary for a thorough understanding. Subsequent research endeavours may delve into the impact of sustainability patterns, social media, and geographical disparities on the utilisation of apps, thus augmenting the understanding of the dynamic food delivery sector.

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