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Technology Acceptance Of E-Restaurant Services - An Empirical Study Extending TAM.

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Abstract

Purpose: The consumer technology acceptance of online food ordering which is one of the emerging services offered by the technological advancements in the restaurant business have been empirically evaluated using technology adoption model. Extended technology acceptance model has been used by including already tested constructs in previous e-restaurant empirical study works of literature.

Methodology: Quantitative empirical study have been used to analyse the primary data collected fromthe young age group respondents. The instrument is prepared from the already available, and reliabilitytested instruments from previous literature related to online restaurant services studies.SMARTPLS3software is used to test the reliability of the instruments and to empirically evaluate the proposed model.

Findings: The results suggested that the online restaurant services behavioural intention is beingsignificantly and significantly impacted by online food ordering E-Restaurant services perceived usefulness,online food ordering trust, online food ordering E-Restaurant services perceived social influence and online
food ordering E-Restaurant services perceived ease of use.

Value of the study: Pondicherry the population from which the data was collected is new to an online restaurant services business. So the review will be useful to explore consumer technology acceptance behaviour in the early stages of adoption. This is one of the few technology acceptance studies where online restaurant services in the south Indian region have not been empirically tested using the technology acceptance model and using the PLS algorithm which makes this study more unique.

Implications: This study gives suggestions to both academicians and industrialists about the customer 's technology acceptance behaviour while using online food ordering services. Since Pondicherry theregion in which the research was conducted is a developing tourism hub and new to online restaurant services, it will give many useful in sights to develop the restaurant firms websites andapplications l.

Keywords

online restaurant services, e-restaurant, online food ordering, TAM, technology acceptance, SMARTPLS, trust, social influence

INTRODUCTION :

Before Internet conquered the world, people who wish to eat food have to visit the hotel directly or use the help of an agent or call the hotel directly for ordering food. After the internet era, reservations were made through online food ordering agents. Gradually, online food ordering services became popular as it was a time – saver and effortless. One can order food based on the information and details provided by the respective hotel agents on their website. Today there are a plethora of online restaurant

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services websites available. They are efficient for people who want to book in advance and for those who book at the nick oftime.

To make online food booking, one has to log in to the website or app. Choose the food and select a hotel in that location. Booking the hotel based on personal preferences such as budget, landmark, activity, information and reviews of other consumers. The process is simple to choose, order and pay. There are several third-party app ' s or website that will aid one in comparison to prices of food prices. With this much money can be saved even while booking for a luxurious hotel. Apart from using laptops and PC to explore the options to use the internet for restaurant services, the accessibility of mobile phones and other portableelectronicdevicesarealsorising.[1]

Restaurant online services have become one of the most dependable and unavoidable services. The continuous availability of options and services, ordering food from our comfort, time-saving measures havemadetheonlinerestaurantbusinessmorefavourable.[2]

Digital company has become an integral part of the business and specifically the marketing part involved in it. The options of products and services available are more in e-commerce than via traditional ways. The comparison of numerous products and selecting the best suited according to the customer's demands isanaddedadvantage[6][3].

Internet-enabled convenient paying methods have become more efficient in government and corporate-related payments. E-payment options are not still prevalent in small and medium business operations, grocery stores, and medical stores. The internet payment methods have not proved to be useful always in online restaurant-related services [7] [4]

Electronicwordofmouthandcustomer-generatedmediaviasocialmediaandblogsarethenewreliable source of digital marketing options. e-WOM and CGM are the most important dependable and can not be biased reviews on online commerce products and services. The recent improvements in technology-enabled devices and social media have made it easy to contribute and access e-WOM and CGM [14] [5]. Onlinefoodorderingservicesisthenewsensationinthee-commerceindustry[16][6].

Self- service technology acceptance in the hospitality industry is an emerging domain in e-commercedue to recent technological advancements. It has gained considerable popularity recently due to an increase inmobileapplicationsusage[19][7].

Online food ordering systems have been found beneficial to the customers in many dependable ways like the online menu they provide and the enjoyment in making choices from the comfort of home. GPS services combined with the internet makes the process more reliable and with ease of use. The reviews of the products and services available in the food ordering platform make the process more informative [20][8].

Online food delivery applications are the form of e-commerce mediums by which many restaurants are being promoted by an intermediary application firm for commerce purposes. Few restaurant firms havetheir online delivery platform, but mostly the intermediaries rule the online food ordering platform. Three hundred fifty million dollars is the market worth of online food delivery platform as of now in India. It is expected to grow 70 million dollars worth more by 2020. Swiggy, Uber Eats, and Zomato are the leading food delivery platforms in India[24][9].

LITERATURE REVIEW :

Research Model :

The primary and most used models to predict consumer behaviour successfully was the theory of reasoned action and theory of planned behaviour [3] [4]. After the technology-enabled services have been put into successful Alternative to traditional methods technology acceptance consumer behaviour, have

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Become the talk of the academicians and e-commerce business firms. TAM was introduced in the late 90s and was the necessary and successful technology acceptance model ever since. TAM had its concepts from earlier theories like the theory of reasoned action, theory of planned behaviour and other basic consumer acceptance models. The two most impacting technology acceptance variables according to the technology acceptance model are the E-Restaurant services perceived usefulness and E-Restaurant services perceived ease of use. E-Restaurant services perceived ease of use is that quality of the service/product, which makes the customers believe that using online services, and it will be easy for them without many efforts. E-Restaurant services perceived usefulness is the quality that makes the customers buy that particular product/services to reduce their efforts better than traditional things [5] [10]. Multi-channel Technology acceptance of internet and electronic devices to use restaurant services have been studied using TAM for analysing the customer ' s behaviour. Restaurant companies must adapt themselves to utilise online services for serving customers. Testing customer behaviour using TAM have shown that online services have benefits like convenient paying methods and more untapped uses to be explored [1] [11]. TAM is the most reliable technology acceptance models and has been found supportive of numerous technology acceptance studies [11] [12]. TAM is one of the few technology acceptance models which can be extended easily with the emerging technology acceptance variables[18][13].

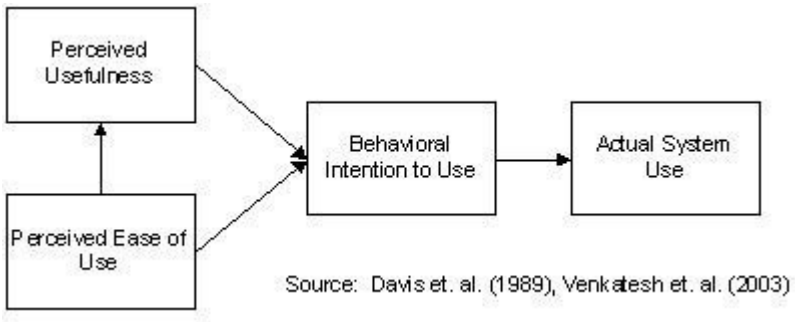

Fig. 1. Technology Acceptance Model

Hypothesis Construction :

E-Restaurantservices E-Restaurant services perceived Usefulness and E-Restaurant services perceivedEaseofusehaveasignificantimpactonOnlinefoodorderingBehaviouralIntention:

E-commerce services Behavioural Intention are significantly influenced by E-Restaurant services perceived usefulness and E-Restaurant services perceived ease of use [8]. E-Restaurant services perceived ease of use and E-Restaurant services perceived usefulness positively Influences customers to use online food ordering platforms [6] [14]. E-Restaurant services perceived Usefulness and E-Restaurant services perceived Ease of use drive the behavioural intention to use e-services in restaurants [10]. E-Restaurant services perceived usefulness is one of the most reliable e-payment factorss to influence online food ordering behavioural intention [13] [15]. E-Restaurant services perceived usefulness influencing the online food ordering attitude will positively Influence the behavioural intention to use online food ordering services[15].BothE-Restaurant services perceived usefulness and E-Restaurant services perceivedease of use are significant online food ordering behavioural intention variables for tourists [17] [16]. Self- service technology acceptance is being positively Influenced by E-Restaurant services perceived usefulness andE-Restaurant services perceived ease of use [19] [17]. E-Restaurant services perceived usefulness and E- Restaurant services perceived ease of use have a positive influence on purchasing via mobile applications [21][18].

*H1: E-RESTAURANT SERVICESPERCEIVED USEFULNESS influence the behavioural intention to acce*pt*ONLINE FOOD ORDERING*

H2: E-RESTAURANT SERVICES PERCEIVED EASE OF USE influence the behavioural intention to accept ONLINE FOOD ORDERING

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E-Restaurant services E-Restaurant services perceived social influence has a significant impact ononlinefoodorderingBehaviouralIntention:

Social media social influence activities like e-WOM and user-generated media will significantly impact the behavioural intention to perform online commerce activities [14] [19]. E-Restaurant services perceived social linfluence positively Influences the online food ordering behavioural intention[17][20]. E-Restaurant services perceived social influence has a significant impact on E-Restaurant services perceived usefulness which has a significant positive impact on online delivery behavioural intention [22] [21]. Social influence is found to be affecting the behavioural intention to use the smartphone for ordering food positively
[23] . Social pressure impacts the intention to order food online [25] .

H3: E-RESTAURANT SERVICES PERCEIVED SOCIAL INFLUENCE influence the behavioural intention to accept ONLINE FOOD ORDERING

E-Restaurant Percieved Trust has a significant impact on online food ordering behavioural intention :

The previous studies in e-commerce literature have proved that e-payment trust is one of the significant Influences of e-commerce behavioural intention [12]. E-Restaurant services perceived trust is the most reliable e-payment factor to influence online food ordering behavioural intention [13]. Trust in the online food ordering platform, and trust in the respective restaurant are the two critical factors which lead online food ordering behavioural Intention [16]

H4: E-RESTAURANT SERVICES PERCEIVED TRUST influence the behavioural intention to accept ONLINE FOOD ORDERING

RESEARCH METHOD

PLS Quantitative research method was used. Data was collected using both online and offline methods. Social media was used to collect the data mostly. Two hundred fifty valid questionnai re respondents were received. Table1 gives the education and job background of the respondents. All the respondents mostly belonged to the young age group (Aged: 18- 25). The specifications of the respondents. The questionnaire of the respondents is the primary tool for data collection. The study was conducted all over the June month. SMART PLS3 was used to evaluate the statistical properties of the data. The reliability and validity of the scale are estimated by the Cronbach ' s Alpha Average Variance Extracted (Pvc) And Composite Reliability (Pc). The hypotheses of studies have been assessed usinga linear SEM model.

TABLE I
BACKGROUND OF RESPONDENTS

EDUCATION	No	(%)
UG	152	60.80
PG	98	39.20
Total	250	100

RESULTS

Consistency and Reliability

Both Composite reliability and Cronbach salphaare used for estimating the convergent validity. Although Cronbach's alpha is used to estimate the item constructs reliability composite reliability is also used for better estimation of reliability and validity. The composite reliability is more than .5, which as considered as a reliable measure for reliability. The results of scale reliability and validity are given in Table 2. The reliability results give the overall view that the model is internally compatible and the variable indices are convergent. All variables reliability(>0.60)andPvc(>0.5)can be viewed as reliable from Table2.

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Structural Equation Modeling :

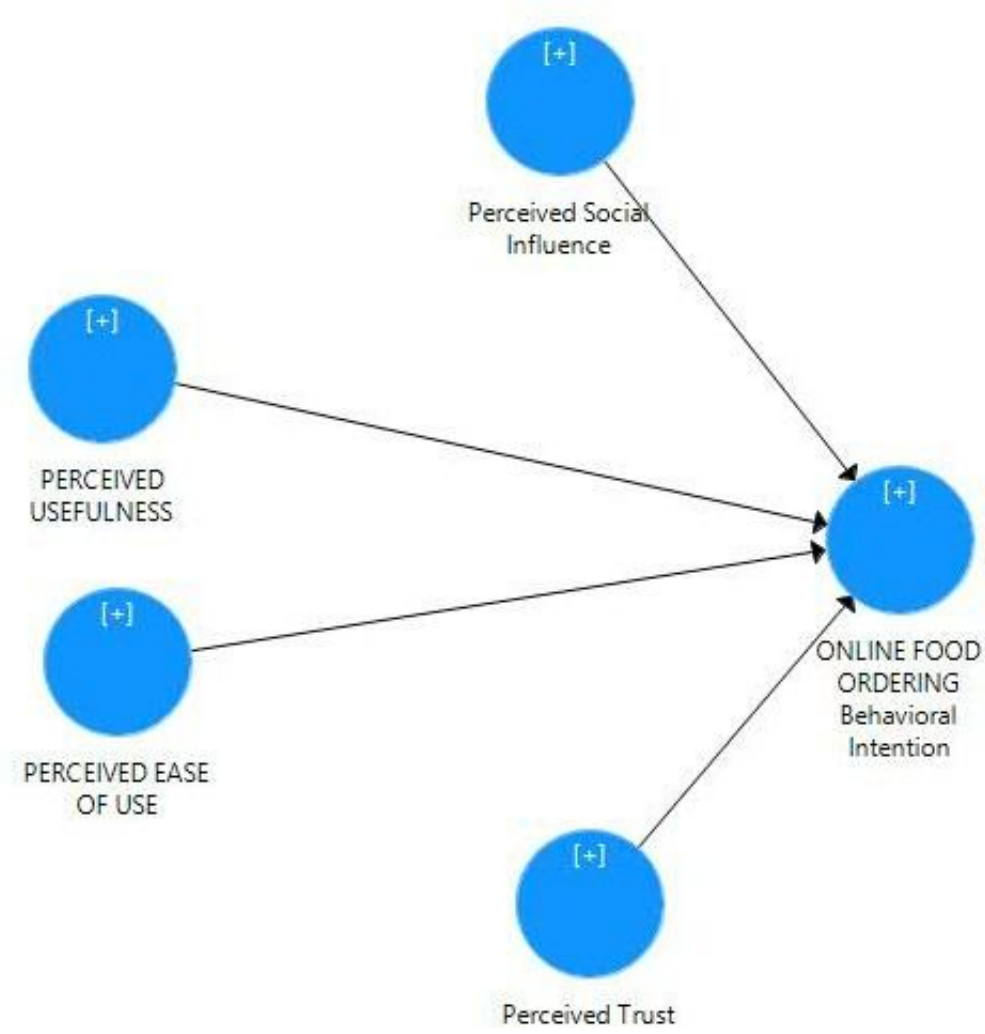

Fig. 2. RESEARCH FRAMEWORK

SEM is being used as the PLS oriented model is being evaluated. The model constructs and significant values are measured. Online food ordering E-Restaurant services perceived usefulness, online food ordering trust, online food ordering E-Restaurant services perceived social influence and online food ordering E- Restaurant services perceived ease of use were found to be significantly influencing online restaurant services behavioural intention. As Table 3, values indicate that E-Restaurant services perceived usefulness and E-Restaurant services perceived trust are the topmost predictors of e- restaurant via applications. Smart pls3 model fit indices show that the model is compatible as the value was found to be 0.050. Any SRMR value in the range 0-0.08 is found to be model fit.

SMART PLS 3 BOOTSTRAPPING RESULTS :

To determine the significance of path coefficients, outer weights, external loads bootstrapping option is used. All the p values were found to be below 0.5, and all the t values are found to be above 1.96. These values indicate that the research model proposed is valid and significant. The hypotheses constructed based on previous studies and research gaps have all been supported. The findings showed that E-Restaurant services perceived use fullness andE-Restaurant services perceived

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trust are top most two

TABLE II
CRONBACH'S ALPHA, COMPOSITE RELIABILITY AND AVE VALUES

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
ONLINE FOOD ORDERING Behavioral Intention	0.945	0.946	0.961	0.859
E-RESTAURANT SERVICES PERCEIVED EASE OF USE	0.890	0.893	0.924	0.753
E-RESTAURANT SERVICES PERCEIVED USEFULNESS	0.776	0.777	0.899	0.817
E-Restaurant services perceived Social Influence	0.932	0.936	0.952	0.831
E-Restaurant services perceived Trust_	0.803	0.815	0.884	0.718

TABLE III
SEM PATHCOEFFICIENTS

	ONLINE FOOD ORDERING Behavioral Intention
E-RESTAURANT SERVICES PERCEIVED EASE OF USE	0.197
E-RESTAURANT SERVICES PERCEIVED USEFULNESS	0.261
E-Restaurant services perceived Social Influence	0.199
E-Restaurant services perceived Trust_	0.225

significant predictors of online food ordering Behavioural intention via mobile applications (Table 4). Observations have external

External loads were significant, and values were more than 0.5, and Outer weights are below 0.05, which indicated that the proposed model is consistent and valid both internally and externally.

TABLE IV
BOOTSTRAPPING
RESULTS

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
E-RESTAURANT SERVICES PERCEIVED EASE OF USE -> ONLINE FOOD ORDERING Behavioral Intention	0.197	0.196	0.091	2.163	0.031
E-RESTAURANT SERVICES PERCEIVED USEFULNESS -> ONLINE FOOD ORDERING Behavioral Intention	0.261	0.257	0.083	3.156	0.002
E-Restaurant services perceived Social Influence-> ONLINE FOOD ORDERING Behavioral Intention	0.199	0.195	0.085	2.327	0.020
E-Restaurant services perceived Trust_ ->ONLINE FOOD ORDERING Behavioral Intention	0.225	0.234	0.087	2.584	0.010

CONCLUSION AND IMPLICATIONS :

Research results suggest that all the hypothesis tested was valid, positive and significant. E-resaurant usefulness, E-restaurant trust, E-restaurant social influence and E-restaurant ease of use is found to be significantly and positively influencing online food ordering behavioural intention. The most influencing variables are usefulness and trust. The study gives implications both for academicians researching about restaurant business and restaurant business firms. Managerial implications from the study are that while developing a website or applications model for the restaurant business, managers

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should concentrate on using the customers get by adopting recent trends over traditional food ordering methods. Firms

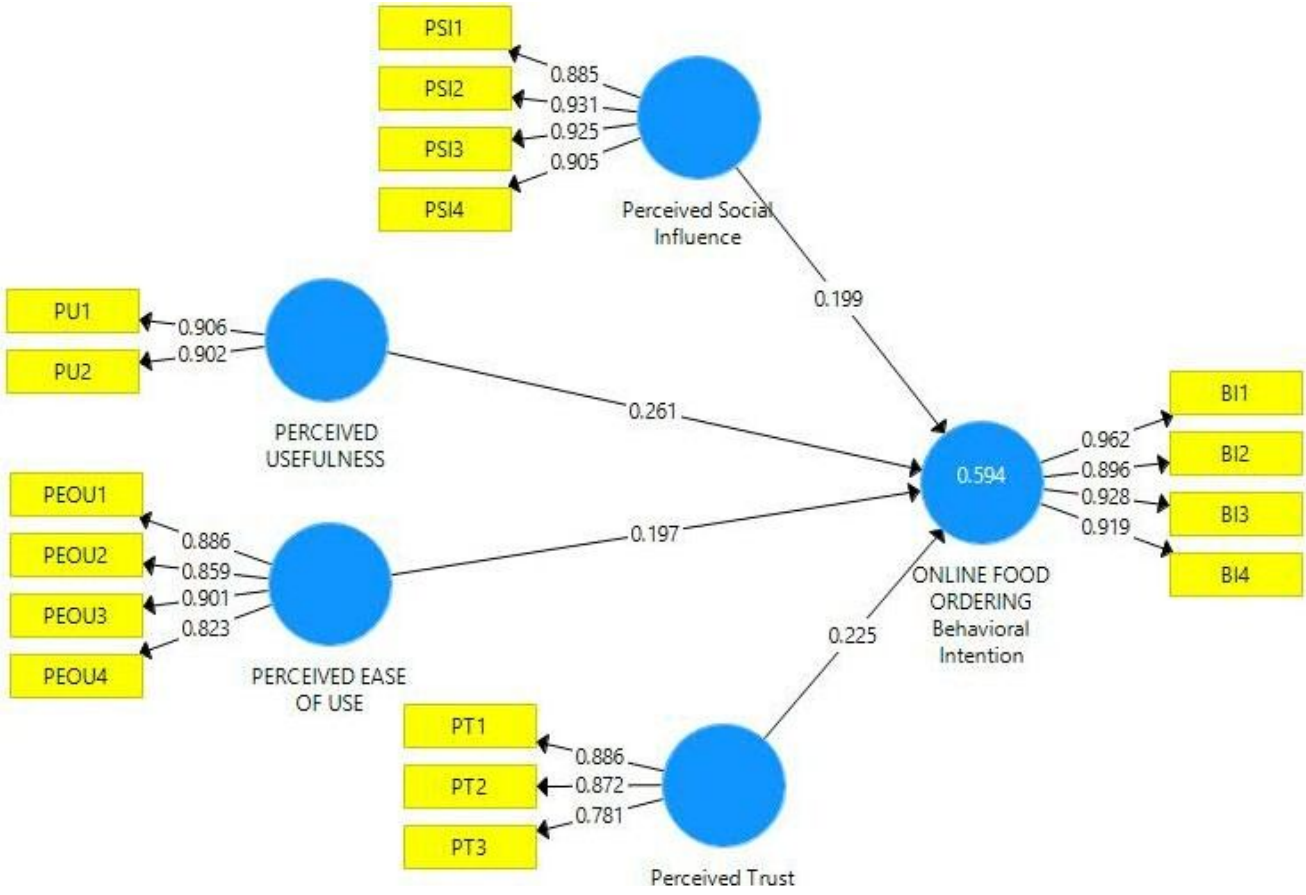

Fig. 3. SEM Beta values

should provide customers with offers and discounts. Managers must concentrate on building the trust that their services will be prompt and the food delivered to customers will be of the same quality and quantity.Customer engagement programs like referral codes and affiliation programmes must be introduced to the customers for promoting social influence factor which is the most crucial construct in B2C e-commerce technology acceptance. The application and web platform must be made very simple to access and fast to load to suit the need of the customers. Academically the research is one of its kind since food ordering technology acceptance behaviour related to developing tourism hub like Pondicherry have not been discussed by empirically evaluating. This study will give researchers an idea of how the new technology introduced to a new audience will be accepted.

LIMITATIONS AND FUTURE DIRECTIONS FOR RESEARCH :

The major limitation is that the research data was collected and conducted only from the residents of Pondicherry and mostly the students from affiliated institutions of Pondicherry University. Further studies can be done in different states and cultures using the proposed model. Qualitative studies can be done in the future related to e-payment via wallet to discover new determinants of technology acceptance. The study can be done using other technology acceptance models and compare the results in order to get new academic and managerial insights.

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Constructs :

E-Restaurant services perceived Usefulness:

PU1 I find online food ordering useful in my daily life.

PU2 Online food ordering helps me accomplish tasks more quickly and increases my productivity.

E-Restaurant services perceived ease of use :

PEOU1 Learning how to use online food ordering apps is easy for me.

PEOU2 My interaction with online food ordering apps is clear and understandable.

PEOU3 I find online food ordering easy to use.

PEOU4 It is easy for me to become skilful at using online food ordering apps.

Trust :

T1 The online food ordering service would keep its commitments.

T2 The online food ordering service would honestly carries out the task related to the food sales.

T3 The onlone food ordering services provides food product information as truthfully as possible. **Social Influence**:

SI1 People who are important to me think that I should perform online food ordering.

SI2 People who influence my behaviour think that I should perform online food ordering. SI3 People whose opinions that I value prefer that I should perform online food ordering. SI4 I have often seen advertisements of online food ordering services on the Internet.

Behavioral Intention :

BI1 The likelihood that I use online food ordering service is very high.

BI2 The probability that I would consider using online food ordering service is very high. BI3 My willingness to use online food ordering service is very high.

BI4 I may use online food ordering services more frequently in future.

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