Application of Technology Acceptance Model (TAM) on Adoption of Food Delivering Applications (Apps.) among University students in Tamil Nadu

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Abstract

The rapid expansion of information technology and the internet has strengthened retail e-commerce, resulting in significant changes in people's lifestyles and society. Food delivery apps are the application or webpage used for ordering food through an internet-connected smartphone. It is the integration of online orders and offline delivery services. It creates a channel between the restaurants and customers with the help of an internet-connected smartphone. The present study examines the applicability of the TAM model to the adoption of Food Delivering apps. among the university students. The researcher used the convenience sampling method for collecting the primary data with the help of a well-structured questionnaire. The sample size of the study consists of 334 students from Bharathiar University, Coimbatore. The researcher used SPSS for analysing the collected data. Four factors were employed in the study: perceived ease of use, perceived usefulness, attitude, and COVID-19 as independent variables and adoption of Food Delivery Apps. as the dependent variable.

Keywords: Adoption, COVID-19, Food Delivery Apps., Internet, TAM

Introduction

Mobile communication is one of the most widely used forms of communication on the planet. Mobile devices are owned by five billion individuals worldwide, and six billion people have subscribed to these media. Not only is the technology used in interpersonal connections, but it is also used in the sale and purchase of goods and services. . Food delivery apps are the application or webpage used for ordering food through an internet-connected smartphone. It is the integration of online orders and offline delivery services. It creates a channel between the restaurants and customers with the help of an internet-connected smartphone. As per the survey done by Rakuten Insight in August 2021, the Zomato app was the most popular food delivery app in India and Swiggy was the second most popular food delivery app. This study aims to find the antecedents that influence the adoption of Food Delivering Apps. among University students in Tamil Nadu by using the (TAM) Technology Acceptance Model. TAM model is a tool for assessing the factors that drive customers to adopt new technology. Three factors, such as perceived usefulness (PU), perceived ease of use (PEOU), and attitude toward usage, describe the TAM model. In this study, the researcher included one independent variable that is COVID-19 (Situational Influence) in the adoption of Food delivery Apps. among the consumers.

Review of Literature

Preetha and Iswarya (2019) examined the antecedents that affect the adoption of online ordering apps. The study used the Ting Chi item scale for measuring the factors. The study analyzed the data with the help of SPSS by using primary data collected from 100 respondents. The study revealed that the is no significant relationship between the demographic factors and the adoption of Online food delivery apps. The researcher concluded that factors such as prompt response, packaging, personalized service, attractive display and accuracy of information are the most influencing factors that affect the adoption of Online food delivery apps.

Kumari (2019) measured the factors that affect consumer behaviour for the adoption of online food delivery apps. The researcher concluded that social media is one of the important promotion tools and affects the consumers for the adoption of online food delivery apps.

Vinaik et.al, (2019) investigated the consumer awareness of mobile food Apps, as well as the factors

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influencing their uptake. Consumers are primarily affected by convenience and offer for moving to cashless ways of payment, according to the report. And the majority of respondents responded that ease of use, ease of payment, longer delivery time, and getting the expected order are important to them, whereas great customer service, getting the expected order, and having fewer restaurants are important to them.

Jacob et al. (2019) The researcher also analyzed the influence and how the online food delivery application on traditional ways of food servicing and the other reasons restraining non-users of these apps using a sample size of 400 and containing 300 users and 100 non-users differentiating the two age group by Diffusion of Innovation(DOI) Theory. The study concluded that the majority (61%) of respondents choose to buy food through mobile apps, 33% prefer to walk to a restaurant, 5% prefer to order food over the phone, and 1% wants to buy food online browsers. The variables that contributed to the rise of online food ordering systems, which had a large impact on youth, were simplicity and convenience, quality, health concerns, tracing system, offers, hygiene, and payment alternatives.

(T.S et al., 2022) Investigated the TAM model for the adoption of over-the-top (OTT) platforms among young consumers in Kerala. The study concluded that the factors such as PEOU, PU, Price, and Peer influence are impacting the adoption of OTT platforms.

Objectives of the study

- To examine the applicability of the Technology Acceptance (TAM) model on the Adoption of Food Delivering Apps. among University students in Tamil Nadu.

Research Methodology

To analyse the objective, the researcher used a descriptive research design that included both primary and secondary data. The primary data was gathered from university students at Bharathiar University who were enrolled in Post Graduate courses. The primary data are collected with the help of a structured questionnaire using Google Forms. Convenience sampling is used as a sampling method. The sample size of the study is 334 Post Graduate students studying at Bharathiar University, Coimbatore. Secondary data is gathered from a variety of sources, including publications, internet sites, newspapers, and websites. The influence of the independent variables like perceived ease of use, perceived usefulness, attitude, and COVID-19 on the adoption of Food Delivery Apps is investigated using descriptive statistics and regression analysis.

Analysis and Discussions

H_{0a}: There is no significant difference between the gender of the students and their adoption of Food Delivery Apps.

Table 1: showing a significant difference between the gender of the students and their adoption of Food Delivery Apps

Gender	N	Mean	Std. Deviation	Std. Error Mean	t	Sig.
Male	128	4.00	.710	.063	4.424	0.000*

Source: Computed from Primary Data

The above table shows the P-value is less than 0.05, indicating that there is a significant difference between the gender of the students and the adoption of Food Delivery Apps.. The mean value of female students is high compared to the male students, so the researcher concluded that the females are more using online food delivery apps.

H_{0b}: There is no significant difference between the area of the residents of the students and their adoption of Food Delivery Apps.

Table 2: Showing a significant difference between the area of the residents of the students and their adoption of Food Delivery Apps

Area	N	Mean	Std. Deviation	Std. Error Mean	t	Sig.
Urban	176	4.27	.752	.057	2.129	0.034*
Rural	144	4.11	.569	.047		

Source: Computed from Primary Data

The above portrays that the P-value is less than 0.05, indicating that there is a significant difference between the area of residents of the students and the adoption of Food Delivery Apps.. The mean value of urban students is high compared to the rural students, so the researcher concluded that the urban students are more using online food delivery apps.

H_{0c}: There is no significant difference between the income of the parents of the students and their adoption of Food Delivery Apps.

Table 3: Showing a significant difference between the income of the parents of the students and their adoption of Food Delivery Apps.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.200	2	2.600	5.804	.003
Within Groups	142.000	317	.448		
Total	147.200	319			

Source: Computed from Primary Data

It is clear from the above table, that the P-value is less than 0.05, indicating that there is a significant difference between the Income of the parents of the students and the adoption of Food Delivery Apps. in association with the F-value of 5.804. The post-doc test confirms the result. The High-income group's students are adopting the Food Delivery Apps. compared to the low and middle-income group.

H_{0d}: There is no significant influence of perceived usefulness, perceived ease of use, attitude and COVID-19 on the adoption of Food Delivery Apps. among university students in Tamil Nadu.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.955a	.912	.889	.122	1.805
a. Predictors: (Constant), Perceived Usefulness, Perceived Ease of Use, Attitude, COVID-19					
b. Dependent Variable: Adoption of Food Delivery Apps.					

Source: Computed from Primary Data

The result revealed the adoption of food delivery apps. considered as dependent variables and perceived usefulness, perceived ease of use, attitude and COVID-19 are considered independent variables. The result indicated that any change in independent variables will yield a 91.2% change in the outcome variable i.e., adoption of food delivery apps. Durbin Watson reveals that the variables are free from autocorrelation.

Table 4: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	*(Constant)*	*.755*	*.438*		*10.864*	*.000*
	Perceived usefulness	*.463*	*.052*	*.762*	*6.839*	*.000*
	Perceived ease of use	*.343*	*.073*	*.217*	*5.135*	*.000*
	COVID-19	*.535*	*.074*	*.794*	*8.370*	*.000*
	Attitude	*.483*	*.071*	*.192*	*5.398*	*.000*

Source: Computed from Primary Data

The table clearly shows that all the hypotheses are supported because the P-Value is less than 0.05. it indicates that all the predictors such as perceived usefulness, perceived ease of use, attitude and COVID-19 are impacted by the adoption of Food Delivery Apps.

In this study, COVID-19 has the most influencing factor in the adoption of Food Delivery Apps.

The multiple regression equation based on the regression analysis is given below.

Y (Adoption of food delivery apps.) = 0.755+ 0.463X1 +0.343 X2 + 0.535 X3 +0.483 X4

Where, X1= Perceived usefulness; X2= Perceived ease of use; X3= COVID-19; X4= Attitude.

Summary Result of the Hypotheses

H0d1: There is no significant impact of perceived usefulness on the adoption of Online Food Delivery Apps. among university students in Tamil Nadu.

Rejected

H0d2: There is no significant impact on perceived ease of use on the adoption of Online Food Delivery Apps. among university students in Tamil Nadu.

Rejected

H0d3: There is no significant impact of attitude on the adoption of Online Food Delivery Apps. among university students in Tamil Nadu.

Rejected

H0d4: There is no significant impact of COVID-19 on the adoption of Online Food Delivery Apps. among university students in Tamil Nadu.

Rejected

Source: Computed from Primary Data

Conclusion

The emergence of online applications for the purchase of goods and services has created a change in behaviour among consumers all over the world. Using the Technology Acceptance Model (TAM), this study will be undertaken to determine the factors that influenced the adoption of online food delivery applications among university students in Tamil Nadu. Food delivery apps are a special type of application used by consumers for ordering food items by using smartphones and mobile networks. The students are increasingly using food delivery apps. to facilitate convenient and quick food delivery. The study concluded that the factors such as perceived usefulness, perceived ease of use, attitude and COVID-19 are influenced the adoption of Food Delivery Apps positively.

Limitations and Scope for Further Research

The main limitation of the study is, that the researcher focused only on students and a specific university, and the findings of the study may have limited generalizability. Comparative studies also are conducted with different universities to examine any differences among students in adopting the Food delivery apps. Future studies may be conducted with different age groups, different areas, etc.

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