

IMPACT OF MOBILE APPLICATIONS IN ONLINE BUS TICKET RESERVATION: A TWO-STATE STUDY IN KARNATAKA AND KERALA

**Dr. Fezeena Khadir, **Krishnanunni A*

**Assistant Professor, Christ deemed to be University, Bangalore*

***Milan Jose, MBA alumni, Class of 2020, Christ deemed to be University, Bangalore*

Introduction

Gone are the days when people used to plan for hours to get their bus reservation. Be it long queues in front of ticket booking offices or prolonged waiting time over the telephone, people had to go through a lot of hassles while booking bus tickets. But now the scenario has completely changed in the Indian bus travel industry. With the increasing popularity and adoption of on-demand bus booking apps, now the entire process of making a bus travel reservation has become quick and hassle-free.

Online ticket reservation

The online ticket reservation system is a centralised web based application which allows the user to book the tickets online. The study focuses on the use of mobile applications in online ticket reservation used in bus transportation system. This allows the user to book tickets, cancel tickets and also it provides the freedom to the user to enquire regarding the routes. The OBTRS is an upgradation to traditional based ticket booking system where the application keeps all the data regarding user details, bus details, route details, restroom details etc.

Apart from the traditional models recently many applications came up with the concept of availing online ticket reservation. This includes both government and private companies. The primary aim is to maintain convenience among the users. People often face difficulties in using the traditional methods of ticket booking. The new mobile applications give the freedom to the customer to book the tickets from anywhere. The young generation under the age of 30 usually use the mobile phones as per the survey in 2017.

The online ticket booking not only allows the customers to book tickets but it also send the copy of the ticket to the users email id also. These applications help to make payment also simpler. They accept Debit cards, Credit Cards, Google Pay, Phone Pe, Paytm, Net Banking etc which provides the customer with a better mode of payment.

Major advantages of these applications include:

- Services are open 24/7
- Simple and instant booking
- Selecting seat of your choice
- Discounts and Promocodes

Bus booking Mobile Applications in Indian bus travel industry

As per the recent report, over the past few years, India has witnessed a significant rise in the online bus ticket booking industry. The country has almost two thousand private bus services agencies that function with around 20,000 buses on different routes across India. Being one of the preferred modes of travel for a major population of the country, the industry is depicting an exceptional growth nationwide.

To compete in the potential market of online bus booking, an good number of leading market players are moving forward in this industry by putting forward user-friendly mobile applications to their customers.

There are a number of online bus tickets booking apps working in India. The app allows customers to book bus ticket for travelling anywhere around the country. Customers can customize their booking by entering the type of bus in which they want to book ticket, the number of passengers, price etc. They can also use filters present in the app to customize the bus ticket booking. Moreover the apps provide 'Bus promo code' that offer customers with discounts and cashback. These apps provide secure mode of payment to

make online transactions. Bus ticket booking through these applications offer a new experience every time the customers book their tickets online. These apps are available on android, windows and iOS platforms.

The leading bus booking apps in India are:

- redBus
- MakeMyTrip
- AbhiBus
- Paytm Bus Booking
- goibibo

This study mainly focuses on the impact of mobile based applications in online bus ticket reservation in Kerala and Bangalore.

Problem Statement

The study mainly focuses on evaluating how effectively the mobile applications perform in satisfying the need of the customers. The study also concentrates on evaluating the factors which led to the shift from the traditional modes of bus reservations.

Objectives

- To understand the factors influencing the users to use mobile applications for ticket booking
- To understand the application which the customer uses the most for booking bus ticket online
- To understand the factors affecting the sales of traditional mode of ticket booking.

To measure the level of satisfaction among users in using these applications

Scope of the Research

This research paper would attempt to find the factors that forced the shift of customers from the traditional mode of booking tickets to the online ticket booking mobile applications. Moreover, the study tries to find the association between the application used and features provided so as to suggest them with better features to boost their sales.

Limitations

- The booking services of other modes of transport and hotels offered by the mobile applications were not considered in the research.
- Respondent's opinion about an online ticket booking mobile app may change with time.
- The study was limited to the passengers of Bangalore – Kerala bus services.

Literature Review

Thomas, Pathak, & Vyas (2014) find the transformations in bus ticket booking industry with respect to 'redbus'. The paper discusses the competition in the Indian market and the various challenges faced by 'redbus'. Increasing the ticketing sales and gaining the trust of bus operators were major challenges. Delivering of efficient and consistent service through value added services are to be taken into account for the increase in sales. It has to keep watch of the new opportunities to sustain the competition. **Oloyede, S.M., & K.S. (2014)** discuss on the development of online ticket reservation in transportation service. The paper discusses on an application such that the bus operators can get rid of office hours and manpower for the reservation of tickets. This can help in managing the business processes internally with reduced human errors and can provide the customers with an easy mode of payment. **Duraisamy, Jamilu & Abuhuraira (2018)** proposed a system of booking tickets on their fingertips without the stress of buying tickets standing in a queue. The model serves many purposes such as-the route map, the price and the discount offered. Moreover the model provides an easy mode of payment which can meet the customer demand of satisfaction. The paper suggests the travel agencies to develop better mode of booking ticket to gain customers. **Cosmas, C., Ajere, & Godswill (2015)** present a review of the software program 'Online Bus Ticket Reservation System'. It keeps a track of all the bus, customer and reservation details. The system

helps in reducing workload of the staff and making the reservation efficient and easier of customers. This also ensures a much secure platform. **Norbayah, Norazah (2017)** analyse the intention of individuals using mobile apps for flight ticket booking. The study tells that the airline industries must come up with more innovative methods and marketing strategies to be competitive in the current market. They force the industries to use the interactive methods available online to gain more customers and hence increase the sales through the online booking apps. The paper proposes a better model to encourage the customers in using mobile apps. **Standing, Vasudavan (2014)** find that travel agencies have started adopting the use of e-commerce for satisfying the demand of consumers and hence increasing the sales. The study provides an in-depth study of key issues related to the travel agency sector. The paper shows the results of a survey of travel consultants and their perceptions on the impact of the Web on their profession and career boost. **Wang, Xiang & Fesenmaier (2014)** understand how the smartphone shapes the tourist experience and suggest that smartphones cannot be separated from the way it is used in one's daily life. The results provide a number of important implications for both research and suggest the future impact of mobile technology in tourism sector. **Nikhashem, Yasmin, Haque & Khatibi (2015)** investigate consumers' perception on online mode of ticket booking. They also analyse the factors on which some individuals still stick on to the traditional modes of booking. The study determines how price perception and internet security can be utilized to understand the consumers' perception. They find the relationship between consumers' decision making in purchasing behaviour to use the internet as a mode of ticket booking over the traditional method.

Research Methodology

The study follows exploratory research design so as there are not enough studies conducted in this area. It can be considered as a research gap and research can be done more extensively. Total sample size was 125 respondents, who have experienced both traditional and online ticket booking apps. The data has been collected by both primary and secondary sources. Primary data includes information collected through self-administered questionnaire based on the perception of customers towards traditional and online mode of ticket booking. Secondary data includes information collected through various newspaper, magazines, journals and internet.

Research tools like SPSS and MS Excel would be used to predict the current trend and establish relationship between various variables.

Statements of Hypotheses

H1: Mode of booking changes with customer age.

H2: Males and females differ in their satisfaction levels of online booking apps

Analysis and Interpretation

Descriptive Statistics

Table 4.1: Gender-wise distribution of respondents

Gender	Frequency	Percent
Male	57	45.6
Female	68	54.4
Total	125	100.0

Out of 125 respondents 54.4% are female and 45.6% are male which is 57 male respondents and 68 female respondents.

TABLE 4.2 Age-wise distribution of respondents

Age	Frequency	Percent
18-25	82	65.6
26-35	29	23.2
35+	14	11.2
Total	125	100.0

It can be observed that 82 out of 125 respondents are in the age category of 18-25. The people in this age category are usually students. So they use the bus for transportation. It will be more convenient mode of

transportation for them and more economical. Later comes the category of 26-35 viz. 29 out of 125 which is smaller in number representing the salaried group of people and working population the remaining part which is above 35 shows people who are either working or traveling with family.

TABLE 4.3 Distribution based on Employment Category

Employment category	Frequency	Percent
Student	67	53.6
Salaried	42	33.6
Self Employed	11	8.8
Un Employed	4	3.2
Others	1	.8
Total	125	100.0

Majority of the respondents are students which constitute 53.6% of the total respondents. Students use to book bus ticket for private transportation to where they study. The salaried people often go to their hometown during holidays or weekends.

TABLE 4.4 Distribution based on online booking of bus tickets

Response	Frequency	Percent
Yes	115	92
No	10	8.0
Total	125	100.0

As high as 92% of the respondents are booking tickets online and 8% of them are using booking tickets but not online.

TABLE 4.5 Distribution based on frequency of booking bus tickets

Frequency of ticket booking	Frequency	Percent
Always	32	27.8
Sometimes	57	49.6
Rarely	26	22.6
Total	115	100.0

Almost 57 of the 115 respondents are only using bus sometimes for transportation. The term sometimes may signify the image that they are often shifting their modes of transport. They may be trying other modes like flight, trains etc. There are 32 out of the 115 who are using it on a regular basis. The final category which uses bus very rarely, perhaps they use the bus for transportation in case of any emergencies.

TABLE 4.6 Preference of mode of booking

Category	Frequency	Percent
Travel Agency	4	3.4
Mobile Apps	100	87.1
Online Booking websites	9	7.8
Others	2	1.7
Total	115	100.0

As high as 100 out of 115 are using mobile applications for booking bus. Mobile applications open a platform for the users to compare prices, get a variety of bus providers at same time, know the routes, detailed bills etc. Apart from traditional modes of bus ticket booking, this provides users the freedom to access a lot of information in the reach of fingers.

TABLE 4.7 Reasons behind the booking mode preference

Reasons	Frequency	Percent
Ease of Usage	45	45.0
Offers	21	21.0
Previous Experience	24	24.0
Options Available	10	10.0
Total	100	100.0

Most of the customers who book through mobile applications are using it because of the ease of usage. Instead of walking into a travel agency and waiting for an hour and booking a ticket, mobile applications eliminate the risk of mobility and effort and enable booking in a couple of clicks. Another factor which motivates them to use the app is the offers and previous experiences.

TABLE 4.8 Level of satisfaction with online booking apps

Satisfaction level	Frequency	Percent
Highly Satisfied	30	30.0
Satisfied	48	48.0
Neither Satisfied Nor Dissatisfied	9	9.0
Dis Satisfied	8	8.0
Highly Dissatisfied	5	5.0
Total	100	100.0

As high as 48% of the respondents are satisfied with the online ticket booking applications, where 30 of the customers are highly satisfied. With the combined average we can see that 78% of the people are satisfied with the service where the remaining 22% have some issues with their travelling experience which either could be attributed to behaviour of staff, bus quality, travelling experience, fares etc.

TABLE 4.9 Mobile booking apps offer better services than other mode of booking

Level of agreement	Frequency	Percent
Strongly Agree	26	26.0
Agree	59	59.0
Neutral	11	11.0
Disagree	4	4.0
Total	100	100.0

As high as 59% of the customers agree that the mobile applications give an edge over the other methods of bookings. With the combined percentage of 75% of the customers have an opinion that mobile applications provide better service than websites or travel agencies. As low as 4% disagreed which could be attributed to unpleasant experience in using the applications.

TABLE 4.10 Preferred app for online bus ticket booking

Category	Frequency	Percent
Redbus	55	55
Abhibus	12	12
Make my trip	22	22
Goibibo	3	3
Paytm	8	8
Total	100	100.0

A total of 55% of the respondents use Redbus for booking tickets. It provides a customer friendly interface and quick processing of tickets. It also shows the different service providers available than any of its competitors. Next comes the MMT with 22%. It mainly focuses on Hotel bookings but now they have eaten up the market share of RedBus which is visible from the results. The remaining Abhibus, PayTm and Goibibo have less than 15% response rate which cannot be considered as a competitor for Redbus.

TABLE 4.11 Preferred features in the app selected

Category	Frequency	Percent
Offers	35	35.0
Promo Codes	23	23.0
Ease of Payment	25	25.0
Refund options	4	4.0
Variety of options available	13	13.0
Total	100	100.0

Around 35% of the customers are using the app because of its offers. The introductory offer, free wallet money, special discount coupons etc. made the customers attracted towards these applications. Another feature is the ease of making payment. It will save time and effort. The promotional codes and using application for referencing etc. could be other reasons. Their decent cancellation policy is convincing and adaptable to any segment of customers.

TABLE 4.12 Level of satisfaction with the customer service of apps

Satisfaction level	Frequency	Percent
Highly Satisfied	29	29.0
Satisfied	62	62.0
Neither Satisfied Nor Dissatisfied	7	7.0
Dissatisfied	2	2.0
Total	100	100.0

People who are using the applications are satisfied with the customer services. It may either be in terms of information or in terms of booking tickets. These applications opens the gateway to the customers to bridge the gap between the traditional modes of bus ticket booking.

Inferential statistics

H1: Mode of booking changes with customer a

TABLE 4.13 Age vs. Mode of booking (ANOVA)ge.

Age	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.429	3	1.143	2.393	.072
Within Groups	53.494	112	.478		
Total	56.922	115			

Here the p value is above 0.05, mode of booking does not change with age.

H2: Males and females differ in their satisfaction levels of online booking apps

TABLE 4.14 Gender vs. satisfaction (ANOVA)

Gender	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.867	4	.217	.871	.484
Within Groups	23.643	95	.249		
Total	24.510	99			

Here the p value is above 0.05, there is no gender-wise difference in satisfaction levels of customers of online booking apps.

Suggestions

- The travel agencies must stay updated to the technologies to tackle the competition from the mobile booking application
- The main strong point of travel agencies is customer relationship, so while proving tele booking and more custom made offers they can again survive in the market
- The customer satisfaction is not complete, there are still some unsatisfied people, research must be done to understand the issues and the mobile application providers must work on that for better peer suggestion and more reach

- The more of the users are among the age group of 18-25 among the adult groups they prefer traditional modes more convenient. So steps must be taken from the companies part for more involvement of middle aged group people to use the applications.

Conclusion

The study mainly focused on the impact of mobile application in booking bus tickets. We can say that the people evolved mainly the young generation has evolved from the traditional way of bus booking to the upgraded method. This provide ease of booking. Tey don't have to wait in long queues and book the tickets. They can easily book the ticket which they like at the time they are available.

From the study, we can see that the major factor which influence the customer in using the mobile application is the ease of usage. Once they book through mobile applications with the help of any friends of family members and from that experience, they do it by their own. Another factor which influence them is the offers and promo codes provided by the applications.

Most of the respondents are satisfied with the applications. Their mode of working and the services provided. As per our findings we can say that the applications are providing information to customers who are not end users but they may book to compare it with other modes of transportation. There are customers who use the bus service sometimes and rarely. They use other modes where they use the applications to compare prices between the two modes etc. But overall, we can say that the majority of people who are using these applications are satisfied with their mode of working and services provided.

The mobile applications or online bookings have severely affected the traditional mode of booking. From our study we understood that if mobile applications was not there these all respondents either use the travel agencies or use another modes for their transportation. So we can clearly say that the sale of travel agencies got decreased due to the implementation of mobile applications.

Majority of the customers use RedBus application for their booking purpose. The user interface and the offers it providing is the main reason for its popularity. RedBus gives you the freedom to book tickets 24/7 with variety of payment modes than any other provider. The provides offers every month to attract more and more customers. Their algorithm is made in such a way to give customised recommendations to customers and giving information to them based on their needs.

While concluding we can say that the mobile applications were such a boost from the traditional modes of booking and they revolutionised the industry maintaining customer satisfaction and providing better customer services to them. There is option for further research on the topic as though the people intentions and interests are subject to change. When more and more competition comes into picture, the figures are supposed to change.

References

1. Duraisamy, Jamilu & Abuhuraira (2018). Android mobile application for online bus booking system
2. Nikhashem, Yasmin, Haque & Khatibi (2015). Study on customer perception towards online-ticketing in Malaysia.
3. Norbayah, Norazah (2017). Flight ticket booking app on mobile devices: Examining the determinants of individual intention to use
4. Nwakanma, Ifeanyi & Etus, Chukwuemeka & Ajere, Ikenna & Agomuo, Uchechukwu. (2015). Online Bus Ticket Reservation System. Statistics and Computing. Vol. 1.
5. Oloyede, M.O., Alaya S.M., & Adewole, K.S (2014). Development of an Online Bus Ticket Reservation System for a Transportation Service in Nigeria. Computer Engineering and Intelligent Systems . Vol.5.
6. Standing, Vasudavan (2014). The Impact of Electronic Commerce on the Travel Agency Sector
7. Thomas, Sujo & Pathak, Bharthi & Vyas, Pavak. (2014). The Growth of Online Bus Ticketing Industry: RedBus Route to Success in the Indian Market. International Journal of Business and Management. 9. 10.5539/ijbm.v9n11p247.
8. Wang, Xiang & Fesenmaier (2014). Smartphone Use in Everyday Life and Travel