

# DETERMINANTS FOR THE ADOPTION OF MOBILE ENTERTAINMENT SERVICE IN NIGERIA: THE CASE OF CALLER TUNES SERVICE

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## ABSTRACT

*Caller tunes services offers great benefits to consumers but adoption has been slow in Nigeria. This study explores the determining factors of caller ring tunes service in Nigeria using the Technology Acceptance Model. Respondents were sampled from secondary schools, polytechnics and Universities in Nigeria. Findings revealed the role of Perceived Usefulness, Perceived Ease of Use, Social Influence and Economic Issues in the acceptance of Caller ring tunes in Nigeria. This study builds on the existing knowledge by understanding the key variables that lead to the acceptance of caller tunes service. It is pertinent for telecommunication providers to give concentration to these key areas that trigger the acceptance of entertainment services due to the huge potential of investments available in this sector.*

**Keywords:** Mobile Entertainment, Adoption, Caller Tunes Service, Technology Acceptance Model, Nigeria.

## INTRODUCTION

Mobile Entertainment services have been adopted into the mobile telecommunication market. However although extensive studies have been carried out on mobile commerce, only few studies have been carried out on mobile entertainment services. Entertainment services range from music, videos and games. Mobile technology is now dependent on value added services rendered by subscribers (Carlson et al. 2006), as telecommunication corporations rely on the capital these services generate revenue

Caller tunes is one of the entertainment services provided by subscribers' in Nigeria, It keeps individuals you call entertained. There is limited adoption studies on Mobile Entertainment Services globally (Pihstrom et al. 2008) and currently no study on its adoption in Nigeria. Research on entertainment services has focused on chat services (Nysveen, Pedersen and Thorbjørnsen, 2005), Mobile Games (Jiang et al. 2015) and Mobile Multimedia (Pagani, 2004). Few studies have focused solely on the adoption of caller tunes service (Roy & Banerjee, 2010; Banerjee, 2011; Apiah et al., 2018), and have revealed the existence of a gap in the adoption of these services. Certain features of caller tunes services include mobile music, spiritual messages, recordings by renowned pastors, advertisement of services, and promotion of blood donation amongst others.

Nigeria has a mobile phone penetration rate of 84% with 146 million phone users. This growth creates an enabling environment for the mobile entertainment industry which continues to show a significant increase, Research shows that in 2014, five billion naira was generated from one telecommunication company from Caller Ring back Tunes. Due to the business opportunities available in value added services, telecommunication firms have made huge

investments in the provision of entertainment services which has shown slow adoption. However, in 2018, the four leading mobile communication companies were summoned by the Senate to provide explanation for tricking Nigerians to subscribe to caller tunes service amongst other accusations. It is therefore pertinent to provide answers to the major determinants of caller ring back tunes in Nigeria. Hence, this paper focuses on examining the determinants of caller ring back tunes adoption in Nigeria. The need to understand people's prediction is paramount to continue using these services.

## LITERATURE REVIEW

### Mobile Entertainment Services

Several studies have been conducted in determining the adoption of mobile entertainment services this is particularly due to the amount of revenue generated from this service. These services range from chat services, mobile music, games and mobile tv amongst others. Nysveen et al (2005) examined the role of gender in the continuous use of mobile chat services. The study revealed the motivating factors for male and female differed with usefulness and expressiveness been major determinants for male while deriving pleasure was noted as a major determinant for females. It is obvious the female and males have peculiar preferences in the adoption of technologies but these findings are rarely holistic. In the case of mobile games, Teo and Park (2003) conducted a study on the adoption of mobile games. The study revealed perceived usefulness; pleasure received and perceived expressiveness as major determinants in the adoption of mobile games. These findings differed from Chang Liu (2003) on the determining factors of mobile games where less effort, innovation and playtime are major determinants of mobile game adoption. Though mobile games is a form of entertainment service, its technology is different from caller tunes, though studies differed on how usefulness and less effort influence adoption, it showed that the innovativeness/ expressiveness of a consumer was a major determinant for adoption. Hew et al. (2016) also conducted a study on the adoption of mobile entertainment services. Results revealed the role of perceived usefulness, ease of use and quality of service as predictors of mobile entertainment adoption. Nevassalo (2013) examined the determinants of mobile entertainment services, the study found that six factors constituted determinants for mobile entertainment services which included performance expectancy, effort expectancy, social influence, hedonic motives, price value and motives. Studies on entertainment services have shown the role of usefulness, ease of use, enjoyment, innovativeness, price on the adoption of these services; this reveals that though mobile entertainment services have benefits to consumers certain factors must drive adoption. This study chooses to adopt perceived usefulness and perceived ease of use and also include the social influence and economic issues from the study by Nevassalo (2013).

In addressing the adoption of mobile music services, Sim et al. (2014) conducted a study on the determinants of mobile music adoption in Malaysia, findings showed the role of Davis Technology acceptance model as a major predictor on the acceptance of mobile music services. These findings were similar to Huchi Wang & Her-sen Doong (2010) in a similar study on mobile music in which social influence was noted as the major determinant in the adoption of mobile music. In Ghana, factors that determine the adoption of caller tunes service in promoting blood donation was investigated by Apiah et al (2018), results showed that perceived ease of use and perceived usefulness were significant predators in the adoption of caller ring tunes in advertising blood transfusion, results also revealed that making the service free of cost will

further promote adoption of the service. Similarly in India, Roy & Banerjee (2010) investigated the factors that influenced the selection of caller ring back tones, results revealed that societal approval, self-image and innovativeness influence the adoption of these services, studies by Banerjee (2011) also showed that age and self-image were primary determinants for selection of a caller tune.

## 2.2 Technology Acceptance Model

Several studies have adopted models in explaining the continuous use of a new technology. However, Technology acceptance model proposed by Davis is one of the most adopted models in research. Research has shown the role of several factors as major determinants in the acceptance of an information system. Behavioural intention is noted as the major determinant of the use of a system while perceived usefulness and perceived ease of use are determinants of the intention of a user to adopt a system

### Perceived Usefulness

This is the extent to which a consumer believes the continuous usage of a technology will be beneficial. Nysveen et al. (2005), state that if an information system does not improve performance, it will not be adopted. It is therefore pertinent for the performance and effectiveness of the user to be improved by the information system. In accessing the usefulness of a system, it is pertinent to consider the immediate and long-term satisfaction of a system.. Hence, this study proposes that perceived usefulness has a significant influence on a user's intention to adopt caller tunes services.

H1: Perceived Usefulness has a significant influence on a user's intention to adopt caller tunes service

### Perceived Ease of Use

Perceived Ease of Use is defined as the extent a user believes that adopting a technology will be without effort. However Gefen & Straub (2000) argue that perceived ease of use will not influence adoption of an innovation if the user benefits from it. The study therefore proposes that Perceived Ease of Use is a determining factor on intention to adopt caller tunes service.

### Social Influence

Social Influence is a construct from theory of planned behavior which states that a technology has a higher probability of adoption when people in the social circle show support of it. Sim et al. (2012) noted the existence of two dimensions on social influence which includes external influence and interpersonal influence. The dimension of external role of influence entails television, mass media, internet Rao & Troshani (2007) while Interpersonal role on influence includes friends, colleagues and superiors. In a study by Wei et al (2009), the mass media was noted as the most important channel in influencing the adoption of technology, while other studies show the role of the immediate social circle in influencing the adoption of an information system. Hence the study examines the role of social influence in determining the adoption of caller tunes service in Nigeria.

Hypothesis3: Social Influence is a determinant on the intention to adopt caller tunes service

### Economic Issues

Economic issues are the price charged for a product or service. It has been noted by Wei et al. (2009) that economic issues could have adverse effects on the adoption of technology. Researchers observed economic issues significantly influenced a users intention to continuously use mobile services in China and Bangladesh (Dai & Palavia, 2009; Islam et al. 2014). However, these findings differed in the United States where economic issues had no effect on the adoption

of mobile services. Hence this study proposes that Economic issues are a major determinant for intention to adopt caller tunes service

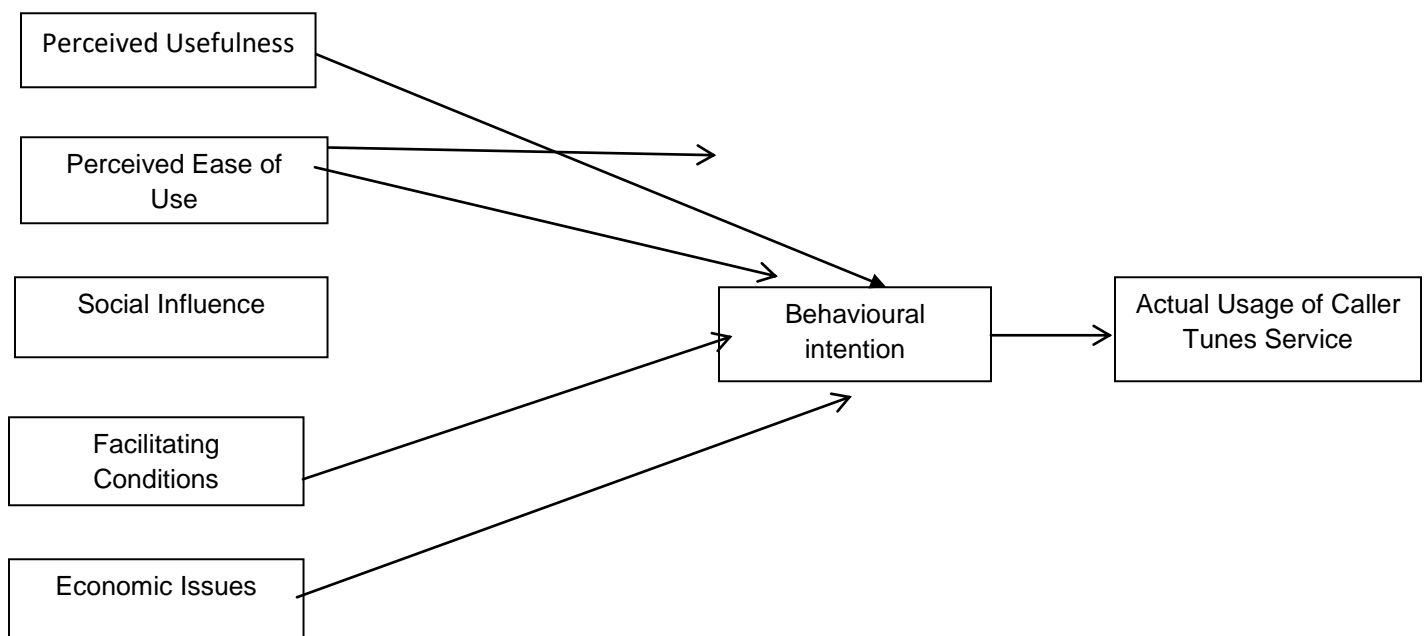
H4: Economic issues are determinants for intention to adopt caller tunes service

### Facilitating Conditions

Facilitating Conditions is defined as the external variables that influence the adoption of a technology. These factors remove obstacles that hinder its adoption for long term adoption. Trust of service providers is embedded in facilitating conditions. This implies that if consumers do not have confidence in a service provider, the service will not be adopted (Rao & Troshani, 2007). Other factors include the privacy of the consumer, security in the use of service. Hence the study argues that facilitating conditions has a strong relationship in intention to adopt caller tunes service

H5 Facilitating Conditions has a strong relationship with intention to adopt caller tunes service

**Figure 1: Adoption of Mobile Entertainment Service in Nigeria Model**



### 3.1 Data Collection

Nigeria's telecommunication industry is the has strong growth indications in Africa. This study was carried out in Ibadan, Oyo State Nigeria. In understanding the acceptance of mobile entertainment service, caller tunes service is chosen due to its popularity in the entertainment service market. Also, younger adults are considered in this study with secondary schools, polytechnics and Universities been considered. Stratified sampling method was adopted to select stunts based on departments and also ensuring the public and private schools were adequately represented.

One hundred and fifty questionnaires were distributed of which one hundred was returned. These questionnaires were designed based on constructs from previous studies using the 7 point Linkert scale.. Questionnaires were further analyzed using descriptive analysis, principal component analysis and Regression analysis.

### 3.2 Measures

The six constructs used in the study were measured using 21 items with the questionnaires designed in English language. Behavioural Intention which is the dependent variable was measured with four constructs which includes ‘ Caller tunes fits well with the way I receive calls’, ‘ Caller Tunes enables me to innovate with latest music’, ‘Caller tunes enables me demonstrate digital skills’, ‘Caller tunes is how I express my personality’.

Perceived Usefulness is the first independent variable and is measured using constructs adopted from Davis (1989) fitting it into the peculiarity of caller tunes service. The constructs include ‘ Using caller tunes is useful to me’ ‘caller tunes enables me entertain those calling’ and ‘ caller tunes enables me create a good image of myself’.

Perceived Ease of Use construct was measured using variables which include ‘ It is easy for me to use caller tunes service’; ‘steps in using caller tunes service is clear and understandable’ and ‘ I find caller tunes service easy to change’

Social Influence was measured using constructs which include ‘people important to me believe I should use caller tunes service’, ‘my friends like my caller tunes’, ‘other people are impressed by the way I use the service’

Facilitating Conditions was measured using constructs which include; ‘caller tunes does not jeopardize my security’, caller tunes does not jeopardize my privacy’, ‘support services for the use of caller tunes is good’

Finally, Economic Issues was measured with constructs such as ‘caller tunes service is cheap’ ‘I have the means of using caller tunes continuously and ‘The cost of caller tunes is right for me’.

### 3.3 Constructs Reliability

Variables in the study were tested using Cronbach Alpha reliability testing. As shown in Table 1, all variables were greater than 0.9. The high reliability scores show the items in the instrument have measured each construct adequately.

### 4.0 Results

In Table 2 shows the demographic characteristics of students represented in the study. Male and female are represented at 55% and 45% respectively, Also the age of respondents range from 15 to 25 representing young adults. Finally the level of study considered ranges from senior secondary schools, polytechnic and university students.

**Table 2: Demographic Data on Caller tunes Service**

Variables	Measurement	Frequency	Percentage
Gender	Female	45	45.0
	Male	55	55.0
Age	15-17	16	16.0
	17-19	13	13.0
	19-21	16	16.0
	21-25	31	31.0
	Above 25	24	24.0
Level of Study	Senior Secondary	21	21
	Polytechnic	37	37
	University	42	42

#### 4.1 Multiple Regression Analysis

The framework for this research was analyzed using the multiple regression analysis, which was imperative in establishing the determining factors of caller ring tunes service adoption in Nigeria. Behavioural Intention which is the dependent variable was tested with several independent variables (Chong et al (2009)

The results from the regression analysis as represented in Table 3 is represented in the five hypothesis listed below

Ho: Perceived Usefulness has a significant influence on a user's intention to adopt caller tunes service

Results showed a very strong significant relationship of **(Beta=0.321;p=0.000)** . This relationship exists between intention to adopt caller ring tunes service and perceived usefulness. The hypothesis is rejected.

Ho: Perceived Ease of Use has no positive relationship with intention of users to adopt caller ring tunes service.

Results reveals there exists a positive relationship **(Beta=0.253;p=0.000)** between intention to adopt caller ring tunes service and ease in the use of caller ring tunes . The hypothesis is rejected.

Ho: Social Influence is a determinant of intention to adopt caller tunes service.

Results show there is a strong relationship **(Beta=0.314; p=0.000)** between intention to adopt caller ring tunes and social influence .We therefore reject the hypothesis

Ho: Facilitating Conditions has a strong relationship with intention to adopt caller tunes service

Results reveal that there exists no relationship **(Beta=0.006;p=0.905)** between facilitating conditions and intention to adopt caller ring back tunes. The hypothesis is accepted

Ho: H4: Economic issues are determinants for intention to adopt caller tunes service

Results reveal a significant relationship **(Beta=0.111;p=0.020)** between economic issues and intention to adopt caller ring tunes.We therefore reject the hypothesis.

**Table 3: ANOVA**

Model	Sum of Squares	df	Mean Square	F	Significance
Regression	62.524	5	12.505	996.597	0.000
Residual	1.179	94	0.013		
Total	63.704	99			

**Table 4: Model Summary**

Model	R	R Square	Adjusted Square	R	Standard Error of the Estimate
1	0.991	0.981	0.981		0.11202

**Table 5: Coefficient Table**

Model	Unstandardized Coefficients		Standardized Coefficient		Significance
	B	Std Error	Beta	t	
Constant	0.000	0.014		0.009	0.993
Perceived Usefulness	0.291	0.065	0.321	4.474	<b>0.000</b>
Perceived Ease of Use	0.229	0.063	0.253	3.620	<b>0.000</b>

Social Influence	0.304	0.071	0.314	4.311	<b>0.000</b>
Economic Issues	0.109	0.046	0.111	2.362	<b>0.020</b>
Facilitating Conditions	0.006	0.048	0.006	0.119	<b>0.905</b>

### **Dependent Variable: Behavioural Intention**

### **Discussion of Findings**

In the launch of mobile services, the role of consumers is paramount. The study intends to investigate factors determining the acceptance of caller tunes Entertainment Service. Results showed that the benefits derived from a systems, ease of use, influence of peers and price of subscribing to caller tunes is a major determinant for adoption. This implies that users were more concerned about the benefits of caller ring tunes service, the ease of using, cost and the influence on peers. The study also revealed that the social circle influence and mass media were also significant in determining the acceptance of caller tunes services. This finding corroborates with the findings of Venkatesh (2003) where constructs were determinants for acceptance. Similarly, a study by Wang & Doong (2010) on the adoption of mobile music showed that social influence played a major role in the acceptance of mobile music services. Sim et al (2012) also showed the role of Ease of Use as the most significant predictor in the acceptance of mobile music services. This study contributes academically to the acceptance of Entertainment services which is considered as the first study conducted in Nigeria. Findings contribute to the existing knowledge by understanding the key variables that lead to the acceptance of caller tunes service. It is pertinent for telecommunication providers to give concentration to these key areas that trigger the acceptance of entertainment services due to the huge potential of investments available in this sector.

### **Limitation of Study**

The study on the adoption of mobile entertainment services has limitations that include a small sample size; future studies may collect data from more respondents and compare such data across cultures. Similarly, the study can be enhanced by comparing the adoption of caller tunes service to other entertainment services. Future studies may also consider the demographic variables of respondents and its role in the adoption of caller tunes service.

## **CONCLUSION**

Telecommunication firms in Nigeria have experienced several challenges due to the low level of adoption of caller tunes service in Nigeria. The main objective of this study was to investigate the determinants of Caller tunes service adoption in Nigeria. Technology Acceptance Model was adopted to suit the peculiarity of the environment in the research. Findings revealed the role of Perceived Usefulness, Perceived Ease of Use, Social Influence and Economic Conditions as major determinants in the acceptance of Caller ring tunes service. These findings have implication for telecommunication providers to consider these key areas rather than coercing users to make use of services. Hence it is imperative to telecommunication industries to consider how useful caller tunes service may be to the consumer and how easy it is for consumers to subscribe to these services free of effort. Similarly the role of peers and the mass media must also be considered in the promotion of these services. Finally, free services should be offered to consumers for a period to instill interest before charging the required fees.

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