

# Critical Factors Influencing Mobile Marketing Technology Adoption by Micro Businesses in Nigeria: A Preliminary Study

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**Abstract:** The paper examines critical factors influencing mobile marketing technology adoption by micro businesses using a qualitative method. Data for this study were adopted through interviews (unstructured and semi-structured) in two different stages with twenty micro-businesses drawn purposefully and underpinned by Technology, Organisation and Environment (TOE) framework. This assisted in unveiling 4 critical factors that shape micro –businesses’ adoption of mobile marketing devices in Amuwo- Odofin LGA of Lagos State, Nigeria. These critical factors include: ease of use, customer accessibility, firm’s sales promotion, and intense competition. These factors are classified based on the TOE framework. This study is vital to academics and practitioners because it provides further insight into mobile marketing technology adoption framework; and identified factors that could shape the decisions of micro- businesses in a bid to cope with technology adoption continually and reduce the enormous time spent in search of information during the adoption process.

## 1 INTRODUCTION

The use of mobile technologies for marketing activities offers a great opportunity for small and medium scale enterprises (SMEs) to improve their marketing capabilities. Scharl (2005) notes that mobile marketing technology is a conventional structure that offer a business the capacity to communicate with customers directly, and work in partnership with the use of mobile devices. The use of mobile applications by marketers has paved ways for different customers to communicate with both prospective and actual customers via the use of phones, and other mobile devices. These devices help small businesses to advertise their products in the internet and enable advertisers to contact potential customers anytime and anywhere (Shankar, 2009). Mobile marketing is achieved when mobile marketing planning and strategy development, decision-making, implementation, monitoring, and maintenance improve the company’s mobile marketing culture (Smutkupt et al., 2010). Small businesses that implement mobile marketing technology into their marketing mix need to concentrate on developing strategies that will create awareness, promote a dialogue, and win the trust of the target customers. However, mobile marketers

have failed to establish such relationships because of the uncertainty of the usage. (Eze et al., 2019).

Although mobile marketing devices play a vital role to small businesses, most of the studies in this area have concentrated on the old theories in information systems which considers mobile marketing technology adoption as non-dynamic in nature and use mostly survey approach that hypothesised variables and predict mobile marketing technology adoption at a single stage (Williams et al., 2009; Eze and Chinedu-Eze, 2018a; Silva, 2007; Eze et al., 2014).examples of such theories included: intention and behavioural based models such as Ajzen and Fishbein, (1980) and Davis, (1989), resource-based view (RBV), Rogers innovation models (Rogers, 1983; Rogers, 1995), Porter’s model (Porter, 1985). Most studies that engage these theories use quantitative methods that conceptualize variables as constructs and use survey approach in predicting the levels of outcome. For example, Strom et al (2014) have looked at 60 papers on mobile marketing adoption use, improved and potential value and found out that out of the 60 papers examined, 2 papers used qualitative approach, while another 2 adopted mixed method (qualiative and quantitative method) and 56 papers used quantitative method. It is argued that substantial number of these theories are not designed

for SMEs (Xu et al., 2007; Martin and Matley, 2001) because they are narrow in nature (Rantapuska and Ihanaine, 2008), and one model or theory effectively describes small businesses adoption decision because some important aspects of small business characteristics are often ignored (Dwivedi et al., 2009a). Gilmore and Carson, (2007). In addition, notes that matters relating to SMEs should be investigated holistically rather than testing and predicting variables at one particular stage. However, little research have examined key factors shaping the adoption of mobile marketing technology in micro businesses in Amuwo-Odofin Local Government Area (LGA) of Lagos State, Nigeria. In Nigeria, majority of researches in this area extrapolated results of other researchers in developed countries as if Nigeria operates in the same environment. Hence, the dearth of research that prove a road map to this kind of research in Nigeria triggered this research. This will help model a theory that may assist micro businesses, SMEs, and scholars in exploring mobile marketing adoption behaviour in small businesses in Nigeria. The paper is structured as follows: The paper reviews first the existing body of knowledge including theoretical underspending of the study in order to understand the, context in greater details. The paper further adopted interviews in gathering the data and thematic analysis in analysing the data. Next section presented the finding and discussion.

## 2 LITERATURE REVIEW

### 2.1 SMEs Adoption of Mobile Marketing Devices in Nigeria and the TOE Framework

This study focuses on micro-businesses considering the fact that they are the pillars for any nation's growth and job creation (Parellada et al., 2011; Mutuala and Brakel, 2006; Eze et al 2018; Eze and Chinedu-Eze, 2018b). Although small businesses are growing rapidly (Ongori and Migiro, 2010; Lee, 2004) little is known about the adoption of mobile marketing applications by micro-businesses in Nigeria, particularly in Amuwo-Odofin LGA of Lagos state, Nigeria were majority of the businesses are SMEs. SMEs in Nigeria used comparable approach implemented by western academics as if Nigeria functions in the same environment with those in more advanced countries. Small businesses that make use of mobile marketing applications in their marketing mix need to focus more on developing strategies which creates awareness, encourage

interactions, and winning the trust of target audiences. Small businesses that use mobile marketing have failed to establish these types of relationships that influence consumer's purchase decisions and loyalty.

The study adopted technology, organisation and Environment (TOE) framework. The theory of TOE was invented by Tornatzky and Fleischer (1990), and emerged from the field of organizational psychology. The TOE is the practice by which organizations accept and implements technological inventions that is influenced by the technological perspective, the organizational perspective, and the environmental perspective (DePietro et al., 1990).

Although TOE is one of the static models however, the study adopted TOE framework because TOE framework integrates the environmental perspective which has been ignored by Rogers Innovation diffusion theory (IDT) (Oliveira and Martins, 2011; Madukua et al., 2016). In addition, the framework in TOE is considered more robust (Alshamaila et al., 2013), and has the capacity to absorbed broad factors that may shape the adoption of mobile marketing technologies in Nigeria's SMEs because of the large number of variables associated with contextual elements of the framework. The Framework also provide important analytical dimensions in exploring adoption decision of a wide range of technology innovations (Oliveira and Martins, 2011). The conceptual framework for this study is presented in Figure 1 below.

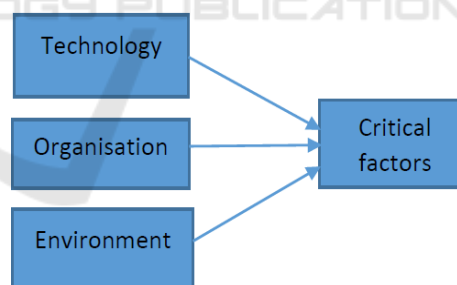


Figure 1: Proposed study framework.

## 3 METHODOLOGY

The study used purposive random sampling because the study was aimed at ascertaining and explaining the participants' real life experiences. Hence, the study selected units of analysis (SMEs) at a single level that helped in making evaluation grounded on the research objectives rather than making statistical generalisation (Mason, 1996). Therefore, the research selected captains of SMEs drawn from service

oriented industries in Lagos that have adopted mobile marketing technology in the last three years. It is worthy to note that micro-businesses in this research are defined as firms that have employed 1 to 10 workers. The population of this study consists of managers and employees of selected micro-businesses in Amuwo-odofin local government area of Lagos State, Nigeria. 70 participants were selected from Lagos business directories of which 15 participants agreed to be interviewed

### 3.1 Unstructured Interviews and Semi-structured Interviews

The study adopted both unstructured and Semi-structured interviews. The purpose of conducting the unstructured interviews first was to have a wider view of the research area and to redefine the research topic in order to, understand the current state mobile marketing technology adoption by SMEs. Secondly, the researchers tested the codes generated with few samples of the raw data to ascertain if the codes will be applied to the data collected. This assisted in the design of the interview questions adopted at the second stage (semi –structured interview) of the data collection. Semi-structured interview was carried out to grasp the richness of the views of the participants (Oates, 2006). Before the interview, formal letter was sent containing the purpose of the interview as well as confidentiality matters. The aim is to ensure that respondents can go through them and feel more comfortable before the interview. The interviews lasted for about approximately 1 hour. It is worthy of note that 4 unstructured interview (preliminary study) were conducted while 16 participants were interviewed through semi-structured interviews. The interview participants’ profile is in Table 1 and Table 2 below.

Table 1: Participant profile for the preliminary study.

No	Role	Company size	Sector
A5	Managing Director	10	IT software development
A6	Manager	9	Training and development
A7	Director	5	Security
A8	CEO	6	Financial firm
A9	Manager	9	Engineering/ Telecommunication

A10	Manager	9	Retails
A11	Manager	5	Telecommunication
A12	Manager	6	Security
A13	Director	10	Property
A14	Manager	10	Property
A15	CEO	9	Consultancy
A16	Manager	5	Money management
A17	Manager	1	Internet marketing
A18	Manager	4	Financial firm
A19	Manager	5	Security training
A20	Manager	10	IT consultant

### 3.2 Data Analysis

This research adopted thematic data analysis was adopted in the analysis of the data. More specifically data driven thematic analysis was deployed because the code used were data driven based on TOE framework. The three elements- Technology, organisation and environment associated with TOE were theoretically driven which aided in unveiling the characteristics of the codes in simpler terms (see Table 2) based on the code name, definition and/or description of the codes (Miles and Huberman 1994). This exercise assisted both in the credibility and dependability checks. The table below (see figure 2) shows the steps involved in the data analysis process. Stage one through three were used for the preliminary study where the initial raw data drawn from the unstructured interview were analysed. At stage four all the data transcribed (unstructured and semi-structured interview data) were imported into NVivo (See stage 4 of Figure 2) which helped in the analysis of the huge data involved. The NVivo which was a software used in the analysis of qualitative data helped to manage data easily. Table 2 also reveals depicts the guide on how the data were coded.

Table 2: Main study participants’ profile.

No	Role	Company size	Sector
A1	Manager	10	Security services
A2	Manager	8	IT software development
A3	Manager	7	Telecommunication
A4	Manager	2	Telecommunication

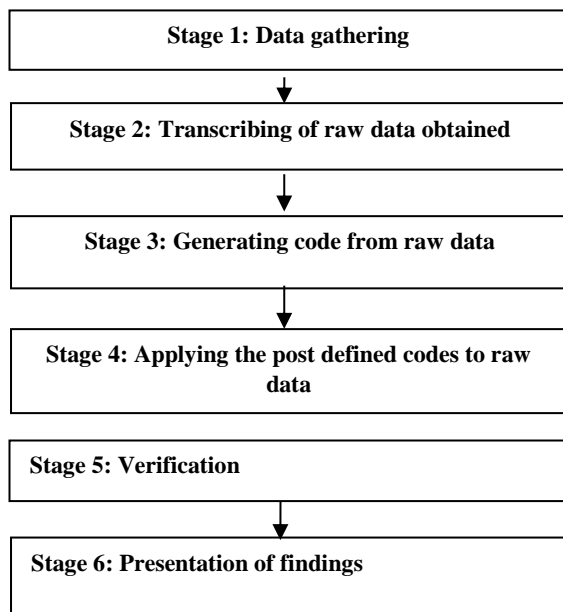


Figure 2: Data analysis Process.

Table 3: Reliability analysis.

Areas	Number of judges	Reliability	
		First judge	Second judge
Critical Factors	2	0.81(81%)	0.87(87%)

Table 4: General guide for generating code.

Codes	Definition	Description
Ease of use	This means when managers emphasize that the use of mobile marketing is very simple	This implies that SMEs in Amuwo-Odofin said that using mobile marketing for their business operation is stress free
Customer accessibility	This refers to the quality of being available when needed	This implies that SME's in Amuwo-Odofin said they use mobile marketing for easy accessibility of their customers
Firms sales promotion	This means advertising on the social media platforms through smartphones by SMEs	This implies that SMEs in Amuwo-Odofin said that they use mobile devices to reach out to customers
Intense competition	This means SME's competing in the same field.	This implies when SME's in Amuwo-Odofin said they need to outsmart their competitors.

Inter-coder reliability analysis was engaged using categories and quotes from the raw data (Bryman, 2008). Two experts in the area of the study evaluated the quotes against the themes which was further validated via across-case analysis of the supporting evidence (Macredie and Mijinyawa, 2011). The analysis revealed that the results of the reliability test discovered over 80% agreement is in relation to the scope of the study. This exceeded the 70% benchmark advised by Miles and Huberman, (1994). The process of the data analysis demonstrates how the data were analysed and presented (see Boyatzis, 1998). Following the analysis a guide was developed in relation with the description of the codes (see table 3).

## 4 RESEARCH FINDINGS

Table 4, and Table 5, show the themes that are linked to each code, supporting cases and supporting evidences which revealed the critical factors.

### 4.1 Explanation of the Framework

The model in figure 3 unveils the major factors influencing mobile marketing technology adoption among micro businesses in Amuwo-odofin Local Government Area of Lagos State, Nigeria. Intense competition among firms producing similar goods is one of the factors influencing the adoption of mobile marketing device. Such firms go online to create awareness and remind audiences about the existence of their products. Furthermore, SMEs find the adoption of mobile marketing easy to use, via social media platforms.

They can easily publicize their products online for the world to see which improves sales. Mobile online platforms also help micro businesses in promoting their businesses.

Table 5: Themes and supporting cases.

Factors influencing the adoption of m-marketing by SMEs		
Codes	Supporting cases	%
Ease of use	A1, A2 .A3.A7,A9,A12, A20,A22	8/20
Customer accessibility	A1,A2,A3,A7, A17, A21,A25	7/20
Firms sales promotion	A4,A6,A8,A10,A11,A12, A12	7/20
Intense competition	A2, A3, A4, A6, A7, A9, A11,A12, A21,A23,A26	11/26

Table 6: Themes and supporting evidences.

Factors influencing the adoption of m-marketing by SMEs	
Codes	Supporting Evidence
Ease of use	<p>“mobile devices are easy to use in accessing customers” (A3)</p> <p>“Because it is easy and exposes you on how best to you can achieve competitiveness, it gives you more customers.”(A7)</p> <p>“Mobile marketing is the best for me right now because it is actually simple” (A2)</p>
Customer accessibility	<p>“We use mobile application to be able to access and reach more customers”. (A1)</p> <p>“Because we can access customers via the mobile devices, it has brought a lot of customers”. (A2)</p> <p>“Because of how easy we access our customers through mobile app, it has improved our sales”. (A7)</p>
Firms sales promotion	<p>“We adopt mobile marketing when we want to carry out sales promotion”. (A4)</p> <p>“It creates awareness and it brings more customers”. (A6)</p> <p>“It is to create awareness about our products and inform customers that we are in stock”. (A8)</p> <p>“Many customers find it difficult to come to our stores so we just use our mobile phones to create awareness about our products online”. (A10)</p>
Intense competition	<p>“Competition is everywhere we have to step up our game” (A6).</p> <p>“Because of the competition around, everybody sells different products, so for me improve sales of my products we have decided to adopt mobile marketing” (A2)</p> <p>“The reason is because competitors are much...” (A4).</p>

In addition, the accessibility of customers via mobile devices to prospective micro business managers is crucial for communication flow so that feedback would be ascertained from prospective customers. These factors are now discussed in the next section.

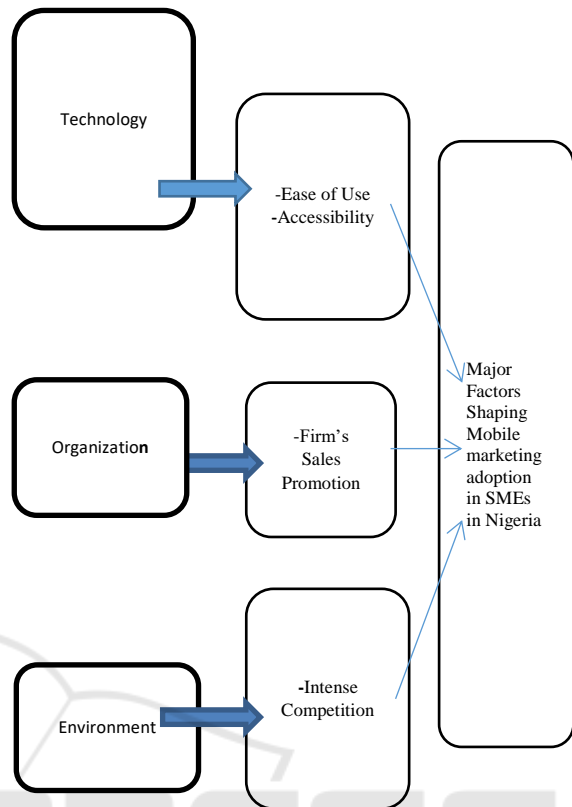


Figure 3: Framework on factors.

## 5 DISCUSSION

### 5.1 Ease of Use

Ease of use is defined as simplicity of the mobile devices in assisting businesses in carrying out business activities or task or the ease with which the mobile marketing devices enables multifaceted tasks to be carried out. Similarly, a number of studies in IT adoption (e.g. Hong, 2011, Khoubati et al, 2006; Lip-Sam &Hock-Eam, 2011) have argued that most micro businesses lack requisite skills and knowledge to engage with IT applications. Hence, any application that is simple to understand will definitely be engaged by micro businesses. This was echoed across cases:

*“Mobile devices are easy to use in accessing customers” (A3)*

*“Because it is easy and exposes you on how best to you can achieve competitiveness, it gives you more customers.”(A7)*

*“Mobile marketing is the best for me right now because it is actually simple” (A2)*

This finding suggests that SMEs play critical roles for the adoption of these applications although observation shows that because of the limited technical know-how of these businesses they still find it some worth difficult to embrace. The findings above are consistent with the work of Hong; (2011), and Polites and Karahanna, (2012).

## 5.2 Customer's Accessibility

Accessibility is defined as the act of being able to reach or acquire something without much effort. The mobile device is unarguably an effective communication tool, it ensures that the customers can reach (or are being reached) firms at any point in time. With the use of mobile devices, clients communicate to customers quicker (Barnes, 2002). Managers interviewed noted that mobile marketing applications have made it easier for them to access their customers through the use of their mobile applications which improve sales. This was noted across cases:

*"We use mobile applications to be able to access and reach more customers". (A1)*

*"Because we can access customers via the mobile devices, it has brought a lot of customers". (A2)*

*"Because of how easy we access our customers through mobile app, it has improved our sales". (A7)*

Evidence further revealed that mobile marketing applications plays a vital part in the consumer buying process and micro-businesses would eagerly accept mobile devices if firms can retain their customers for a long time (moon, 2003).

## 5.3 Firm's Sales Promotion

Firm's sales promotion in this context entails how mobile marketing is used for advertising firm's products or services which help to create awareness online about products and services. Evidence suggests that SMEs use applications like WhatsApp, Facebook, Instagram, Twitter, among others to create awareness about their products and services on their mobile phones. Observation revealed that the level of competition in the business environment is relatively high which has made the adoption of mobile marketing applications by SMEs more effective. Hence, they go on the mobile platforms and advertise their products so potential buyers who may be aware of their products and patronise them. This was echoed across cases:

*"We adopt mobile marketing when we want to carry out sales promotion". (A4)*

*"It creates awareness and it brings more customers". (A6)*

*"It is to create awareness about our products and inform customers that we are in stock". (A8)*

*"Many customers find it difficult to come to our stores so we just use our mobile phones to create awareness about our products online". (A10)*

This findings is consistent with the work of Leppaniemi and Karjaluo, (2008) which suggests that mobile advertising offers marketers the potential to promote products and services in a personalized and interactive way.

## 5.4 Intense Competition

Competition in this context means forces that may threaten the existence of a business. The finding revealed that SME's in Amuwo-Odofin experience intense competition. Some of the participants pointed out that competition is what made them to engage in the adoption of mobile marketing:

*"Competition is everywhere we have to step up our game" (A6).*

*"Because of the competition around, everybody sells different products, so for me to improve sales of my products we have decided to adopt mobile marketing" (A2).*

*"The reason is because competitors are much..." (A4).*

Similarly, Khoubati in (2006) noted that mobile marketing technology adoption is an opportunity to fight competition, increase market share, and promote the businesses. This finding is consistent with Salmela and Turunen, (2003)'s research.

## 6 CONCLUSIONS AND IMPLICATIONS

The study unveiled 4 critical factors influencing the adoption of mobile marketing technology in Amuwo-odofin Local Government Area of Lagos State which helped in the development of a framework aimed at assisting micro businesses to better understand the base approach or strategy to deploy mobile marketing devices in their business operations. The critical factors depicted in the framework based on the theoretical codes of TOE framework (technology, organization, and environment). These factors include ease of use, customer accessibility, firm's sales promotion, and intense competition. The framework has some implications.

Theoretically, the framework offer a frame of references (Agarwal 2000 and Macredie and Mijinyawa, 2011) into understanding the critical factors shaping mobile marketing technology adoption by micro businesses. The operational definitions of the factors may serve as tools by researchers to understand and explain factors shaping mobile marketing technology adoption. The study has identified factors which fall within the context of TOE frameworks. Macredie and Mijinyawa, (2011), in their study note that the incapacity of scholars to effectively define the factors has been a problem in analyzing and validating most studies. Therefore, the empirical factors can may be used to develop hypothesis to validate the factors. Researchers may carry out a comparative study or mix method approach to validate and better understand the critical factors shaping the adoption of mobile marketing devices in SMEs.

Practically, the framework designed in this study may serve as a frame of reference to micro businesses seeking to have a deep insight of the critical factors shaping the adoption of mobile marketing devices since Dedrick and West, (2003) found that frameworks are vital for practitioners and decision makers seeking to design models for IT application. Therefore, the framework may be used by micro business managers for a robust explanation for the courses of action in adopting mobile marketing technology (Macredie and Mijinyawa, 2011). Micro businesses managers may also use the justification in the study and the empirical insight to create awareness among employees on the likely challenges or benefits associated with the adoption of mobile devices.

## 6.1 Research Limitations and Future Research

It is important to note that the framework has its limitations. For example, the factors presented in this paper are limited. The researchers identified other factors during the analysis but such factors were not incorporated in the framework because of the limited supporting evidences associated with such factors. Further studies should be carried out to identify other factors in other industries or organizations with different approach.

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