

**Examining the Mediating Effect of
Organizational Commitment on the
Relationship between Technology
Characteristics and Technology Adoption in
the Nigerian Small and Medium Enterprises
(SMEs)**

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ABSTRACT

This paper examined the mediating position of organizational commitment (OC) as a mediating variable on the relationship between innovation characteristics (complexity, perceived usefulness) and computer technology adoption (CTA). It is obvious from the literature that organizational variables have significant roles to play in shaping the kind of, or the magnitude of relationship existing between technology characteristics and technology adoption. Despite this development, however, very limited studies were undertaken in this direction, especially in relation to Nigerian SMEs. In an attempt to empirically justify the above claim, a model was proposed and two propositions were formulated (1. OC mediates the relationship between complexity and CTA; 2. OC mediates the relationship between usefulness and CTA). In addition to the literature reviewed, relevant data was gathered by interviewing ten (10) employees of different SMEs; and qualitative analysis was done using content analysis respectively. It was found that OC mediates the relationship between Technology characteristics and CTA. It is expected that the paper would extend the frontier of the exiting literature and would help practitioners plan using the proposed framework.

1.0 INTRODUCTION

Within the rapidly changing global picture, SMEs are compelled to keep track of six major factors: demographic, economic, social-cultural, natural, technological and political-legal

environments. It takes real commitment for businesses to understand how these factors interact with one another (Kotler & Keller, 2006) produce satisfactory outcomes. This study focuses on the technological concern of Nigerian SMEs; It is clear from the literature that much of the existing research focused on the technology adoption decision and other measures such as 'intent to adopt' and 'adoption versus non-adoption' (Zhu & Kraemer, 2005). This scenario motivates the present study to focus on the mediating role of Organizational Commitment on the relationship between Technology Characteristics and Computer Technology Adoption, especially within the context of the Nigerian SMEs. In this study Computer Technology entails hardware and software applications that support operations and decision making in the business (Thong, 1999). Technology adoption as far as this study is concerned is the rate at which users make the actual use of the technology in their operations.

1.1 Research Propositions

1. Organizational Commitment mediates the relationship between complexity and CTA.
2. Organizational Commitment mediates the relationship between usefulness and CTA)

1.2 Objective

To examine the mediating effects of organizational commitment on the relationship between technology characteristics and technology adoption in the Nigerian SMEs.

1.3 Research Design

The data for this study was gathered through the reviewed of relevant literature and the interview of ten (10) employees of some selected firms, using purposive sampling technique. All participants in the survey had five years and above experience and had a minimum of Diploma certificate. For better representation, two (2) interviewees were chosen from each of the bakery,

superstore, private school, pharmaceutical industries located in Bauchi metropolis, Nigeria. Content analysis was used to analyze the data collected.

2.0 LITERATURE

2.1 Technology Characteristics

In their effort to insure comprehensive explanation of the factors that either facilitate or inhibit technology adoption, Davis (1993) and Rogers (1995), made some outstanding findings that form the basis of today's technology adoption research. Established evidences have shown the correlation existing between some of these factors and technology adoption. Complexity, compatibility, perceived usefulness and ease of use (Davis, 1993; Rogers, 1995) are among the popular technology characteristics that determine technology adoption in SMEs.

2.2 Organizational Commitment, Technology Characteristics and Adoption

Despite the strong effects of technology characteristics on adoption, not much attention has been given to the direct, indirect or mediating relationship between organizational commitment and adoptions as an accompanying platform that facilitates the actualization of innovators' dreams (Hartog et al., 2010). When employees are dissatisfied at work, they are less committed they will look for other opportunities to quit. If opportunities are unavailable, they may emotionally or mentally "withdraw" from the organization, and this could lead to slow technology adoption. Thus, organizational commitment and job satisfaction are important attitudes in assessing employees' intention to quit as well as the overall contribution of the employee to the organization (Iok and Crawford, 2004).

Studies have highlighted that commitment has a great impact on the successful performance of an organisation (Meyer and Allen, 1988); with this

performance, new technologies could seem simple, compatible, very useful and adopted with ease. Going by this, human resources are seen to be an organization's greatest assets, then retaining committed human resources should be a priority to organisations that want to have smooth flow of technology adoption (Nehmeh, 2009). In their definition, O'Reilly et al. (1986), focus on the psychological bond that glues the employee to the organisation. This bond has three dimensions that all centered on the personnel-- compliance, identification and internalisation. In a separate research that consolidate the idea of proponents of "psychological bond," OC was conceived as a force that binds an individual to a course of action" (Meyer & Herscovitch, 2001), this could imply commitment to new technologies, notwithstanding their characteristics. These ideas have roots in some theories like Dissonance theory, Role and group theory, Instrumentality and Utility, and Behavioral Intention that play a part in the various definitions of commitment.

3.0 ANALYSIS AND MODEL DEVELOPMENT

This section begins with qualitative (content) analysis of the data gathered through the conduct of field interviews. It is followed by the actual proposed model development based on the identified variables from the literature and the accompanying field study that unraveled some variables that are not in the literature or peculiar to Nigerian SMEs interviewed. As it is always the case, research propositions were finally authenticated to accept or dispel relationships.

3.1 Interviewees' Profiles

It was clearly demonstrated in the research design that the ten (10) employees of some selected firms that participated in the survey had five years or above experience and had a minimum of first degree. Equally, they were chosen five different industries located in Bauchi, Nigeria. They are bakery (BF), superstore (SF), private school (PF),

	This organization deserves my loyalty.	√		√	√	√	√	√	√		
Technology adoption	I use Computer for my work many times per day.	√		√		√	√	√	√		
	In general, I use computer at work five days per week.	√		√	√	√	√	√	√		
	At most, I use computer once a week for office work.		√							√	√

their organizational commitment, only R9 and R10 declined from owing a great deal to their organizations, they said they don't feel like part of the family in their organizations. Still on commitment, respondents R2, R4, R9, and R10 indicated that their stay in their organizations is only a matter of necessity; one of them said, "..... *once I get another place, I will leave here*". The participants were also asked to state their levels of loyalty; R1, R3, R4, R5, R6, R7, and R8 confirmed their loyalty to their organizations.

The adoption of computer technology was tested by asking participants the number of times they use computer at work many times daily, five times weekly and at most once a week. On this, R1, R3, R5, R6, R7, and R8 accepted using computer many times daily and five times a week. However, R2, R4, R9, and R10 pledged they only use computer once a week. One noticeable feature of variations in the above table is that they could be associated with the nature of participants' schedules and their educational status.

It is obvious from table 3.2 that participants R2, R4, R9, and R10 were of the view that using computer technology is a task they always find difficult. In fielding a question regarding the difficult nature of the computer technology they in their organization respondent R2 related that ".....*though it makes work fast, but up till now am still trying to use one program they call excel for my workers' salaries, but still find some difficulties*". On the issue of whether computer behaves in an abnormal way occasionally, all the participants agreed; admitting that they sometimes seek help from professionals.

When asked to comment if computer improves their work (that is usefulness), all the respondents responded in the affirmative. On this, R5 responded that "..... *a good example is right now am on sabbatical leave in ABU, Zaria, with computer, I was able to opened a website that I use to interact with my students who are physically far away; what an improvement!.....*" Eliciting interviewee's views on

3.3 Proposed Model and Relationships

In this section, a model was proposed and relationships were established among the constructs. It could be recalled that the main focus of this study is to determine if OC mediates the relationship between technology characteristics and adoption. According to Baron and Kenny (1986), a variable functions as a mediator when: a) change in levels of the independent variable significantly results in change in the presumed mediator; b) if change in the mediator significantly results in change in the dependent variable and c) when significant relations between the independent and dependent variables is no longer significant if "a" and "b" are controlled. Figure 3.3 below depicts these links.

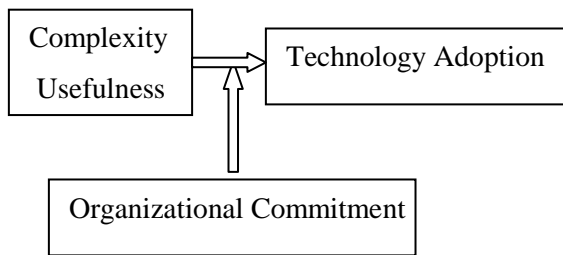


Figure 3.3 proposed research model

Predicating our submission on Baron and Kenny's (1986) conditions, we argue that the interview responses largely conform to the proposition that OC mediates the relationship between technology characteristics and technology adoption in Nigerian SMEs. This relationship could be seen in table 3.2; where complexity and perceived usefulness are related to organizational commitment and OC is related to CTA. Referring to the table again, with the exception of R4, all the participants that said using computer is a complex task, have low commitment to their organization. This is a good reflection of what obtains in the literature. According to Meyer and Allen (1988), commitment has a great impact on the successful performance of an organisation; this could imply that the complexity of a technology can ginger organizational commitment of the users to strive and overcome it. Dedicated workers are challenged by difficult task. Goal-setting theory emphasizes the importance of useful and challenging goals in accomplishing motivated behavior. In their seminal work, Locke and Latham (1990) published, "A Theory of Goal Setting and Task Performance." In this book, they emphasized how complex tasks motivate employees to be committed to goal accomplishment.

The second condition of mediation was also established by field study in this research. Still from the table 3.2; high level of commitment was accompanied with enhanced usefulness. R1, R3, R4, R5, R6, R7, and R8 that indicated high level of

organizational commitment have also agreed that computer is very useful to them in doing their work; it improves productivity and hastens assignment accomplishment. A good authentication in the literature is where OC was conceived as a force that binds an individual to a course of action" (Meyer & Herscovitch, 2001), the cause of action here could imply commitment to learning and using new technologies.

Additionally, we can infer from table 3.2, the significant relationships between complexity, perceived usefulness, organizational commitment, and computer technology adoption. R2, R9 and R10 that viewed using computer as complex, perceived it as less useful and showed low commitment, are the participants exhibited weak adoption rate by using computer only once a week. One of them (R10) was reported as saying ".....in fact I feel lazy using computer, it does not change my work and I don't want to have much to do with it...." A result from a conceptual research conducted by Eta, Abdullahi and Muhammad (2013), is in solid conformity with the expressions of the interviewees regarding the existence of the mediation effect of OC in this study. With all this, we can argue that OC is a mediating factor in this research.

4.0 CONCLUSION

In line with the literature reviewed and the field study conducted in this study, Conclusion could be drawn that significant mediating effect of OC exists on the relationship between TC and CTA. Until such a time when a quantitative study that will discuss commitment as Affective, Normative and Continuance to verify the very component that plays significant role, this result is upheld for now. Therefore, future research should examine that.

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