

*Full Length Research*

# **Influence of Mechanic and Organic Organizational Structure on E-Library Service Delivery in University Libraries in South-South, Nigeria**

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Electronic library service delivery is crucial for user satisfaction in this information and communication technology dispensation. Evidences point to the contribution of mechanic and organic organizational structure to e-library service delivery, but it is not apparent that a study in South-South, Nigeria has addressed the influence of mechanic and organic organizational structure on e-library service delivery. This study therefore investigated the influence of mechanic and organic organizational structure on e-library service delivery in university libraries in South-South, Nigeria. The study adopted survey research design. The population of the study was 618 academic librarians and library officers in university libraries in South-South, Nigeria. Total enumeration was used. A validated structured questionnaire was used for data collection. The Cronbach's Alpha coefficients for the constructs ranged from 0.76 to 0.95. A return rate of 79.6% was achieved. Data were analyzed using descriptive and inferential (linear and multiple regression) statistics. The findings of this study revealed that both mechanic organizational structure ( $\bar{x} = 3.06$ ) and organic organizational structure ( $\bar{x} = 3.10$ ) are adopted in university libraries in South-South, Nigeria. The study further revealed that both mechanic organizational structure ( $\beta = 0.151$ ,  $t(492) = -2.463$ ,  $p < 0.05$ ) and organic organizational structure ( $\beta = 0.575$ ,  $t(492) = 9.403$ ,  $p < 0.05$ ) had significant influence on e-library service delivery. The study concluded that both mechanic organizational structure and organic organizational structure are crucial to e-library service delivery in university libraries in South-South, Nigeria. The study recommended that the management of university libraries improve on the level of e-library service delivery. The management should also encourage information innovation and information management to improve e-library service delivery in university libraries.

**Keyword:** E-library service, E-library service delivery, Mechanic organizational structure, Organic organizational structure, Organizational structure, University libraries.

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## INTRODUCTION

E-library service delivery in university libraries became possible with the advent of high performance software and hardware systems, communication channels and specialized application software, caused explanatory activity in this information technological area. Herein, the e-library definition changes and updates in accordance with the evolution of the understanding of e-library service delivery goals, its objects and purpose. For more accurate and comprehensive definition of e-library service delivery, researchers employ a variety of approaches such as classification and generalization of the known definitions (Baryshev, Babina, Zakharov, Kazantseva & Pikov, 2015).

Arora, Trivedi and Kembhavi (2013) opined that e-library service delivery provides library and information services and resources in electronic format other than print format and enhances searching of electronic collections distributed across networks, rather than merely creating electronic repositories from digitized physical materials. An e-library is a library in which collections are stored in digital formats (as opposed to print, microform, or other media) and accessible by computers. The content may be stored locally, or accessed remotely. Akpoghome and Idiegbeyan (2010) opine that the potential of e-library service delivery lies in its use of electronic wide area network in the library in which the users enjoy the euphoria of being in distance and still access library collection. The foregoing reveals that e-library eliminates physical boundaries of data storage, access, retrieval and dissemination of information to users within and across the globe with the use of internet network.

According to Robbins, Cenzo and Coulter (2014) an organizational structure is defined as a system that determines how job tasks are formally divided, grouped and coordinated within an organization. In the context of this study, the definition of an organization as given by McNamera (2020) in conjunction with the organizational structure definition as given by Robbins, Cenzo and Coulter (2014) provided the core definition of an organizational structure in terms of this study. This study thus defined the organizational structure as a system that determines how tasks are formally structured and coordinated within a group that is intentionally organized to accomplish a common goal (Robbins, Cenzo & Coulter, 2014; McNamera, 2020). Each department or division within an organization directly contributes to the overall organizational performance, thus the need to critically analyze each department's performance in order to determine what impact it has on the overall organizational performance. The business objective is to have an organization in which all departments are in line with the organization's main objectives. There are contributing factors to the concept of e-library service delivery; one of such is the concept organizational

structure.

Organization structure can be defined simply as the total of the ways in which its labor is divided into distinct tasks and then its coordination and integration is achieved among those tasks. It is the map of relationships that lets the firm orchestrate specialized experts and provides the basic foundation within which an organization functions (Mohammed & Saleh, 2013). Organizational structure institutionalizes how people interact with each other, how communication flows, and how power relationships are defined. It reflects the value-based choices made by the company. It refers to how job tasks are formally divided, grouped, and coordinated and can provide the link between social and psychological subsystems (Rezayian, 2007).

Shields (2016) identified two main organizational structures. These are a mechanistic structure and an organic structure. The mechanistic structure is said to be more formalized with high specialization and high administrative intensity while the organic structure is said to be less formalized. It is thus evident that all organizational structures may experience challenges based on the circumstances around the organization at a given point in time. Since most organizational structures are fixed processes, the process to change them is very lengthy and this process cannot be adapted to all changes within the organization, especially temporal or short-term changes. Therefore, there is need for an organization to ensure that its organizational structure is always effective. However, this study will focus on the mechanic and organic organizational structures in university.

### Mechanic Organizational Structure

Mechanic organizational structures are efficient, rigid, predictable, and standardized. Specifically, mechanistic organizations are characterized by a rigid hierarchy; high levels of formalization; a heavy reliance on rules, policies, and procedures; vertical specialization; centralized decision making; downward communication flows; and narrowly defined tasks. The mechanistic structure of organizations in terms of complexity has few training opportunities for their employees and less job specialty within the organization (Rober & Olive, 2013). There are different characteristics of the mechanistic organizational structure. Lunenburg (2012) lists the following characteristics: mechanistic or bureaucratic organizations; low complexity, high centralization, high formalization, high stratification, low adaptiveness, high production, high efficiency and low job satisfaction. Under centralization, the mechanistic structure of organizations, decision making is limited to a few people and departments in the firm. The proportion of job diversity and workers who participate in decision making is low and the decision areas they are involved in are also few (Robert & Olive, 2013).

## Organic Organizational Structure

Organic organizational structures are flexible, adaptable, and team directed. In particular, organic organizational structures are characterized by weak or multiple hierarchies; low levels of formalization; loose rules, policies, and procedures; horizontal specialization; decentralized decision making; communication flows in all directions; and fluidity of tasks adaptable to changing conditions (Lunenburg, 2012). Hage (1965) documents the organic form as being one where individual responsibilities in an organization keep on changing and are frequently redefined with time portraying low levels of formalization. The author also adds that in this structure, communication, control and power are in the form of a network configuration as an authority and decision making is spread throughout the organization thus depicting low centralization. Organic organizational structures are based on interpersonal transactions; they mostly rely on interpersonal factors such as face-to-face communication (Ambrose & Schminke, 2003; Rober & Olive, 2013).

## Objectives of the Study

1. To find out the types of organizational structure adopted in university library in South-South, Nigeria.
2. To investigate the relative influence of organic and mechanic organizational structures on e-library service delivery in university libraries in South-South, Nigeria.

## Research Questions

1. What types of organizational structure is adopted in university library in South-South, Nigeria?
2. What is the relative influence of organic and mechanic organizational structures on e-library service delivery in university libraries in South-South, Nigeria?

## Literature Review

Mishra and Maharana (2019) empirically investigated the effects of dimensions of organizational structure on innovation in business school libraries in India. A structured questionnaire was used to collect data for this study. Survey research design was used questionnaire was used as instrument of data collection. A total number of twenty copies of questionnaire were distributed among the librarians of all leading libraries in India. The quantitative data were analyzed to test the hypothesis. The dimensions of organizational structure i.e., vertical complexity, employee participation and

organizational complexity are positively related to innovation and have higher OS influence in innovation among business school libraries. On the other hand, increase in formalization, the degree of centralization and strict adherence to pre-defined roles and rigid rules in the organization are negatively related to innovation.

Mon (2019) conducted a research on the effect of organizational structure on company performance in manufacturing industry. This research was to investigate the effect of complexity, formalization, nature of hierarchical and technology on company performance in Indonesia. A total of three hundred and eighty copies of questionnaire was filled and returned by respondents. Data was collected using a questionnaire, in order to measure how much influence the organizational structure has on the firm performance. Data was processed using the SPSS program. The results of the analysis show that the organizational structure for complexity and nature of hierarchical variables has a positive but not significant effect while formalization and technology have a positive and significant effect on firm performance. Furthermore, adjusted R square obtained at 59.1% is influenced by the four variables the other 40.9% is the contribution of other variables not included in this study.

Nene and Pillay (2019) investigated the impact of organizational structure on organizational performance. This study examined the impact of organizational structure on the organizational performance of the Property Administration Services Department (PAS) within an organization located at the Rosherville Industrial Area in Johannesburg South, South Africa. The study intended to give a practical perspective on the impact of a complex organizational structure on elements of personnel job satisfaction and departmental performance. Survey research design was used and a total of two hundred and fifty copies of questionnaire was filled and returned by respondents. The research instrument was designed to establish the elements that influence the composition of the organizational structure. Data analysis was done through descriptive and inferential statistics. The conclusion showed the inference between these elements and the actual aim of this study. The study did not directly compare the analysis of performance and organizational structure influence on it but rather aimed at establishing the general consensus by the participants on the likelihood of them accepting suggestions and recommendations of the study.

Nitzl, Hilgers Hirsch and Lindermüller (2020) investigated the influence of the organizational structure, environment, and resource provision on the use of accrual accounting in municipalities. Postal survey was used. The survey was sent to the public financial managers of all German cities and counties with more than 20,000 inhabitants. In addition, questionnaire was pretested by both practitioners and scholars. After minor adjustments of the items based on their feedback, the questionnaire was sent to 1006 municipalities. The final

survey was conducted in autumn 2016. Two hundred and fifty five copies of the questionnaire were received, yielding a response rate of 25.3%. The research found that the most relevant driver for a more sophisticated use of accrual accounting is the contextual situation in which the municipality is embedded. In the research model, a municipality's contextual situation consists of fiscal stress, its political competition and culture, and the relevant legal system. Another important factor is the adequate provision of resources, such as an IT system that delivers easily accessible and accurate accounting information. Organizational structure of the municipality was found to be highly bureaucratic and is regarded as the main obstruction to organizational reforms.

Shabbir (2017) conducted a study on Organizational Structure and Employee's Performance: A Study of Brewing Firms in Nigeria. This study sought to assess the effect of organizational structure on employee's performance in brewing firms in Nigeria. The purpose of the study was to determine whether there is appropriate structure in Nigeria brewing firms and the extent it has contributed to their employees' performances. The population of the study is 6468 being the total staff strength of the five brewing firms in Nigeria Stock Exchange while the sample size was extracted from the population using Taro Yamane method. This study used descriptive type of survey design and structured questionnaire was used to generate data. Descriptive statistics, correlation and t-statistics, was adopted for analysis for data and hypotheses testing. The result of the study revealed that nature of hierarchical layers has significant positive effect on the employee's performance of brewing firms; that technology has significant positive

effect on the employee's performance of brewing firms; that internal and external boundaries has significant positive effect on the employee's performance of brewing firms; and that formalization significantly affect employee's performance positively. In view of the above findings, the study concludes that adopting appropriate structure is the fulcrum on which employees' performance of brewing firms revolves. The study therefore recommended among others that Nigeria firms should give more serious attention in designing an appropriate structure that must match all units and component parts of organization to facilitate employee's performance.

## METHODOLOGY

The study adopted survey research design. The population of the study was 618 academic librarians and library officers in university libraries in South-South, Nigeria. Total enumeration was used. A validated structured questionnaire was used for data collection. The Cronbach's Alpha coefficients for the constructs ranged from 0.76 to 0.95. A return rate of 79.6% was achieved. To determine the reliability of this instrument, a pre-test was conducted using 60 librarians and library officers in university libraries in South-West, Nigeria. The Data collected was analyzed using the Statistical Product and Service Solutions software (SPSS Version 22). Descriptive statistics such as simple percentage value (%), mean, standard deviation and frequency distribution was considered appropriate for description of variables. linear and multiple regression analysis was used to test the hypotheses.

## RESULT

**Table 1.** Descriptive Analysis of Mechanic Organizational Structure Adopted in University Libraries in South-South, Nigeria

Statements	SA (%)	A (%)	D (%)	SD (%)	Mean	S.D	Average Mean
<b>Mechanic Organizational Structure</b>	(%)	(%)	(%)	(%)			
The organizational structure of my library is highly formalized and centralized	252 (51.2%)	204 (41.5%)	36 (7.3%)	0 (0%)	3.44	0.627	<b>3.06</b>
Communication lines in my library tends to follow formal channels	144 (29.3%)	300 (61.0%)	36 (7.3%)	12 (2.4%)	3.17	0.660	
Standardization is according to work process in my library	72 (14.6%)	384 (78.0%)	36 (7.3%)	0 (0%)	3.07	0.463	
There is a strong emphasis on getting staff to adhere closely to formal job descriptions in my library	132 (26.8%)	264 (53.7%)	96 (19.5%)	0 (0%)	3.07	0.677	
There is formal control of most operations by means of sophisticated control and information for getting work done in my library	48 (9.8%)	336 (68.3%)	96 (19.5%)	12 (2.4%)	2.85	0.608	
There is high productivities in my library	60 (12.2%)	276 (56.1%)	144 (29.3%)	12 (2.4%)	2.78	0.682	

N=492 (Source: Survey, 2021)

KEY: SA=Strongly Agreed, A=Agreed, D=Disagreed, SD=Strongly Disagreed, \*\*\* Decision Rule: if mean is ≤ 1.49=Strongly Disagreed; 1.5 to 2.49=Disagreed; 2.5=3.49=Agreed; 3.5 to 4=Strongly Agreed.

Table 1 reveals descriptive analysis of mechanic organizational structure adopted in university libraries in South-South, Nigeria. The result shows that the Average Mean of mechanic organizational structure adopted in university libraries is  $\bar{x} = 3.06$ . This result implied that the mechanic organizational structure is adopted in university libraries in South-South, Nigeria.

**Table 2.** Descriptive Analysis of Organic Organizational Structure Adopted in University Libraries in South-South, Nigeria

<b>Organic Organizational Structure</b>	(%)	(%)	(%)	(%)			
The organizational structure of my library is decentralized and flexible	216 (43.9%)	264 (53.7%)	12 (2.4%)	0 (0%)	3.39	0.621	<b>3.10</b>
Communication lines in my library are more fluid and flexible	168 (34.1%)	264 (53.7%)	60 (12.2%)	0 (0%)	3.22	0.645	
Standardization is according to work knowledge and end result in my library	132 (26.8%)	312 (63.4%)	48 (9.8%)	0 (0%)	3.17	0.581	
There is a tendency to let the requirements of the situation and the individual personality define proper on-the-job behavior in my library	132 (26.8%)	252 (51.2%)	96 (19.5%)	12 (2.4%)	3.02	0.749	
There is high job satisfaction in my library	96 (19.5%)	300 (61.0%)	60 (12.2%)	36 (7.3%)	2.93	0.778	
There is loose, informal control and heavy dependence on informal relationships and norm for getting work done in my library	36 (7.3%)	372 (75.6%)	72 (14.6%)	12 (2.4%)	2.88	0.550	

N=492 (Source: Survey, 2021)

**KEY:** SA=Strongly Agreed, A=Agreed, D=Disagreed, SD=Strongly Disagreed, \*\*\* Decision Rule: if mean is  $\leq 1.49$ =Strongly Disagreed; 1.5 to 2.49=Disagreed; 2.5=3.49=Agreed; 3.5 to 4=Strongly Agreed.

Table 2 reveals descriptive analysis of organic organizational structure adopted in university libraries in South-South, Nigeria. The result shows that the Average Mean of mechanic organizational structure adopted in university libraries is  $\bar{x} = 3.10$ . This result implied that both the organic organizational structure is adopted in university libraries in South-South, Nigeria.

**Multiple Linear Regression Analysis of Influence of Mechanic and Organic Organizational Structure on E-library Service Delivery in University Libraries in South-South, Nigeria**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta ( $\beta$ )		
<b>1 (Constant)</b>	<b>3.975</b>	<b>2.610</b>		1.523	<b>0.129</b>
Mechanic organizational structure	0.650	0.264	0.151	2.463	0.014
Organic organizational structure	1.798	0.191	0.575	9.403	0.000

a. Dependent Variable: **E-library Service Delivery**  
**R =0.708**  
**R Square =0.502**  
**Adjusted R square =0.500**

N= 492 (Source: Field Survey, 2021)

Table 3 indicates the relative influence of organizational structure indicators (mechanic and organic organizational structure). Mechanic organizational structure ( $\beta = 0.151$ ,  $t = -2.463$ ,  $p < 0.05$ ) and Organic organizational structure ( $\beta = 0.575$ ,  $t = 9.403$ ,  $p < 0.05$ ) significantly influenced e-library service delivery in university libraries. The result indicate that both organic and mechanic organizational structure contributed 50% (Adjusted R square = 0.500) variation of on e-library service delivery in university library. The result implies that both organic and mechanic organizational structures have the prospect of enhancing e-library service delivery in university library in South-South, Nigeria.

## Discussion of Findings

Research question one sought to find out the types of organizational structure of university libraries in South-South, Nigeria. The Average Mean of mechanic and organic structures are Average  $\bar{x}$  = 3.07 and Average  $\bar{x}$  = 3.10 respectively. This result implied that both the mechanic and organic organizational structures are adopted in university libraries in South-South, Nigeria. The result of the study corroborate Shields (2016) who identified mechanic and organic structures as the two main organizational structures adopted in modern organizations. The result of this study further confirmed that both the mechanic and organic organizational structure can be adopted by an organization at a time depending on the situation on ground. The explanation of Burns and Stalker (1961) that the mechanic and organic organizational structure is aimed at explaining the two opposite ends of a continuum of organizational structure possibilities was correct. The result of this research added that despite the fact that these two organizational structures are two opposite ends of a continuum, both the mechanic and the organic can be adopted by university library organization for effective e-library service delivery. The result of this study also corroborated Mon (2019) Nene and Pillay (2019) both the mechanic and organic organizational structure influences organizational sustainability, organizational performance and organizational success.

## Conclusion and Recommendation

The study concluded that both the mechanic and organic organizational structure are crucial to e-library service delivery in university libraries in South-South, Nigeria. Based on the findings of this study, both the mechanic and organic organizational structure relatively influence e-library service delivery in university libraries. The finding of this study shows that both the mechanic and organic organizational structure was also found to play a significant role in determining university libraries degree of e-library service delivery in university libraries in South-South, Nigeria. The study recommended that the management of university libraries should adopt the best organizational structure (organic and mechanic) suitable at a particular period of time for effective and efficient e-library service delivery in university libraries. This is to ensure that the best organizational structure is adopted for continue improvement of e-library service delivery in university libraries South-South, Nigeria.

## REFERENCES

Akpoghome, U. T & Idiegbeyan, O. J. (2010).The role of digital library in law research. *International Journal of*

- Library and Information Science*, 2(6), 108-113.
- Ambrose, M. L., & Schminke, M. (2003). Organization structure as a moderator of the relationship between procedural justice, interactional justice, perceived organizational support, and supervisory trust. *Journal of Applied Psychology*, 88(2), 295.
- Arora, J., Trivedi, K. J., & Kembhavi, A. (2013). Impact of access to e-resources through the UGC-INFONET Digital Library Consortium on research output of member universities. *Current Science*, 307-315.
- Baryshev, R. A., Babina, O. I., Zakharov, P. A., Kazantseva, V. P., & Pikov, N. O. (2015). Electronic library: Genesis, trends, from electronic library to smart library. *Journal of Siberian Federal University, Humanities & Social Sciences*, 6(8), 1043-1051.
- Burns, T., & Stalker, G. M. 1961. *The management of innovation*. London: Tavistock.
- Hage, J. (1965). An axiomatic theory of organizations. *Administrative Science Quarterly*, 289-320.
- Lunenburg, F. C. (2012). Mechanistic-organic organizations: an axiomatic theory: Authority based on bureaucracy or professional norms. *International Journal of Scholarly Academic Intellectual Diversity*, 14(1), 1-7.
- McNamera, C. (2018). Definition of organization. Retrieved from <https://managementhelp.org/organizations/definition.htm>
- Mishra, C., & Maharana, B. (2019). The effects of dimensions of organizational structure on innovation in business school libraries in India: An empirical study. *SRELS Journal of Information Management*, 56(4), 216-221.
- Mohammed, F., & Saleh, F, (2013). Surveying the impact of organization structure on employees' job satisfaction of agricultural bank in Ardebil province. *International Journal of Management and Social Sciences Research*, 2(3), 76-80
- Mon, M. D. (2019). Effect of organizational structure on company performance in manufacturing industry. *International Journal of Research and Innovation in Social Science (IJRISS)*, 3(5), 265-270.
- Nene, S. W., & Pillay, A. S. (2019).An investigation of the impact of organizational structure on organizational performance. *Financial Risk and Management Reviews*, 5(1), 10-24.
- Nitzl, C., Hilgers, D., Hirsch, B., & Lindermüller, D. (2020).The influence of the organizational structure, environment, and resource provision on the use of accrual accounting in municipalities. *Schmalenbach Business Review*, 72 1-28.
- Rezayian, A. (2005). *The basics of organization and management*. Tehran. SAMT publications.
- Robbins, S. P., Cenzo, D. A. D., & Coulter, M. (2014).Defining organizational structure. In *Fundamentals of Management: Management Myths Debunked* (pp. 106). London: Pearsons Higher Ed.

Rober, W. and Olive, M. (2013). The effect of formal organizational structures on inter-organizational networks: A study on OEMs in the forest technology industry of Northern Sweden. Master thesis of Umeå School of Business and Economics

Shabbir, M. S. (2017). Organizational structure and employee's performance: A study of brewing firms in Nigeria. *American Research Journal of Business and Management*, 3(1), 1-16.

Shields, J., (2016). Organizational structure in managing employee performance and rewards: Concepts, practices, strategies. Cambridge: Cambridge University Press.