CONSTRAINTS TO INFORMATION AND COMMUNICATION TECHNOLOGY ADOPTION IN CALABAR METROPOLITAN AREA OF CROSS RIVER STATE, NIGERIA

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ABSTRACT

The discussion of information technology diffusion in the continent of Africa, which continues as the controversial issue of national communications policies of African governments, remains unsettled. This study examined the constraints to information technology utilization in the communication environments of selected organizations. The literature on information technology adoption in Africa addresses the issues of national communication policies, infrastructural development of information technology and cultural barriers to information technology diffusion in the region. A value shift sociological theory was abstracted for the study. Four research questions were formulated from four related variables. 600 respondents were randomly selected for the study. Data were analysed using simple percentage and it revealed among others that the communication policies of civil governments accounted for the major source of constraints to information technology diffusion in the communication environments of the surveyed organizations.

Keywords: *Information technology, business environment, adoption, communication*

INTRODUCTION

There has been increasing interest in the discussion of communication in Africa. The issues that frequently appear on the discussion agenda include information technology transfer, the effect of ecology on visual image decoding, communication and culture, traditional modes of information dissemination, film and culture, innovation diffusion communication, communication and national development, radio communication forums, video and public enlightenment campaigns, among others.

The contributions to these discussions have come from individuals with different professional affiliations. Journalists on foreign assignments in Africa have published reports of their experiences; diplomats on foreign services have been exposed to peculiar communication situations that hinder their assignments; politicians on tours circulates reports of strange communication experiences ill Africa, and merchants, industrialists and regional representatives of transnational corporations have told tales about African communication experiences.

Beyond the negative impressions reported in the foregoing section, the research community has made tremendous contributions to the development of

applied communication in Africa. Rural sociologists, agronomists and scientists interested in the affairs of the African peasantry have published reports of innovation diffusion communication to support agricultural modernization, family planning, public health and literacy development. Professional broadcast journalists engaged in external services such as VOA's African Panorama program have reported about the efficacy of short-wave radio communication for the delivery of advertising commercials to audiences in the widely dispersed rural communities.

The diffusion of information technology in the global communication environment is like a swift current which cannot be reversed. A swift current would not permit anyone to swim upstream and any attempt to do so would naturally prove futile. This analogy is probably true of societies that resist the revolutionary development in communication technology and its application in different sets of communication environments. Africa is probably one of the regions in the world where the new information technologies have not gained wide application either because of widespread poverty or persistent resistance to .modern information technology, or persistent preference for traditional patterns of communication.

In spite of the growing incidence of technology transfer to the region in recent times, there is still little communication activity in the area. More research is needed to determine the extent to which a combination of social factors that include the role of the elitist information technology policymakers in the public and private sectors can be held responsible for the crawling pace of the development of the information and communication infrastructures in the region. These questions need to be refined with proper conceptualizations that permit productive investigation of the issues at stake.

Thus, the clue to the problems confronting the penetration of information and communication technology is not sufficiently documented in the research literature. This study sought to examine the constraints to modern information technology utilization. The acknowledged relationship between communication and national development apparently justified the venture. Four relevant research questions were used as the basis of generating data for the study. These are: How do you perceive your role as information technology decision-maker? What is your opinion about the import of information technology to Nigeria? Should information technology utilization be validated against cultural values? Is the Technology-Assisted Information Processing enhancing your organization's success?

INFORMATION TECHNOLOGY ADOPTION IN THE BUSINESS ENVIRONMENT

The reported review sought to identify six core restraining factors to information technology adoption in the communication environment of organizations. The six factors represented a delineation of the body of existing literature on the subject area. The literature showed that cultural factors rank high on the list of constraints to information technology utilization in the surveyed organizations. Different analysts and commentators advanced diverse viewpoints from different perspectives. Obijiofor

(1998) argued that the selection of information infrastructures should be validated against the cultural values of the users. In another look at the same issue, Gerbner, (1997) warned against the substitution of the modem communication technologies in place of the traditional patterns of information dissemination that sustain the culture of the people. He suggested that the modem and traditional modes be used complementarily.

National Communication policies play a significant role in the transfer and use of information technology according to the surveyed literatures. Manson (1998) took a look at the situation of the role of African Governments. The investigator lamented the counterproductive control policies of the government to the utter disregard of the facilitating role of the information technology toward development program implementation. He proposed the open door policies that support the pace of socio-economic development. In his analysis of factors in African development and modernization Ghosh (1984) believed that the information age had important significance for African development. He stressed that communication and national development were intimately related and should be considered together by the development agencies in the region. The literature survey indicated that constraints were identified with access to information technology in most African countries. Gender discrimination was cited as a constraint.

In their analysis Rathgerber and others (2000) reported that there was gender discrimination in access to some categories of information in parts of Africa. The denial of information access to women was related to the genders' subordinate role in the society.

Access constraints were cited. The lack of sufficient information technology wares in most of Africa was cited as a constraint to the utilization of the technology in the region. Grant (1994) stressed the relationship between information technology application and the pace of development programs in the region. He encouraged public policy makers to provide their people with access to information networks to benefit from the services that the networks offer.

Social factors were also among the constraints reported in the literature. In his study, Eileen (1994) attributed the problem of information hardware procurement, installation and application in Ethiopia to multiple factors that include social, economic, technical, financial, political and management constraints. Eileen explained that these factors constrained the development of infrastructures that support information technology applications. The dearth of technical-know-how in the region was cited among the constraints. The lack of full implementation of the democratic principle of government was cited in the literature as a constraint. In their report Eileen,and Gordon (1194 found that information technology development in Nigeria, Ethiopia and Tanzania was constrained by conservative govenment

censorship and media control policies. The counterproductive media polices of governments hindered the procurement and use of the new information technology in Africa. The review partially supported the basic assumptions expressed in the research questions that were advanced for the study. The literature on the various forms of obstacles to the use of the new information technologies in the African communication environment was found to be fairly documented. The study at hand was designed to examine the constraints to information technology utilization in selected organizations in the city of Calabar. The review, therefore, facilitated the conduct of the study.

METHODOLOGY

The study population was drawn from three different organizations in the public and private sectors which are doing business in the Calabar metropolitan area of Cross River State of Nigeria. These organizations were adjudged to be the largest importers of information technology wares. The city hosts 250,000 inhabitants and is the headquarters of the Cross River State Government. It runs the Civil Service bureaucracies and serves as the seat of education and commercial center where business organizations converge. The population consists predominantly of urban settlers who use English as a second language and a medium of public enterprise.

The study sample comprised 600 participants who were lifted from three sets of sample frames. The frames included, Civil Service Staff list; Staff lists of Metropolitan Colleges and Universities and Registrar of Business Organizations. The three sample frames represented authentic source of information about the participants as they furnished details such as management staff categories that indicate name, position, rank, address, sex, age, educational qualifications, occupation and income. These sources of population sample already existed in organized natural setting. Because the sample frames consisted of persons with different staff designations, the frames were screened to identify only persons who attained management staff positions and were likely to be involved in information technology policy making decisions. This sample selection procedure did not ensure that every name on the staff lists would be included in the study sample. Kirlinger (1973) intimated that limited populations that exist in organized natural context needed a random sampling procedure.

The questionnaire sets were distributed and served as the data generating source. They consisted checklist of four questions to which the respondents reacted. The questionnaire sets were pretested in a field survey before their administration. The contents - items, were thoroughly revised for clarity, using competent scholars. The respondents were provided with a set of self-report checklist of items that enable

them to record their viewpoints. The checklists contained items relatil1g to the research questions. Through this process the respondents were rah-'d, using raw scores and percentage equivalents to determine their performances. Scores were computed against 600 (No. of respondents).

RESULTS AND DISCUSSION

The results obtained from all measures were summarized and computed with the help of the illustrative tables. This presentation format facilitated the praise communication of group performances as well as permit comparisons of intergroup performance on the measurement scale. A simple statistical mean was used for sign and intergroup capacity.

Question One: How do you perceive your role as information technology decision-maker?

Categories of Respondents	**Permissive**		**Restrictive**		**Absconding**	
	X	**%**	**X**	**%**	**X**	**%**
Civil Service Executives	80	13.33	116	19.33	4	.66
Corporate Executives	180	30.0	18	3.00	2	.33
College/University Administrators	120	20.0	75	13.00	5	.83
Total Score	380	63.33	209	35.33	11	1.82
Mean Score	126	21.11	69	11.77	3.66	.60

Source: Survey 2008

Table One: X = Score. The numeric and percentage scores of respondents in the three surveyed organizations by attitudes toward the technology policies. It shows that information technology decision-makers in the civil service organization were relatively more restrictive in policy attitudes than their counterparts in other sectors. Conversely, corporate executives indicated relatively permissive attitude towards decision-making policies than their counterparts in other sectors. Under the same measure, Colleges/University administrators came next to corporate organizations in permissive policy attitudes.

Question Two: What is your opinion about the import of information technology to Nigeria?

Categories of Resp.	**Approriate**		**Inappropriate**		**Absconding**	
	X	**%**	**X**	**%**	**X**	**%**
Civil Service Executives	165	27.5	33	5.5	2	.33
Corporate Executives	198	33.0	2	.33	0	0
Col/Uni Administrators	171	28.5	28	4.66	1	.16
Total	534	98.0	63	10.04	3	.49
Mean Score	178	29.66	21	3.5	1	.16

Source: Survey 2008

The Numeric and Percentage Scores of Respondents in the three surveyed organizations by technology transfer proposition. Table 2 indicated that corporate

organizations also came highest in the ranking of the three organizations over the measure of liberal policy attitudes toward the importation of information technology followed by colleges/universities.The civil service organization, nevertheless, received the third ranking position. From the table,it is obvious that a grreater proportion of the respondents endorsed the proposition of information technology import. Also from the above table, it is not an exaggeration saying that the population of absconding respondents was insignificant.

Question Three: Should information technology utilization be validated against cultural values?

Categories of Resp.	**Correct**		**Incorrect**		**Absconding**	
	X	**%**	**X**	**%**	**X**	**%**
Civil Service Executives	36	6.0	160	26.66	4	.66
Corporate Executives	12	2.0	186	31.0	2	.33
Col/Uni Administrators	16	2.66	181	30.16	3	.5
Total Score	64	10.66	527	87.83	9· 1	.45
Mean Score	21.13	3.55	176.66	29.27	3	.45

Source: Survey 2008

Based on the obtained numeric scores and their equivalent percentage indicators, table 3 shows that all the three surveyed organizations apparently rejected cultural values as the controlling factor in information technology utilization. In comparison, however, the corporate organizations seemed to lead the other two organizations in the population of respondents who rejected the proposition. The corporate organizations were followed closely by College/University administrators in their stand against the cultural values as a measure of technology utilization in their communication environments. Nevertheless, the civil service organization apparently reserved some concessions for cultural value based information technology utilization. Evident fromthe table above a very significant number of the respondents rejected the proposition. In all the three organizations, the population of absconding respondents was insignificant.

Question Four: Is the Technology-Assisted Information Processing enhancing your organization's success?

Categories of Resp.	**Certainly**		**Uncertainly**		**Absconding**	
	X	**%**	**X**	**%**	**X**	**%**
Civil Service Executives	178	29.66	16	2.66	6	1.0
Corporate Executives	196	32.66	3	.5	1	.66
Col/Uni Administrators	186	31.0	10	1.66	4	.66
Total Score	560	93.33	29	4.82	11	1.83
Mean Score	186	31.10	9.66	1.6	3.66	.61

The Numeric and Percentage Scores of Respondents in the three surveyed organizations by the proposition of technology assisted infonnation processing and organizational success facilitation. Table 4 shows that all the three surveyed organizations endorsed the proposition that information technology wares facilitated

their information processing chords and enhanced the success of their organizations. Consistently, corporate organizations topped the list followed by colleges/university organization. The Civil Service organization received the third position in the ranking. The absconding respondents were quite insignificant.

CONCLUSION

Policy-makers in the Civil Service bureaucracies exhibited restrictive attitudes toward national communication policies, therefore it was concluded that the lack of dynamic orientations toward national communication policies contributed to the lagging pace of information technology diffusion in the system. Although all the three organizations surveyed endorsed tile information technology import, the civil service organization exhibited some reservation as its percentage score on this issue indicated. This was also reflected on its stand on the issue of the controlling role of cultural values over information technology utilization. Generally, all the three organizations endorsed the utility of information technology in the success of their organizations.

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