

## TECHNOLOGY-UNCERTAINTY IMPACT ON OFFICE MANAGERS' PERFORMANCE IN PAINT MANUFACTURING FIRMS IN PORT HARCOURT

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### ABSTRACT

*The study examined the relationship between technology-uncertainty and office managers' performance in paint manufacturing firms in Port Harcourt. The objective of the study was to examine how the dimensions of technology-induced stress such as techno-complexity, techno-uncertainty, and techno-overload relate with the measures of office managers' performance such as work quality, timely dissemination of information and task accomplishment in paint manufacturing firms in Port Harcourt. The explanatory cross section survey research was adopted for the study. The population of this study consisted of one hundred and ten (110) office managers of nineteen (19) registered paint manufacturing firms in Port Harcourt. A sample of one hundred and ten (110) respondents was obtained using census sampling technique. Structured questionnaire was used as instrument for data collection after face-validation. Cronbach alpha was used to test the internal consistency of the instrument. Out of 110 copies of the questionnaire administered, a total of 90 copies were retrieved. Mean and standard deviation was used for the univariate analysis while the bivariate analysis was done using Spearman rank order correlation. Multivariate analysis was done using Partial Correlation. The findings revealed that techno-uncertainty have significant negative relationship on office managers' performance in paint manufacturing firms in Port Harcourt. The study concluded that technology-uncertainty has negative effect on office managers' performance in paint manufacturing firms in Port Harcourt. The study recommended that management of paint manufacturing firms could provide regular hands-on ICT training for administrative heads and their assistants to enable them upgrade and update their digital skills and experiences to close the digital skills gap in the system.*

**Keywords:** *Technology-Uncertainty, Office Manager Performance, Timely Information, Job Quality, Tasks Accomplishment*

### INTRODUCTION

We live and work in a digital world where information and communication technology has become a ubiquitous ingredient of life. Digitalization has significantly transformed the way we think, plan, collect, organize, classify, store and share information in the offices in firms today. Most of the traditional office routine functions such as generation of data, processing and classification of data and information, filing, and dissemination of information via memos, circulars, letters, etc. are now automated. Office managers such as Directors and Heads of Unit in paint manufacturing firms now use desktop computers, laptop computers, mini-laptops, i-phones, i-pads, networked printers and copiers, CD-ROM, DVDs, flash drives, internet-enabled digital devices and social networking platforms (e-mail, facebook, whatsapp, twitter, intranet, extranet, etc.) to manage firm's data/information in their

respective workplace. This has enhanced the administrative process and performance of paint manufacturing firms to a reasonable extent (Igodo, 2017). However, the use of technology by office managers has been associated with some level of stress (Ekiye, 2017; Igodo, 2017).

The use of technology especially in a developing country like Nigeria is fraught with a lot of technical issues, anxieties, worries and difficulties which Craig in Tarafdar, et al (2010) described as "technology-induced stress". He described it as "a modern disease of adaptation caused by an inability to cope with the new computer technologies in a healthy manner, manifesting itself in two distinct and related ways: in the struggle to accept computer technology, and in the more specialized form of over-identification with computer technology." The researcher conceptualizes technology-induced stress as the fear, pressure and problems end-users encounter while making use of computer devices. It is equally seen as the technical, operational, psychological, and social anxieties/difficulties experienced by man as he grapples with the use of digital appliances, computer networks and the internet. Technology is one of the major causes of workplace stress today. Many dimensions of technology-induced stress have been identified by researchers: work overload, role ambiguity, job insecurity, work-home conflict, techno-complexity, techno-unfamiliarity or uncertainty (Tarafdar, et al., 2010), information overload, network problems, security problems, faulty computer hardware and ergonomics, issues with application software, and security issues such as authentication and viruses (Kupersmith, 2005); the rate of technological change, lack of standardization, lack of or poor training and documentation, reliability of the technology and the increased workload (Ennis, in Mlotshwa, 2013). However, this work adopts techno-complexity, techno-uncertainty and techno-overload.

Another factor that necessitated this study is the fact that there seems to be dearth of empirical studies on how technology-induced stress relates with office managers' performance in paint manufacturing firms in Port Harcourt. There is need therefore to close this knowledge gap.

### **Hypotheses**

- HO<sub>1</sub>: There is no significant relationship between techno-uncertainty and office managers' work quality in paint manufacturing firms in Port Harcourt.
- HO<sub>2</sub>: There is no significant relationship between techno-uncertainty and office managers' timely information dissemination in paint manufacturing firms in Port Harcourt.
- HO<sub>3</sub>: There is no significant relationship between techno-uncertainty and office managers' task accomplishment in paint manufacturing firms in Port Harcourt.

### **Techno-Uncertainty**

Tarafdar, et al. (2010) defined techno-uncertainty as "a situation where an end user feels stressed up as a result of the constant and fast changes and upgrades in the kind of information and communication technologies used in their workplace." Information and communication technology (ICT) is fast changing as a result of software and hardware upgrades and end users such as office managers are constantly under the pressure of advancing their technological skills to be able to operate new devices, and ICT-platforms introduced into the workplace. Office managers as end users are also faced with this form of technology-induced stress as they experience newer versions of computer software and computer sets (Odu, 2018).

Gibson (2013) in his own view described techno-uncertainty as the unpredictable and fragile nature of computer hardware and software. The fragility and possibility of ICT gadgets developing sudden faults in the office is another source of stress for office managers and other end users in the 21<sup>st</sup> century. A computer system, printer or projector that was working well the previous day might malfunction or even fail to operate the next day when the office managers wants to use it as instructional media. The unreliable nature of computer as a working tool for knowledge workers such as office managers in paint manufacturing firms is even more pronounced in the possibility of important files and programs stored in computers or electronic external storage devices getting corrupt and leaving the office manager frustrated. This can impede a well-prepared work system to the stress of repeating the entire work. Commenting on the concept of techno-uncertainty, Chinda (2018) noted that "it can be very frustrating when computer suddenly malfunctions thereby making it impossible for the office manager to discharge his or her duty. Nevertheless, techno-uncertainty represents stress associated with sudden faults and malfunctioning of computerized devices as well as the unreliable nature of the devices. Odu (2018) identified technical breakdown as an element related to techno-uncertainty. Paint manufacturing firms workers who make use of computer systems almost on a daily basis experience a lot of job interruption as a result of technical breakdown. Technical breakdown can be defined as the failure of an electronic machine, equipment, device or network system to function as expected (Seji, 2012). One of the most stressful thing about the use of information and communication technology is the fact these technologies are not very reliable as they may develop faults unexpectedly. For the paint manufacturing worker, it is common for the machine to start malfunctioning all of a sudden which makes it impossible or difficult for the operator to finish the product or complete the number of units expected per time. Users of internet service providers such as MTN, Glo, Etisalat, Airtel, Smile, Spectranet, etc often experience poor network conditions and other issues related to malfunction in the virtual environment. All these constitute stressor for end-users such as office managers. It is pertinent to note that network problem and computer hanging are used here as indicators of techno-uncertainty.

### **Concept of Office Manager's Performance**

The term office manager has been given different meanings by different authors based on their perceptions and societal trend. Clement (2017) pointed out that in the human resource management nomenclature "Office manager is synonymous to 'Unit Head' which describes a staff who provides administrative support or who is in charge of clerical and administrative activities of a Chief Executive Officer, department, unit, or an entire organization.

An Office manager is responsible for monitoring and reviewing systems, usually focusing on specific outcomes such as improved timescales, turnover, output, sales, etc. They may supervise or manage a team of administrators, allocating roles, recruiting and training, and issuing assignments and projects (Olali, 2017). In the view of Bedford (2016), office managers are in charge of customer service, report writing, budget management, database management, systems analysis, purchasing, book keeping, human resources supervision, and records management, form/template design, website maintenance, and payroll management in most public and private establishments.

Elms in Urang (2018) identified the following activities carried out by administrative officers (Office managers) in an organization:

1. Prepares and processes confidential correspondence, reports, agendas, and general papers; composes and types routine correspondence, memos, letters, reports, etc.; processes exams, forms, schedules, contracts, grants, and general correspondence; prepares and edits papers, reports, agendas, and/or manuscripts for publication.
2. Maintains departmental databases, budgets, cash controls, and accounting and purchasing records; coordinates billing to departments; maintains accounts receivable database system; processes and maintains payroll and personnel records for staff and students; researches, gather, and analyzes data.
3. Regularly coordinates the activities of a department project or program; coordinates department events; coordinates department computing and software resources, which may include a web page.
4. Arranges conferences and meetings; prepares and assembles materials; makes, confirms, and processes travel arrangements and expense reports; schedules appointments and arranges meetings; screens phone calls; maintains schedules and calendars; monitors inventory.
5. May supervise clerical/student staff and performs other duties as assigned.

It has been established in the preceding paragraphs that office managers perform administrative and management tasks to ensure that their staffs can work efficiently and effectively. They are employed by all types of organizations, including large corporations, small business, non-profit organizations and governmental agencies.

Clement also noted that Office managers (also known as Administrative Officers and Office Administrators) plan and coordinate administrative support activities and ensure that every task is performed efficiently in an office system. They often manage the administrative support operations in a large firm and an entire office in a small company. They make decisions on the types of support duties required in their department or company as well as the list of necessary qualifications to perform specific jobs. Administrators also deal with promotions, determine salaries and working conditions and assist in hiring administrative support staff. They devise rigorous training programs to hone the skills of new employees. When duties are duplicated in the office, they redefine jobs to attain maximum productivity. Office managers also known as office administrators undertake a range of functions to make sure the administration activities within an organization run smoothly (Igwe, 2012). They may be responsible for the management of human resources, budgets, accommodation and property facilities and records. These functions can be performed at various levels ranging from junior through to upper management.

### **Techno-Uncertainty and Office Managers' Performance**

Though technological device to some extent are unpredictable and fragile as can be seen in the nature of computer hardware and software and some other production technological devices, but is not tied to productivity because there are some functions that require human manipulation which ordinarily do not require technological devices to accomplish them. It is common for the machine to start malfunctioning all of a sudden which makes it impossible or difficult for the operator to finish the product or complete the number of units expected per time. But it should be noted that techno-uncertainty does not influence performance of office managers in paint manufacturing firm. This is because, when an office manager does not have access to adequate network, he or she will find it difficult to work. More so, if the computer system hangs, there is every tendency the work morale of such user will

depreciate. This is in agreement with this position of Gibson (2013) in his own view described techno-uncertainty as the unpredictable and fragile nature of computer hardware and software. The fragility and possibility of ICT gadgets developing sudden faults in the office is another source of stress for administrative officers and other end users in the 21<sup>st</sup> century. The unreliable nature of computer as a working tool for knowledge workers such as office managers in paint manufacturing firms is even more pronounced in the possibility of important files and programs stored in computers or electronic external storage devices getting corrupt and leaving the office manager frustrated.

### **Theoretical Framework**

This work was based on Lewin and Edwards' Person–Environment Fit Theory popularized in 1962 (Osita, 2018). Person–Environment Fit Theory of psychological stress describes the interaction between the person and environment ( $P \times E$ ) as the key to comprehending people's cognitive, emotional and behavioural reactions such as stress. The theory assumes:

- i. A mismatch between a person and his work environment will lead to tension and uneasiness capable of hampering his level of productivity.
- ii. The second tenet of this theory is that worker's capabilities (skill sets) will determine the level of work pressure and how environmental pressure affects their output. The theorist explained that "the level of match between job demands and workers' capabilities (knowledge and skill) to meet those demands is referred to as demands–ability fit (Cummings & Worley, 2008).

This relates to the technology-induced stress as the independent variable of this study in that when there is a mismatch between the technological experience and skills of an office/office manager and the nature of technological resources in use in his work environment, he experiences some level of psychological strain. Technical failure, techno-insecurity (risk of hackers and virus attacks), and the inability of the office manager to cope with the skills upgrade required to operate and manipulate computer systems, projector, internet network, electronic media and other electronic resources are capable of subjecting him to pressure which in turn could affect his effectiveness in terms of document management, information dissemination, and supervision.

The proponent of person-environment fit theory also argued that when there is a match or equilibrium between an employee's personality, skills/competencies and the working environment (organizational culture, technology and tools), it leads to job satisfaction and optimal performance. This aspect of the theory amplifies the fact that the individual digital literacy level of an average office managers in the paint manufacturing firms can moderate the relationship between technology-induced stress and his effectiveness in the discharge of his administrative duties.

The adoption of person-environment fit theory as a major theoretical framework for this study is predicated on the fact that the theory describes how the interactions and relationship between a worker and his working environment affects the level of strain he/she experiences on the job. It also recognizes environmental factor which can moderate the relationship between technology-induced stress and office managers' performance.

### **METHODOLOGY**

The cross-sectional explanatory survey research design was adopted for this study. The population of the study consists of one hundred and ten (110) office managers (heads of departments) of nineteen (19) registered paint manufacturing firms in Port Harcourt. The

above information was obtained from Paint Manufacturers Association of Nigeria (PMAN), Rivers State Branch. The census method was adopted since the population is not large. Structured questionnaire was used as instrument for data collection. The work adopted the face and content validity Cronbach alpha was used in determining the internal consistency of the instrument. Thus, a Cronbach alpha level of 0.70. Mean and standard deviation was used for the univariate analysis while the bivariate analysis was done using Spearman rank order correlation. Multivariate analysis was done using Partial Correlation. The entire process of analysis done via SPSS. Spearman rank order correlation coefficient was computed with the formula below:

$$R = \frac{1 - \frac{6\sum d^2}{n(n^2 - 1)}}{1}$$

Where;

n = number of pairs of data

d = difference between the ranking in each set of data.

Σ = Summation

If our statistical analysis shows that the significance level is below the cut-off value we have set (which is 0.05), we reject the null hypothesis and accept the alternate hypothesis. Alternatively, if the significance level is above the cut-off value, the null hypothesis was accepted.

## Results

### Techno-Uncertainty and Office Managers' Performance

Ho<sub>1</sub>: There is no significant relationship between techno-uncertainty and office managers' work quality in paint manufacturing firms in Port Harcourt.

Ho<sub>2</sub>: There is no significant relationship between techno-uncertainty and office managers' timely information dissemination in paint manufacturing firms in Port Harcourt.

Ho<sub>3</sub>: There is no significant relationship between techno-uncertainty and office managers' task accomplishment in paint manufacturing firms in Port Harcourt.

### Correlations between Techno-Uncertainty and Office Managers' Performance

		Techno-Uncertainty	Work Quality	Timely Information Dissemination	Task Accomplishment	
Spearman's rho	Correlation Coefficient	1.000	-.224	.017	-.881**	
	Techno-Uncertainty	Sig. (2-tailed)	.000	.000	.006	.000
		N	90	90	90	90
	Work Quality	Sig. (2-tailed)	.000	1.000	-.224	-.224
		N	90	90	90	90
		N	90	90	90	90

	Correlation Coefficient	.017	.017	1.000	.017
Timely Information Dissemination	Sig. (2-tailed)	.006	.000	.006	.000
	N	90	90	90	90
	Correlation Coefficient	-.881	-.881	-.881	1.000
Task Accomplishment	Sig. (2-tailed)	0.000	.000	.000	.000
	N	90	90	90	90

**\*\*.** Correlation is significant at the 0.01 level (2-tailed).

### Source: SPSS Output

Column two of Table above shows r value of -0.224 at a significant level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating to techno-uncertainty and work quality. Since the significant level is less than the alpha level of 0.05, the null hypothesis ( $H_{01}$ ) which states that there is no significant relationship between techno-uncertainty and office managers' work quality in paint manufacturing firms in Port Harcourt was rejected and the alternate hypothesis ( $H_{a2}$ ) was accepted. This implies that there is a weak negative relationship between techno-uncertainty and office managers' work quality in paint manufacturing firms in Port Harcourt.

Column three of Table above shows r value of 0.017 at a significant level of 0.06 which is greater than the chosen alpha level of 0.05 for the hypothesis relating to techno-uncertainty and timely information dissemination. Since the significant level is greater than the alpha level of 0.05, the null hypothesis ( $H_{02}$ ) which states that there is no significant relationship between techno-uncertainty and office managers' timely information dissemination in paint manufacturing firms in Port Harcourt was accepted. This implies that there is no significant relationship between techno-uncertainty and office managers' timely information dissemination in paint manufacturing firms in Port Harcourt. This implies that incidents of techno-uncertainty do not bring about any significant changes in office managers' ability to disseminate information on time.

Table above shows r value of -0.881 at a significant level of 0.000 which is less than the chosen alpha level of 0.05 for the hypothesis relating to techno-uncertainty and task accomplishment. Since the significant level is less than the alpha level of 0.05, the null hypothesis ( $H_{03}$ ) which states that there is no significant relationship between techno-uncertainty and office managers' task accomplishment in paint manufacturing firms in Port Harcourt was rejected and the alternate hypothesis ( $H_{a3}$ ) was accepted. This implies that there is a very strong negative relationship between techno-uncertainty and office managers' task accomplishment in paint manufacturing firms in Port Harcourt.

These results showed that techno-uncertainty has a weak relationship with work quality; it has no relationship with timely dissemination of information and it has a strong negative relationship with office managers' task accomplishment in Paint manufacturing firms in Port Harcourt.

Table above shows r value of -0.881 at a significant level of 0.000 which is less than the chosen alpha level of 0.05 for the hypothesis relating to techno-uncertainty and task accomplishment. Since the significant level is less than the alpha level of 0.05, the null hypothesis ( $H_{04}$ ) which states that there is no significant relationship between techno-uncertainty and office managers' task accomplishment in paint manufacturing firms in Port Harcourt was rejected. This implies that there is a very strong negative relationship between techno-uncertainty and office managers' task accomplishment in paint manufacturing firms in Port Harcourt. This indicates that increase in techno-uncertainty is associated with decrease in office managers' performance in terms of timely information dissemination. These results showed that techno-uncertainty has a weak negative relationship with work quality; it has no relationship with timely dissemination of information and it has a significant negative relationship with office managers' task accomplishment and timely information dissemination in Paint manufacturing firms in Port Harcourt.

### **Techno-Uncertainty and Office Managers' Performance**

The test of hypothesis five revealed that techno-uncertainty has a low relationship with office managers' work quality in paint manufacturing firms in Port Harcourt. The test of hypothesis six revealed that there is no significant relationship between techno-uncertainty and office managers' timely information dissemination in paint manufacturing firms in Port Harcourt. While the test of hypotheses six revealed a strong negative relationship between techno-uncertainty and office managers' task accomplishment in paint manufacturing firms in Port Harcourt. This means that increase in technical failure (sudden breakdown of ICT facilities and network problems) culminates in a decrease in office managers' performance in paint manufacturing firms in Port Harcourt.

This finding is in consonance with the findings of Igodo (2017) that techno-uncertainty hampers the job performance of office administrators in manufacturing firms in Rivers State. Technical failure in the form of bad networks, sudden malfunctioning of computer systems and printers, and computer freezing is capable of disrupting administrative activities. Poor network service which is a common experience in the Nigerian digital environment is capable of not only increasing the administrator's anxiety, it can also frustrate his effort of sending an e-mail or accessing his mails. Generally, most of the online administrative processes depend largely on network strength. Supporting the above, the findings of Gibson (2013) revealed that poor network signals hamper e-mail delivery & brings about delay in information dissemination and decision making. File transfer in many organizations today determines the speed and effectiveness of message exchange over the network. If the system controlling the network is faulty or the internet service provider (MTN, Glo, Etisalat, Spectranet or Smile) has signal problems, file transfer and other computer mediated communications suffer. When this happens, the information dissemination function of the office manager is negatively impacted.

Odu (2018) found that printers, photocopiers, and other electronic machines in the office also develop sudden faults especially in the midst of urgent jobs. It is common for the computer system to freeze or even fail to boot. This does not only put the office and information manager under pressure, it also leads to delay in the completion of urgent tasks. This is more frequent and frustrating in the area of producing documents. Even after typing and proofreading, a simple fault from the printing machine can delay the printing and delivery of letters, memos and other official documents.

## **CONCLUSIONS**

Based on the analyses of data and discussion of findings, the study concluded that technology-Uncertainty has negative effect on office managers' performance in paint manufacturing firms in Port Harcourt. It was equally concluded that the extent to which job performance of office managers' is affected (positively or negatively) by technology-induced stress is a function of their environmental factors.

## **RECOMMENDATIONS**

Based on the findings and conclusions, the following recommendations were made:

1. Managers of paint manufacturing firms in Port Harcourt in Port Harcourt could also be committed to learning basic troubleshooting skills to reduce the amount of time often wasted in waiting for technicians.
2. Management of paint manufacturing firms in Port Harcourt in Port Harcourt could ensure subscription of single user modem to overcome network problem.
3. Employees of paint manufacturing firms in Port Harcourt could ensure frequent dusting of their respective computer system to avoid unnecessary hanging.

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