Organisational Culture and Implementation of IT Policy

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Abstract
Despite empirical evidence on the significance of Organizational culture on policy implementations in organizations, it is quite evident that organizational culture is still lacking in many organizations today. This study aimed at identifying the existence of organizational culture in an organization and determine its influence on the implementation of IT Policy. Study sample size of 124 was selected from the target population of 180 staff at Federal Institute of Industrial Research, Oshodi, Nigeria. The study found that there was a strong significant and positive correlation between Organizational Culture and Implementation of IT Policy. Culture is missing in the organization and this is one of the reasons why implementation of IT Policy hasn't taken effect. The study suggests that organizational culture must be strengthened in order to achieve better results and success with implementing IT Policies. A well-established organizational culture amongst members and stakeholders will stimulate decision making, coordination and control within an organization. Organizations need to continuously and periodically train and emphasize system of shared norms, beliefs, values, and assumptions which binds people together, thereby creating shared meaning, as this leads to increase employee motivation in achieving business objectives. Organizations must ensure that implementation of IT Policies aligns with the strategic goals of the organization in completing individual tasks, IT routines and IT projects without violations. Firms must make all their employees aware of their IT Policies and train them on how to comply with the procedures. Members of a particular organization must be encouraged to adhere, uphold and cherish organizational values, beliefs and practices as this will lead to successful implementation of IT Policy.

Keywords: Organization; Firms; Organizational Culture; IT Policy; Policy Implementation.

Introduction

Organizational culture refers to a system of shared norms, beliefs, values, and assumptions which binds people together, thereby creating shared meanings. This system is manifested by customs and habits that exemplify the values and beliefs of a particular organization. Just as each individual has a unique personality, so each organization has a unique culture (De Bono et al 2014; Gray and Larson, 2018). Information Technology (IT) consists of all the hardware and software that a firm needs to use in order to achieve its business objectives. To be successful in achieving this, companies and firms must abide and put measures in place to enforce adherence to IT Policy. This will help members of the organization to avoid obstacles and take advantage of pathways to complete IT tasks, routines and projects without violations (Whitman and Mattord, 2009; Vacca, 2017; Lasisi and Sanni, 2018).

Culture is considered to be a set of behavioral and cognitive characteristics, that is the basic beliefs and assumptions shared by the organization members that have been proven to be effective to be considered useful, productive and therefore to be transferrable to new members. Organizational culture is a driver for organizational innovation and performance. It encompasses values and behaviors that contribute to the unique sociotechnical approach to routine day to day work and project management in an organization. Organizational culture represents the collective values, beliefs and principles of organizational members and is a product of such factors as known history, management style, market approach, strategic alignment, portfolio management, project management and community outreach (De Bono et. al., 2014; Charalambous, 2014; Keer and Valcke, 2015; Lasisi and Sanni, 2018).
Policy is a plan of action used to convey instructions from the organization's senior management to those who plan, schedule, oversee, coordinate and make decisions. The objective of policy is to provide management direction and support with respect to various activities, tasks, routine works, projects, and

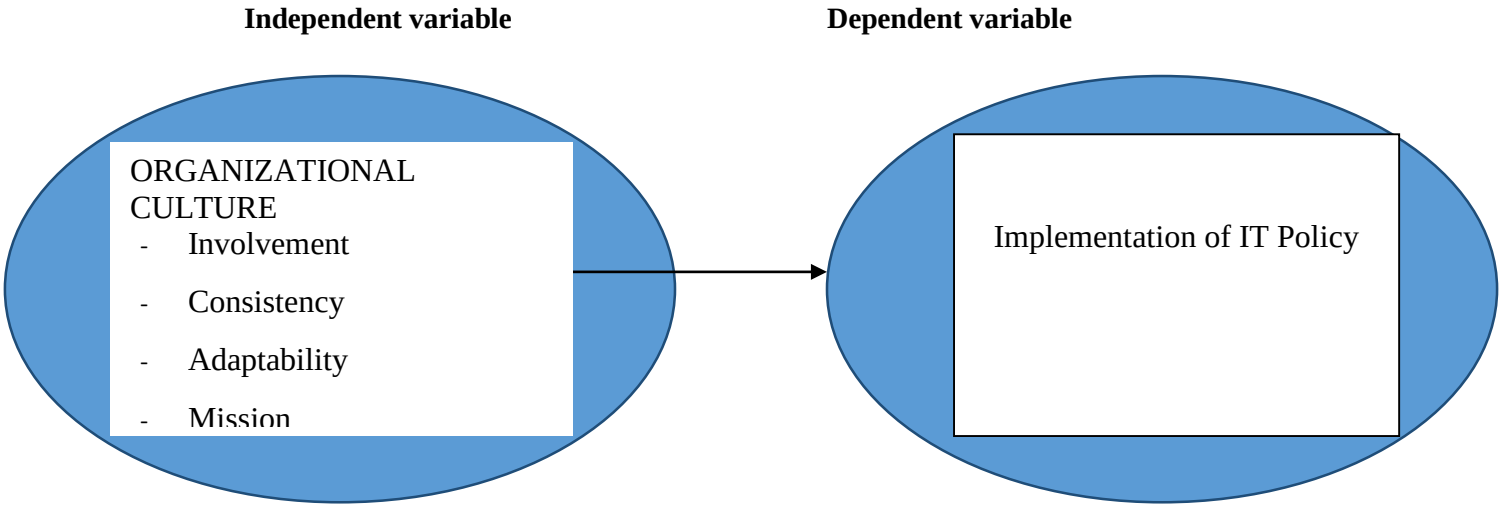
programs with business requirements, relevant laws and regulations for the organization. The fundamental aspect of IT Policy is related with technology standards, information assurance, privacy and security, which serve as the blueprint for the overall policy program and create a platform to implement IT policies in an organization (Whitman et al 2009; Gluschke et. al., 2018; Gray and Larson, 2018; Cobb Stephen, 2019).
For instance, Policy ensures that all systems are protected against malicious code that can steal, damage, or destroy information in an organization either small or large. Thereafter, a control is put in place to enforce this policy which must be adhered to by all members of the organization. For example: Approved antivirus software will be installed on all systems (Cobb Stephen, 2019). To make a policy effective and enforceable, IT professionals defined a number of criteria which includes policy dissemination, comprehensions, review, compliance and uniform enforcement (Whitman et al 2009; Borg and Gall 2014; Gluschke et. al., 2018; Cobb Stephen, 2019).
There are bodies of knowledge across broad range of fields suggesting that compliance to IT Policies depend to a larger extent on organizational culture. Many organizations have failed in the implementation of IT policies due to lack of an established organizational culture. This study set out to investigate whether this is the same scenario at the Federal Institute of Industrial Research, Nigeria (FIIRN). The FIIRN is a big research institute under Federal Ministry of Science and Technology, which has been failing with implementation of IT Policies, even with the availability of all IT infrastructures, facilities and resources across different departments. Implementation is the process of introducing a new idea into a social system, ensuring its application, use and compliance. In an information technology context, implementation encompasses all the processes involved in getting new software, hardware and users operating properly and adequately in its environment. Culture at the Federal Institute of Industrial Research, Nigeria includes the organization's vision, values, norms, professional ethics, systems, symbols, language, assumptions, beliefs, and habits. It also involves the way members interact with each other, with clients, and with stakeholders.

Statement of Research Problem

In an age where information technologies have permeated the fabric of every organization and has become indispensible in day to day activities, it is important to investigate whether implementation of IT Policy is effective. Adoption and utilization of technology has grown beyond bounds in many developing countries, however the implementation of policies to guide the proper usage, storing, sharing, distribution and safeguarding of these technologies for common good has been challenging. The consequences of IT policy implementation failure are immense, which includes: security breach, data loss, inefficient service delivery, project failure, loss of reputation, legal battle, revenue losses, damages, injury, debt, bankruptcy, collapse of the organization, and so on. It was observed that members of the Federal Institute of Industrial Research, Nigeria have no culture of compliance to IT Policies which might be related to lack of organizational culture. Oluwafemi and Agada (2015) are of the opinion that successful implementation of ICT policy has the capacity to cut cost of coordination, communication and information processing; and many businesses have taken advantages of this. Without an established and well-structured organizational culture, the implementation of IT policy will not be successful in organizations. Therefore, it is important to study organizational culture at the Federal Institute of Industrial Research, Nigeria and determine the impact this have on the implementation of IT Policies. This will enable the management to identify problems related to IT policy implementation and proffers solutions to them.

Conceptual Framework

The conceptual framework indicates the independent variables and dependent variable under investigation and the effects independent variable have on the dependent variable. The independent variable is the organizational culture while the dependent variable is implementation of IT policy. The Organizational Culture was examined in terms of involvement, consistency, mission and adaptability of the staff in Federal Institute of Industrial Research, Nigeria.



Organizational Culture

According toDenison *et al.* (2013), there are four attributes to organizational culture; the attributes are involvement, consistence, adaptability and mission. Involvement is about showing high level of commitment to the job. The characteristics of consistency include stability, coordination and integration. Adaptability refers to risk taking and change orientation while mission is about being purposeful and having sense of direction. It was established that organizational culture has a substantial effect on implementation of IT policy and its structure. If that is case, we could assume that implementation of IT Policies would be found wanting if there is lack of organizational culture. Adaptability is concerned with the organization in relationship with the environment. There are three points attached to adaptability, first one is establishing change, which means that organizations with high level of adaptability try new innovations, ideas and approaches. The second point is organizational learning, which is about encouraging risk taking which comes with experiences through both success and failure. The third point is the customer focus, which is defined as adaptability being directly proportional to the level of trust (Denison et al 2013). If an organization has high adaptability the paramount issues will be customer's satisfactions and readiness for environmental changes or challenges. The organizational mission should be reinforced in the mind of organization members and stakeholders due to its roles in strategic objectives and visions of the organization (Loisch 2007; Hermans 2010; Denison et al 2013).

Involvements establish sense of ownership and responsibility through which there will be greater level of commitment of the employees in the organizational activities. There will be growing level of capacity to do job independently (Denison et al 2013). Involvement creates greater amount of positive inputs by the employees and increased level of adherence to IT policy process. Involvement has three sub points; first is empowerment. This allows employees to be free to an extent in making decisions on the job independently. Second is training; this is required for the proper interpretations of the information needed to make decisions by the employees. Training goes together with structure; the structure enables the employees to identify the boundary for the scope of activities they need to render (Tansuhaj 2014). The third sub point is capability development. Training and coaching are very significant to the establishment of this trait of involvement, capability promotes teamwork (Denison 2013). Decision making by management must account for inputs from employees, as group work facilitates tolerance, integration and reduces pressure (Akande and Yinus, 2013).

The fourth trait of organizational culture is consistency. This entails collective effort and integration. There are three sub points affiliated to consistency, they are core values, agreement and coordination and integration (Denison et al 2013). All the four traits of organization culture are determinants of proven organization and predictors of quality and organizational performance (Denison et al 2013). From the study of Sher and Lee (2014), the traits address the process of internal integration and the dynamism of external adaptation.

According to McAdam and Parkinson (2012), culture can impede the implementation of information systems. Organizational factors in line with strategic goals can be important for the success of information systems within organizations. Organizational culture reflects assumptions about clients, employees, mission, products and activities. These assumptions are translated into norms of behavior and expectations about what are legitimate, desirable ways of thinking and acting. Since organizational culture comprises shared rather than individual values, it is highly complex (Donna Marshall et al 2016). The specific role of organizational culture is especially meaningful in challenging times. When organizations are going through change, ideology plays an important role in shaping actions (Giritli *et al.* 2013).

Cultureisapropertyofagroup,becausewheneveragrouphasenoughcommonexperience,itbeginstoform.Onefin dsculture atthelevelofsmallteams,familiesandworkgroups.Italsoarisesatthelevelofdepartments,functionalgro ups,andotherorganizationalunitsthathaveacommonoccupationalcoreandcommonexperience.Itisfoundatever yhierarchicallevelbutitexistsatthelevelsofthewholeorganizationifthereissufficientsharedhistory.The past decade has seen considerable increase in the impact of culture on the development and use of information and communication technology and there is the clear need for organizations to understand the relationship between organizational culture, information technology and information security (Ribiere and Schulte 2014). Schein (2009) further this argument thus: notwithstanding the fact that technology may be free of culture, some technologies such as IT may not be culture-free because they are affected by human behavior.

Information Technology is an important component of the organizational decision making and most managers rely on it to aid their decisions (Mediel and Tawanda 2012). In their research in 2012, Mediel and Tawanda concluded that when culture is in agreement with Information Technology it lays down the patterns for the usage of information, creates cohesion among organizational members and allows the creation of social controls among others. Ribiere and Schulte (2014) also argues that if we want to make organizations more efficient and effective, then we must understand the role that culture plays in organizational life. McAdam and Parkinson (2012) relate organizational performance to the degree of success in realizing an administrative or operational function in relation to institutional mission. They revealed that sometimes the initial founders of a firm (or management teams) consciously decide to improve the performance of their firms using the power that resides in developing and managing a unique corporate culture, citing examples of General Electric, McDonalds, Disney and Microsoft. Mediel and Tawanda (2012) also stressed that having widely shared and strongly held norms and values lead to performance benefits such as: enhanced co-ordination and control within the organization, increased employee effort, and improved goal alignment between the organization and its employees.

According to Omwono et al (2016), it has been observed that many organizations are adopting Information Technology along with all its technical requirements. However, IT Policy implementation continues to fail. This is the reality at the Federal Institute of Industrial Research, Oshodi, Nigeria. The human side of technology cannot be overemphasized and that is one of the motivations of this study.

Methodology

Research Design

The study used a cross-sectional approach (surveying) so as to analyze data collected from the target population within a point in time; this is because the study intends to establish the presence of organizational

culture and the relationship between organization culture and implementation of IT policy at the selected organization.

Study Population

The target population of this study was 180 individuals consisting of the staff members of the selected organization (Federal Institute of Industrial Research in Nigeria). The 180 individuals were selected across the ten departments of the organization. The researchers chose the organization due to ease of access to the required information among other reasons mentioned earlier.

Sample Size

The sample size for this study was 124 respondents who were selected from the target population of 180. This sample size was arrived at by using Sloven's formula of sample size computation which states that; $n = \frac{N}{1+Ne^2}$ (Oso and Onen 2005). Where, n is the sample size, N is the target population, e is the level of significance, which is 0.05. Therefore;

$$n = 1 + 180\ [(0.05)^2] = 124$$

Table 1: Study Population and Sample Size Table

S/N	Department	Target population	Sample size
1	Food technology	17	12
2	Bio technology	15	10
3	Chemical, fiber and environmental technology	14	10
4	Project design and development	30	20
5	Planning, technology transfer and information management	23	16
6	Human resources management	27	18
7	Extension and linkages	17	12
8	Production, analytical and laboratory management	16	11
9	Accounts	08	6
10	Director general's office	13	9
	Total	**180**	**124**

Sampling Procedures

To select the sample of 124 respondents out of 180 target population, the sampling technique adopted was random sampling, in which every employee in the various departments has equal chance of taking part in the study. According to Amin (2005), randomization is effective in creating equivalent representative groups that are essentially the same on all relevant variables thought of by the researcher.

Data Sources

Both primary and secondary data were used for the research

Data Collection Instruments

The data collection instrument in this study was basically questionnaires. The questionnaires were administered personally by the researcher to the respondents and collected after it was filled. The

questionnaires comprised of closed ended questions that required the respondents to answer all the questions to the best of their knowledge. The answers were in form of four points Likert Scale which were strongly disagree, disagree, agree and strongly agree with the codes 1,2,3 and 4 respectively.

Validity of the Research Instrument

Validity is the degree to which results obtained from the analysis of the data actually represents the phenomenon under study. This study looked at two kinds of validity: face validity and construct validity. Face validity was carried out by giving the questionnaires to two experts to check whether the questions are relevant to the contents. Content validity was done by subjecting the questionnaire to experts review and adjustments. Items were checked in terms of language, clarity, relevance, and comprehensiveness. The items were rated as follows:

4 – Very relevant, 3 – Quite relevant, 2 – Somewhat relevant, 1 – Not relevant.

The researcher then put the items in 2 groups, with categories 1 and 2 in one group and the other 3 and 4 in the other group. The researcher then calculated the Content Validity Index (CVI) using the formula below:

$$CVI = \frac{Items\ rated\ as\ very\ relevant\ and\ relevant(3\ and\ 4)}{Total\ number\ of\ items}$$

For the instrument to be valid, the CVI was within the acceptable statistical range of 0.5 to 1. The fraction for the CVI was above 0.7 and thereby the data collection instrument was considered to be valid.

Reliability of the Research Instrument

Reliability is a measure of the degree to which research instruments yield consistent results or data after repeated trials. The test-retest technique was used to assess the reliability (accuracy) of the instruments. The questionnaire was randomly administered to individuals at the Federal Institute of Industrial Research, Nigeria. These individuals were not included in the actual study. The tests and the trait measurement proved consistency which is an indication of the instrument's reliability.

Table 2: Validity and Reliability

Variable	Cronbach Alpha Coefficient	CVR (Content Validity Ratio)
Organization cultures	0. 8200	0.7922
Implementation of IT Policy	0.8025	0.8633

The items were tested using Cronbach Alpha and it gave a reliability value of 0.79 which is above the recommended reliability of 0.7.

Administration of the Questionnaires

The questionnaire was administered to the respondents at a point in time and it was retrieved after each respondent were satisfied and willing to return. Respondents were requested to complete the survey to the best of their knowledge and ability and try not to leave any part of the questionnaire unanswered. On retrieval, all returned questionnaires were checked for appropriateness and usefulness. The data gathered was edited, encoded into the computer and statistically treated using the SPSS Version 22.

Data Analysis

The study used simple frequency counts (frequencies and percentages) to analyze the profile of respondents. The frequency and percentage distribution were used to determine the demographic characteristics of the respondents. Descriptive statistical analysis was carried out on the data collected, after that, inferential statistical analysis was conducted. To understand the strength of relationship between organizational culture

and Implementation of IT policy, the researchers ran a correlation test using Person's product moment correlation coefficient.

Table 3: Correlation

Variables	Mean	Standard Deviation	1	2	3
Organizational culture (1)	2.6489	.83517	(0.770)		
Implementation of IT Policy (2)	2.6265	.87165	.556**	0.693**	(0.761)

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

Findings in table 3 above show that Organizational culture (Mean = 2.6489) is not very strong at the Organization under study. Furthermore, we observed that a relatively strong significant and positive correlation exists between Organizational culture and Implementation of IT Policy. This underscore the fact that an organization with an established well-respected culture would experience efficient and effective Implementation of IT policy.

Regression Analysis

Regression analysis was used to examine the level to which Organizational Culture determine Implementation of IT Policy and the results are presented below;

Table 4: Regression model forOrganization Culture and Implementation of IT Policy

Model	Standardized coefficients		
	Beta	T	Sig
(Constant)	.191	2.679	.006
Organizational culture	.673	6.842	.000

a. Dependent Variable: Implementation of IT Policy

b. Predictors: (Constant), Organizational culture and Information Technology Policy issues.

The regression analysis in table 4; shows that Organizational Culture has significant impact on Implementation of IT Policy with t-statistic 6.842 and significance level is 0.000, which is less than P-value 0.05 and Beta value of Organization Cultures is 0.673. Beta value shows that one percent change in Organization Cultures will change Implementation of IT Policy by 0.673 percent.

Survey of members of the organization through interview is as follows: *IT policy implementation is at a poor state at the organization. There are no effective IT regulations and standard. Performance of IT related activities at the organization is nothing to be excited about. It was however observed that steps were being taken to improve IT policy implementation through trainings…*

Discussion of the Findings

The result from this study shows that Organizational culture amongst members of Organization under study is not well established. Furthermore, we observed that a relatively strong significant and positive correlation exists between Organizational culture and Implementation of IT Policy. This demonstrates that an organization with an established adhered culture would experience efficient and effective IT policy implementation. According to Tusubira and Mulira (2014), Cultureisabstract, yetitsinfluenceinsocialandorganizational activities is highly important. Culture is powerful and essential,

becauseit'stacitandoftenunconsciousinfluencedeterminesindividualandcollectivebehavior,perceptionandtho ughtpatternsaswellasvalues.Findings from the study indicated that Organization Cultures has significant impact on Implementation of IT Policy =with t-statistic 6.842 and significance level is 0.000, which is less than P-value 0.05 and Beta value of Organization Cultures is 0.673. This shows that Organization Cultures have positive impact on Implementation of IT Policy. Beta value showed that one percent change in Organization Cultures will change Implementation of IT Policy with 0.673 percent.

Conclusions and Recommendations

In general, this study looked at the role of Organizational Culture in improving the implementation of Information Technology policy in the case studied. In particular, the study examined the relationships between the studied variables. The relationship was strongly and moderately significant and positively related. It is evident from the study that Organizational Culture, when emphasized in the organization, will lead to improved implementation of Information Technology policy. We observed that the organization (FIIRO) has a weak cultural adherence amongst her members. Therefore, the research institute should make efforts to improve compliance with norms, values and reiterate missions and goals amongst her members. The research institute must embark on projects and activities that align Organisational Cultural aspects that promote effective implementation of Information Technology. However, as many arguments for IT planning prove, IT implementation is a complex exercise and more research is needed to identify the best, cost-effective, and valuable solutions for successful implementation.

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