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WORKFORCE ANALYTIC AND ORGANIZATIONAL COMPETENCE OF GSM TELECOMMUNICATION FIRMS IN NIGERIA: THE MODERATING ROLE OF ORGANIZATIONAL STRUCTURE

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ABSTRACT: *This study examined the moderating role of organizational structure on relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria. The design for the study was the cross-sectional survey research. The population of the study comprised managers of all four functional GSM telecommunication firms. Primary data was generated using the structured questionnaire. The reliability of the instrument was ascertained using the Cronbach Alpha coefficient with all the items scoring above 0.70. The Spearman Rank Order Correlation Coefficient was used in testing for the bivariate hypotheses while the partial correlation was adopted in testing for the moderating role of standardization and formalization on the relationship between the studies variables. The results from the analysis revealed that there is a significant relationship workforce analytic and organizational competence of GSM telecommunication firms in Nigeria. Similarly, the study affirms that the process of standardization of the organization plays a critical and well evident role in ensuring that workforce analytics results in competence of GSM telecommunication firms in Nigeria. Finally, organizational formalization is affirmed to contribute and impact meaningfully on the relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria. The study concludes that in the process of formalization, management of the GSM telecommunication firms stress on the adoption and implementation of policies which clearly align the organization with its environment and in the same manner enhances the organizations capacity for learning and effectively adapting its human resource to the needs of its market or context.*

KEYWORDS: workforce analytics, organizational competence, organizational structure

INTRODUCTION

Interest in the fields of data science and data analytics has increased substantially among scholars and practitioners in recent years. Spanning challenges as diverse as individualized health care diagnosis and treatment, customer sentiment analysis, intelligent traffic management, real-time financial fraud detection, and national security concerns, data analytics and science have become central topics in the academic, business, and popular press. These trends are the result of a confluence of factors, including the availability and accessibility of data, increased computer processing speeds, and dramatically lower networking and storage costs.

In addition, contributing to the disruptive impact of data science and analytics is the development of interdisciplinary theoretical and statistical innovations in computer science, statistics, and mathematics (McKinsey Global Institute, 2016). Interest in analytics in the fields of HR and workforce management has grown dramatically among scholars and practitioners as well (Bock, 2015; Boudreau & Cascio, 2017; Davenport, 2013; Davenport, Harris, & Morison, 2010; Guenole, Ferrar, & Feinzig, 2017; Huselid, 2015; Levenson, 2017; Rasmussen & Ulrich, 2015).

As the market for high-performing and high-potential talent is becoming much more efficient in many firms, top talent is becoming simultaneously more expensive and more easily lost to competitors. As conventional sources of competitive advantage no longer differentiate firms in the global marketplace, effectively responding to globalization requires flexibility, speed and innovation and talent. This has led to an intense focus on workforce strategy, and on differentiation in investment levels among employees and jobs in support of business objectives. As a result, many firms are substantially increasing the level of accountability of the line manager's role in talent management and, ultimately, strategy execution (Rasmussen & Ulrich, 2015).

The interest in workforce analytics is not unrelated to a number of outcomes it brings to an organization including enhancing organizational competence. One of the key outcomes of the increased emphasis on accountability has been the significant growth in the demand for the insights and information that workforce analytics can generate. Widespread interest in innovations such as Google's Project Oxygen (Bock, 2015; Garvin, 2013) and the Moneyball phenomenon have had a significant impact on the prevalence of workforce metrics and analytics in many firms (Deloitte, 2017). The demand for employees capable of developing and implementing workforce analytics has also increased dramatically as job titles and postings containing the terms “workforce analytics” have proliferated, and the workforce analytics “industry” among consulting and technology firms has seen significant growth (Deloitte, 2017).

This study examined the moderating role of organizational structure on the relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria. It also sought to provide answers to the following research questions:

i. What is the relationship between s workforce analytics and organizational competence of GSM telecommunication firms in Nigeria?

ii. Does organizational structure moderate the relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria

LITERATURE REVIEW

Data analytics has been described as a merging of art and science (Fitz-enz & Mattox, 2014). While statistics are obviously a major component of any analytical exercise, analytics also involve a mental framework and logical understanding of the information at hand and the problems that need to be solved. In this way, analytics may be viewed as a “communications device,” bringing together

information from multiple sources to provide an actionable representation of a current state and a likely future (Fitz-enz & Mattox, 2014). By providing an evidence-based approach to decision making, analytics is a logical method that enables technological manipulation of information to provide insight on relevant issues.

Within the realm of data analytics, different levels of analysis exist: descriptive analysis, predictive analysis, and diagnostic analysis. Most commonly employed by organizations, descriptive analysis gathers data on past events or trends. This could include such measures as turnover rates or cost to hire a new employee. Predictive analysis evaluates why past trends have occurred and how they will change or continue without intervention (Leveson, 2017; Mugo, 2016). An example of predictive analysis would be the use of a model to increase the probability of selecting the right candidate for a job; while the diagnostic assesses the gaps and loop holes evident within the human resource content of the organization. This could entail suggesting models to understand how alternative investments in employee training affect the firm's bottom line (Mugo, 2016).

Levenson (2017), defined Workforce Analytics as the various integrating systems and database operations that advance the management and coordination of the organization's human resource in ways that enhance their features in terms of skills, knowledge and suitability for particular contexts. Levenson (2017) describes it as a growing and increasingly popular approach towards human resource management based on the level of efficiency it facilitates and the improved levels of control it offers the leadership of the organization. Workforce analytics is therefore important for a number of reasons – primal amongst which is the anchoring of the human resource content with those of the organizations environment in ways that enrich the organizations capacities, and ability to meet and satisfy the need and expectations of its customers or market.

The application of workforce analytics within a firm may be a one-time effort or may coincide with a newly overhauled approach to organizational management. It is not uncommon, however, for one-time efforts to inspire more broad-reaching organizational change. It is important for organizational or HR leaders driving the incorporation of analytical methods to consider the purpose behind these efforts. According to Angrave et al. (2016), analytics must be rooted in an understanding of the data to be used and the context under which that data were collected if any meaningful insight is to be gained.

This understanding will help determine the resources that are required and the form that the analysis will eventually take. In any case, HR professionals and management must develop a strategic understanding of how human capital contributes to organizational success prior to incorporating workforce analytics. If the nature of the issue to be tackled using analytical tools is not explicitly defined, the likelihood of adding any value to the organization is extremely low. Before solutions are "fired at" the perceived issue, it is important to understand the potential causes behind the problem at hand (Fitz-enz & Mattox, 2014).

Workforce analytics builds mainly on information management and its application in human resource policy formulation and implementation. Angrave et al., (2016) stated that the development of an organizations human resource builds on the understanding and predictability of such resource. According to the author, organizations do not only have a duty to controlling their human resource, they also have a duty to applying it's suitably such that it yields outcomes that can be described as advantages to the organization. Workforce analytics, according to Levenson (2017) presents organizations with this function – one through which their human resource can be understood, controlled and effectively applied using parameters that are unique and as such, drive the organizations competitiveness within its market and environment. Its emergence is such that advances not only efficiency in human resource management systems, but also enables a more proactive as well as responsive approach towards the growing changes and challenges within the context of the organization.

Organizational Competence

Organizational competence concerns its capacity for expressing value and effectively addressing the concerns of its existence. As earlier noted, competence is not only a condition or attribute but also the expression and actual demonstration of such. In terms of attributes, competence denotes existing infrastructure, systems and skill levels that reflect capacities that are in tune with the nature and evolving features of the organizations context or environment (Dessler, 2015; Sheehan et al, 2014). It depicts soundness and change readiness from an upfront assessment of the organizations components or factors. Hence, it is possible for competence to be perceived without its actual manifestation in terms of action or behaviour, but rather from an assessment of its qualities and properties. Mohammad, Davoud and Samaneh (2015) argued that organization competence is observable and can also be determined from its characteristics and the nature or composition of its personnel. According to the author, capacities can be detected and in most situations justified based on an assessment of the organizations existing records of performance, structure, operational capacities, social ties or connections, and the qualifications and experience of its staff or human resource (Ateke & Kalu, 2016; Abou-Moghli, 2015).

In another vein, the competence of the organization can also be expressed in terms of its actions and behaviour. That is to say, competence is also a demonstration of the organizations capacities through the nature and quality of its services and its expressed behaviour in terms of learning, adaptability, and competitiveness (Sheehan et al, 2014). However, it is important to note that in line with the adopted theoretical foundations of the knowledge-based view theory and the human capital theory, the conceptualization of organizational competence adopted in this study is that which aligns with the views of Zeb-Obipi (2016) and Derwin (2016) who described it from the stance of the organizations internal and primarily, human resource capacities to learn, collaborate, innovate and also effectively apply the technologies of the organization in useful and proficient ways. Based on this perspective, one may argue that organizational competence is also concerned with the nature of relationships between staff and the extent to which roles or job features also allows for the transfer or sharing of information as well as the expression of creativity and resourcefulness by the workers.

A firm acquires competitive strength by developing new competencies through organizational transformation with acquisition and integration of knowledge (Abou-Moghli, 2015). Therefore, a firm's core competence(s) is defined as a set of problem-defining and problem-solving insights that fosters the development of strategic growth alternatives. In addition, core competencies are the integrated bundles of skills and technologies which are competitively unique and re-deployable (Kubaisi, 2013). Core competencies are the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies, and are the result of a social learning process in the organization (Jarvis, 2014). For example, technological competences are manufacturing plant and equipment, manufacturing know-how, engineering know-how and quality assurance tools, and customer competences are knowledge of customer needs and processes, distribution and sales channel, communication channel and company/brand reputation (Dias & Escoval, 2014). These knowledge, know-how, and expertise lead to decisions about new product development (Dessler, 2015).

Workforce Analytics and Organizational Competence

The evolving nature of workplace relationships and the growing complications associated with emerging work forms in organizations today has increased the calls not for more stringent controls but rather for a more effective one, harmonic with the dynamics and changes occasioned by the environment of the organization. Thus, one finds that workforce analytics provides and also identifies the necessary models for aligning the human resource properties and content of the organization with its environment; this agrees with Gobble (2017) observation and position that workforce analytics throws weight behind organizational actions which are green, especially in view of its database management processes and the low emphasis on paper or filing systems that at rely on paper manufacturing and at the end, a high level or amount of waste. Studies point to the imperatives of workforce analytics in detailing and highlighting on the gaps and evident loopholes in organizational functionality. Hirsh, Sachs and Toryfter (2015) pointed out that one of the major characteristics of such analysis is that it offers a comparison of the organizations availing human resource features and the industry prevailing features external to the organization.

Derwin (2016) stated that there are several ways and methods towards approach or carrying out workforce analytics. This is important to note as all processes and approaches may yield similar results of consequences on the behaviour of the worker or organization. This is because the context of organizations differ; hence, analysing the features and content of the human resource should begin first understanding the situation of the organizations context and the best possible ways of approaching its workforce – applying and driving its capacities and usefulness within the environment of the organization. Diad and Musa (2015) pointed to the imperatives of learning and information acquisition through social ties within the context or network of the organization.

Building competence requires a large amount and variety of employee participation, and demands rigorous analytical activity (Diad & Musa, 2015), and organizational learning (Diad & Musa, 2015). In addition, core competencies should be developed around strategic business factors because this

approach leads to a common understanding of where the key performance gaps were in the business. Core competence-based competitive advantage can be sustainable over time, if the company exploits cumulative learning about the technology effectively (Diad & Musa, 2015). Recent conceptual work suggested the importance of organizational learning for core competence development. Organizational learning translates knowledge into core competences. This is because core capabilities are a function of the firm's ability to organize itself into a knowledge-creating system.

In addition, knowledge creation have often involved the formation of certain types of internal horizontal structures such as project management, virtual R&D workgroups and the establishment of a co-operative working relationship with the surrounding environment including universities, laboratories, competitors, clients and suppliers (Okpara, 2015). With knowledge of the organization's existing and potential technical competencies, a firm focuses on evaluating the strategic value of current competencies, and forming an initial view on which potential technical competencies might be strategic (Mugo, 2016): A firm also decides where, when, and how to expand the scope of the core competencies. The major problem in managing competencies and R&D activities is uncertainty. This phenomenon affects firms throughout their activities in mobilizing the basic technological competencies, and internally controlling the interactions between these competencies, and mobilizing all useful competencies.

The exploitation of big data offers many opportunities as they allow data to be matched and linked to identify undiscovered patterns. Although the use of big data has the potential to change the way human resources are managed, there remains grey areas that concern the use of big data in the context of the HR function. Workforce data is highly sensitive, and organizations need to exercise great care in deciding what data to collect and what to do with it (Cappelli 2017). For example, it is possible to monitor the content of people's emails, but most organizations would shy away from what they would consider a highly intrusive practice.

Increasing amounts of data are available from sensitive sources such as wearable technology and mobile phone records, placing an even greater responsibility on employers (CIPD 2013). Importantly, the GDPR (General Data Protection Regulation), agreed by European Parliament in April, 2016, limits the capability of the employer to use personal data for purposes not identified at the moment of data collection. The GDPR requires the employer to be kept informed of whether the data are collected and how they will be used. In addition, personal data can be processed only if the use is compliant with the original purpose that motivated data collection. Indeed, processing data for another purpose requires the employee's explicit consent. Finally, when personal data are no longer needed, they should be deleted from the server, implying that HR databases should be reviewed and cleansed periodically.

Zwitter (2014) points out that free will and individualism are compromised by the use of big data in the workplace. In addition, relying too heavily on workforce analytics can make employees feel as if they are reduced to just numbers rather than individuals. Given these ethical issues, how should

workforce analytics be used in an organization? Importantly, legal standards vary from one country to another (CRF Research 2017). Richards and King (2013) argue that existing privacy protections only focus on securing personally identifying information and therefore may not be enough, as they do not protect workers from the misuse of data within the workplace. What is really required is the development of an organizational framework for the ethical use of personal data on workers; the framework should be based upon the four principles of privacy, confidentiality, transparency, and identity (Richards and King 2013), which should give workers agency with respect to the use of data within the organization. As analytics functions mature, having a robust governance framework becomes more important (CRF Research 2017).

Based on the foregoing, the study thus hypothesized that:
Ho_1: There is no significant relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria

Organizational Structure

Organizational structure describes the ordering, arranging and assigning of roles and functions within the organization. Zachary (2015) stated that the structure of the organization provides a framework through which members of the organization are integrated and their relationships within the workplace defined. Organizational structure is also concerned with the establishment of reporting systems – providing benchmarks and protocol that ensure the validation of members and their activities within the system.

Organizational structure therefore describes the various interrelated formats and supportive frameworks that define and determine the nature of interaction and reporting systems that occur or which are manifested in the workplace Gareth (2010). It is the extent to which the organization links roles and responsibilities to the goals and objectives of the organization – especially the way it orders and conditions communication and exchanges that occur within the workplace. It is as such a key aspect necessary for channelling human efforts and interrelations towards the wellbeing and health of the organization. Ajagbe (2014) argued that organizational structure is fundamental to leadership or governance in organization, and no matter the perspectives of leadership, structure is always evident in any organization-based relationship.

Maduenyi, Oluremi and Fadeyi (2015) noted that structure is imperative for maintaining organizational form – a primary component of the behaviour and identity of the organization which depicts its stance and approach towards its environment. Meanwhile Bai, Feng, Yue, and Feng (2017) argued that the basic goal of structure is to provide a design through which relationships, roles and behaviour is monitored, controlled and effectively channelled towards the goals of the organization. It is as such a concern of the organizations leadership as it enables a more interconnected process by which members of the organization can be effectively coordinated.

The structure of an organization can be defined simply as the total of the ways in which its labour is divided into distinct tasks and then its coordination and integration is achieved among those tasks (Gareth, 2010; Ajagbe, 2014). It is the map of relationships that lets the firm orchestrate specialized experts (Kavale, 2012), and provides the basic foundation within which an organization functions (Mohammed and Saleh, 2013). Organizational structure institutionalizes how people interact with each other, how communication flows, and how power relationships are defined (Kavale, 2012). It reflects the value-based choices made by the company (Long et al., 2013); it refers to how job tasks are formally divided, grouped, and coordinated and can provide the link between social and psychological subsystems (Kavale, 2012).

March and Simon (cited in Kavale, 2012) expressed a more behavioural view by defining organizational structure as the pattern of relationship and behaviours that change slowly and thus provide clarity and stability. Similarly, Ranson (cited in Kavale, 2012) posits that structure is a complex medium of control, the framework of rules, roles, and authority relations that seeks to facilitate prescribed purposes by differentially enabling certain kinds of conduct, conferring support for forms of commitment and obligating those who reject the claims entailed by the framework. It is the formal system of task and reporting relationships that controls, coordinates, and motivates employees so that they cooperate to achieve on organization's goals (Long et al., 2013).

Ibrahim et al. (2012) posited that organization structure refers to the way jobs are divided, where decisions are made and how work roles are coordinated. Structure defines how job tasks are formally divided, grouped and coordinated. It specifies the firm's formal reporting relationships, procedures, controls, and authority and decision-making processes. Structure indicates area of responsibility, authority and accountability (Long et al., 2013). Furthermore, organizational structure specifies the work to be done and how to do it and it influences how managers work and the decisions resulting from that work. Structure is concerned with the official arrangement of jobs and the reporting relationships that control, co-ordinate and inspire workers to work as a team in order to achieve the firm's objectives. The function of organization structure is to facilitate the performance of firms through the implementation of strategy. David (cited in Kavale, 2012) stated that for an organization to manage its strategies well in practice a good structure is necessary. Lewis et al. (cited in Kavale, 2012) viewed the structure of an organization as an authority and responsibility for result achievement.
Standardization: This describes actions concerned with ensuring conformity to established service and product benchmarks and models. Standardization is important to the actualization of the organizations goals. Wenixiao et al (2016) opined that the nature of relationships within the workplace is such that requires conditioning actions targeted at ensuring behaviour and work outcomes are patterned to achieve consistency and reliability. Jens and Gurille (2014) noted that standardization focuses on efficiency and cohesiveness where members understand what is expected of them. Standardization therefore outlines expected work formats which members of the organization must adhere to and observe as a way of ensuring quality services and product offerings.

In this vein, standardization thus impacts on the allocation and structuring of relationships and roles in ways that are considered as supportive of its goals and which can be argued to drive its competence in specific areas or features. Sibindi (2014) opined that in achieving collaboration within the workplace, members must have a shared perception and understanding of service and product models to which they are expected to adopt or follow in their roles – this helps in building cooperation and eases the process of standardization. However, more needs to be done in respect of advancing knowledge empirically on the role of standardization on the relationship between workforce analytics and organizational competence. Thus the following hypothesis is stated:

Ho_2: Standardization does not significantly influence the relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria

Formalization: Within the workplace, protocols, processes, and work formats are embedded in formalization. Yeonlee et al (2014) described formalization as the action of making organizational relationships official through validating processes and protocols that serve to outline the modus operandi for the organization. Formalization is therefore a defining quality which details the behaviour of the organization when it comes to interactions and exchanges that occur between the levels or units in the organization. Bai et al (2016) argued that formalization is essential and reflects the extent to which actions and behaviour is guided in line with the values of the organization.

Maduenyi et al (2015) noted that the action of formalization details what can be considered as acceptable or unacceptable when it comes to relationships within the workplace. It is as such vital in driving positive and healthy relationship outcomes in the organization. While various studies affirm to role and imperatives of formalization in the actualization of organizational goals such as competence, there is scarce empirical content which addresses its influence on the relationship between workforce analytics and organizational competence; thus the following hypothesis is put forward:

Ho_3: Formalization does not significantly influence the relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria.

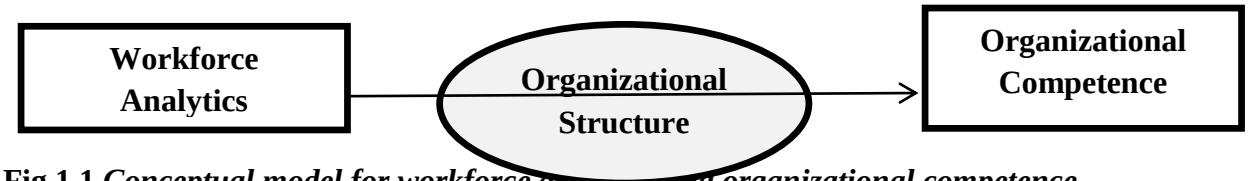

Fig.1.1 ***Conceptual model for workforce analytics and organizational competence***
Source: Desk Research (2021)

METHODOLOGY

The design for the study was the correlational design and the population for this study comprised of all four functional GSM telecommunication firms with the units of measurement comprising managers of the firms. Data collection instrument was the structured questionnaire, which was assessed using the Cronbach alpha reliability test. The Spearman's rank order correlation was used in testing for the bivariate hypotheses with the aid of Statistical Package for Social Sciences version 23.0. The tests were carried out at a 95% confidence interval and a 0.05 level of significance.

DATA ANALYSIS AND RESULTS

The tests cover hypotheses earlier stated which were bivariate and all stated in the null form. The 0.05 significance level is adopted as criterion for the probability of either accepting the null hypotheses at ($p>0.05$) or rejecting the null hypotheses at ($p<0.05$).

We shall commence by first presenting a proof of existing relationships.

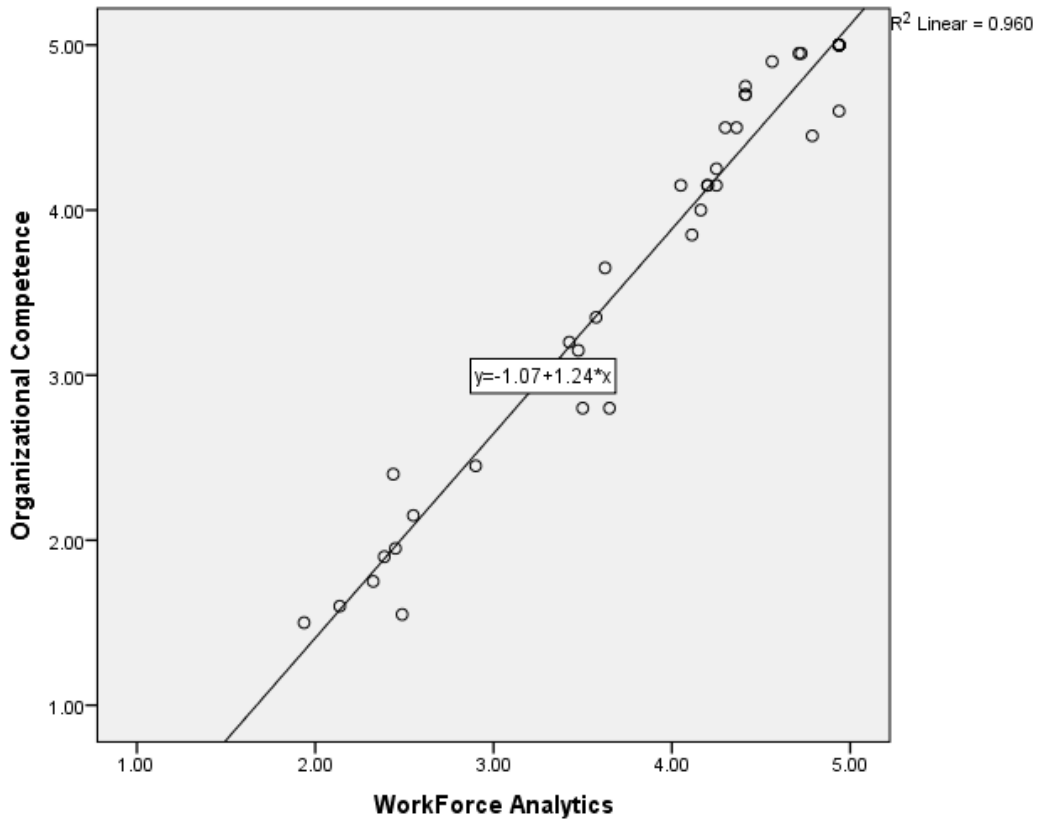

Figure 1 scatter plot relationship between workforce analytics and organizational competence
Source: SPSS Output

The scatter plot graph shows at R^2 linear value of (0.960) depicting a very strong viable and positive relationship between the two constructs. The implication is that an increase in workforce analytics simultaneously brings about an increase in the level of organizational competence. The scatter diagram has provided vivid evaluation of the closeness of the relationship among the pairs of variables through the nature of their concentration.

Table 1: Correlations for Workforce Analytics and Organizational Competence

			Workforce Analytics	Organizational Competence
Spearman's rho	Workforce Analytics	Correlation Coefficient	1.000	.972**
		Sig. (2-tailed)	.	.000
		N	39	39
	Organizational Competence	Correlation Coefficient	.972**	1.000
		Sig. (2-tailed)	.000	.
		N	39	39

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

Source: SPSS Output

Ho_1: There is no significant relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria.

Table 1 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.972 on the relationship between workforce analytics and organizational competence. This value implies that a very strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in organizational competence was as a result of the adoption of workforce analytics in GSM telecommunication firms in Nigeria. Similarly displayed in the table 1 is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria.

Table 2: Correlation for moderating effect of Organizational Standardization

Control Variables			Analytics	Competence	Standards
-none-[a]	Analytics	Correlation	1.000	.827	.695
		Significance (2-tailed)	.	.000	.001
		Df	0	15	15
	Competence	Correlation	.827	1.000	.796
		Significance (2-tailed)	.000	.	.000
		Df	15	0	15
	Standards	Correlation	.695	.796	1.000
		Significance (2-tailed)	.001	.000	.
		Df	15	15	0
Standards	Analytics	Correlation	1.000	.630	
		Significance (2-tailed)	.	.005	
		Df	0	14	
	Competence	Correlation	.630	1.000	
		Significance (2-tailed)	.005	.	
		Df	14	0	

A. Cells contain Zero-Order Correlations.

Source: SPSS Output

Ho_2: Standardization does not significantly influence the relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria

Table 2 above presents the result for the test on the moderating effect of organizational standards on the relationship between workforce analytics and organizational competence. As depicted in the table, model 1 illustrates significant relationships between all three variables with an R_1 (indirect) correlation between workforce analytics and organizational competence at 0.827. However, for model 2, the R_2 (direct) correlation (although yet significant) is weaker at 0.630 than the indirect ($R_1 > R_2$). This goes to suggest a stronger and more significant relationship between workforce analytics and organizational competence as moderated by organizational standards. Thus, the result indicates that the relationship between workforce analytics and organizational competence is significantly moderated by organizational standards of firms.

Table 3: Correlation for moderating effect of Organizational Formalization

Control Variables			Analytics	Competence	Form
-none-[a]	Analytics	Correlation	1.000	.827	.721
		Significance (2-tailed)	.	.000	.000
		Df	0	17	17
	Competence	Correlation	.827	1.000	.625
		Significance (2-tailed)	.000	.	.004
		Df	15	0	15
	Form	Correlation	.721	.625	1.000
		Significance (2-tailed)	.000	.004	.
		Df	15	15	0
Form	Analytics	Correlation	1.000	.697	
		Significance (2-tailed)	.	.001	
		Df	0	14	
	Competence	Correlation	.697	1.000	
		Significance (2-tailed)	.001	.	
		Df	14	0	

A. Cells contain Zero-Order (Pearson) Correlations.

Ho_2: Formalization does not significantly influence the relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria

Table 3 above presents the result for the test on the moderating effect of organizational formalization on the relationship between workforce analytics and organizational competence. The table reveals that in model 1 there exist significant relationships between all three variables with an R_1 (indirect) correlation between workforce analytics and organizational competence at 0.827. However, for model 2, the R_2 (direct) correlation (also significant) is weaker at 0.697 than the indirect ($R_1 > R_2$). This goes to indicate that the relationship between workforce analytics and organizational competence is stronger and more significant when moderated by organizational formalization. Therefore the evidence from the analysis presents organizational formalization as a strong and significant moderator of the relationship between workforce analytics and organizational competence of the firms.

DISCUSSION OF FINDINGS

The findings from the analysis demonstrate that the structure of the organization plays a critical role enhancing the relationship between workforce analytics and organizational competence of telecommunication firms in Nigeria. The findings show that both dimensions of organizational structure comprising of its formalization and standardization significantly channel the activities and practices of the workforce analytics of the organization towards improved outcomes of functional, technology and quality control competence.

Organizational structure shows how members of an organization think, and the development of an attitude considering the needs of market and business environment as a whole is dependent on it. Thus,

organizational structure is crucial in creating innovative ways through which the organization can effectively address its functional needs, and the increase of technological responsibility to environment and future generations. In this respect, changing the structure of the organization is necessary, because through it, its members are informed about the objectives, methods and accepted values, about how to act, pursue or engage in desirable practices, a guide of behaviour for overcoming the complexity and uncertainty, specific to their work (Austin & Classen, 2008). Thus, the idea of competence must be released in the entire organization in order to act in an ethical way towards the environment in which the organization operates.

There are several types of organizational structures, depending on the degree of integration of competence; however, the two forms addressed herein concern the formalization and standardization of the organization. The noted forms of organizational structure could also influence its reaction or responsiveness to the competence features and demands of its environment. A poor reactive structure is evident in any organization that does not approach items regarding competence in its work, being concerned solely in maximizing the value of its stakeholders, while the responsive structure as expressed in an organization is characterized by responses to legislative pressures, assuming some actions targeting sustainable development.

Responsive in organizations is often considered a function of its structure, market dynamics and relationships with stakeholders. This supports the adoption of effect development principles in the management processes, which facilitate improved approaches and structural features that are effective in driving the competence goals and objectives of the organization (Chattopahyay, Finn & Ashkanasy, 2010). This is as previous studies also corroborate the views expressed in this study that there is a strong relationship between organizational structure and organizational competence. Thus, Classen (cited in Ashkanasy et al., 2010) noticed that a weak organizational structure impedes the organization's progress regarding the increase of responsibility towards the environmental, while other authors (Curkovic and Landeros, 2006) studied the correlation between organizational structure and competence issues, indicating the failure in transmitting the quality control information, the obstruction in participation of stakeholders and the failure of initiatives taken in this regard.

CONCLUSION AND RECOMMENDATIONS

The study concludes that workforce analytics improves organizational competence of GSM telecommunication firms in Nigeria. Furthermore, the study affirms that the process of standardization of the organization plays a critical and well evident role in ensuring that workforce analytics is translated unto the organizational competence of GSM telecommunication firms in Nigeria. Also, organizational formalization is affirmed to contribute and impact meaningfully on the relationship between workforce analytics and organizational competence of GSM telecommunication firms in Nigeria.

From the foregoing conclusion therefore, following, recommendations are here proffered:

i. It is recommended that in the process of formalization, management of the GSM telecommunication firms stress on the adoption and implementation of policies which clearly align the organization with its environment and in the same manner enhances the organizations capacity for learning and effectively adapting its human resource to the needs of its market or context.

REFERENCES

Abou-Moghli, A. (2015). The role of organizational support in improving employees performance. *International Business Research, 8*(2), 198-203.

Ajagbe, M. A. (2014). *Funding Criteria in Technology Based Firms in Malaysia* (Doctoral dissertation, UniversitiTeknologi Malaysia).

Angrave, D., Charlwood, A., Kirkpatrick, I., Lawrence, M., & Stuart, M. (2016). HR and analytics: why HR is set to fail the big data challenge. *Human Resource Management Journal, 26*(1), 1-11.

Ashkanasy, N. M., Wilderom, C. P., & Peterson, M. F. (2010). *The handbook of organizational culture and climate*. SAGE Publications, Inc., https://www.doi.org/10.4135/9781483307961

Ateke, B. W., & Kalu, S. E. (2016). Managing the sales force for competitiveness: experience from insurance firms in Port Harcourt. *Ilorin Journal of Marketing, 3*(2)1-15.

Bai, W., Feng, Y., Yue, Y., & Feng, L. (2017). Organizational structure, cross-functional integration and performance of new product development team. *Procedia Engineering, 174*, 621-629.

Bock, L. (2015). *Work rules! Insights from inside Google that will transform how you live and lead*. New York: Twelve Books.

Boudreau, J. W., & Cascio, W. (2017). Human capital analytics: Why are we not there? *Journal of Organizational Effectiveness: People and Performance, 4*, 119-126.

Chattopadhyay, P., Finn, C., & Ashkanasy, N. M. (2010). Affective responses to professional dissimilarity: A matter of status. *Academy of Management Journal, 53*(4), 808-826.

CIPD (2013) *Learning and talent development*. Annual survey report 2013. London: Chartered Institute of Personnel and Development in Partnership with Cornerstone.

Curkovic, S., & Landeros, R. (2000). An environmental baldrige. *American Journal of Business*.

Davenport, T. (2013). Keep up with your quants. *Harvard Business Review, 91*(7–8), 120–123.

Davenport, T. H., Harris, J. G., & Morison, R. (2010). *Analytics at work: Smarter decisions, better results*. Boston: Harvard Business School Press.

Deloitte. (2017). *Rewriting the rules for the digital age: 2017 Deloitte human capital trends*. New York: Deloitte University Press.

Derwin, G. (2016). The influence of competence and job satisfaction of employee performance through work culture, 5(2), 2302-1411.

Dessler, G. (2015). *Human resource management*, 14th ed. Prentice Hall

Diad, S.M., Musa, T.A. (2015). The influence of training on employee's performance, organizational commitment, and quality of medical service of Jordanian private hospitals. *International Journal of Business and Management, 10*(2), 117-127.

Dias, C., & Escoval, A. (2014). Organizational flexibility as a strategic option: fostering dynamic capabilities of hospitals. *Healthcare Quarterly, 17*(2), 38-43.

Feldman, M. S., & Khademian, A. M. (2002). *To Manage Is to Govern. Public Administration Review, 62(*5), 541–554.

Fitz-Enz, J., & John Mattox, I. I. (2014). *Predictive analytics for human resources*. John Wiley & Sons.

Gareth, R. J. (2010). *Organization theory: Design and Change.* New York: Pearson International

Garvin, D. A. (2013). How Google sold its engineers on management. *Harvard Business Review, 21*, 75–82.

Gobble, M. M. (2017). The datification of human resources. *Research Technology Management, 60*(5), 59-61

Guenole, N., Ferrar, J., & Feinzig, S. (2017). *The power of people: Learn how successful organizations use workforce analytics to improve performance*. New York: Pearson

Hirsch, W., Sachs, D., & Toryfter, M. (2015). Getting started with predictive workforce analytics. *Workforce Solutions Review. 6*(6), 7-9.

Huselid, M. A. (2015). Workforce analytics for strategy execution. In D. Ulrich, W. A. Schiemann, & L. Sartain (Eds.). *The rise of HR: Wisdom from 72 HR thought leaders*. Alexandria, VA. Human Resource Certification Institute.

Ibrahim, M., Sulaiman, M., Kahtani, A., & Abu-Jarad, I. (2012). The relationship between strategy implementation and performance of manufacturing firms in Indonesia: The role of formality structure as a moderator. *World Applied Sciences Journal*, *20*(7), 955-964.

Jens, S., & Gurille, K. A. (2014). An examination of the influence of the organizational structure types and management levels on management practices in organizations. *International Journal of Business and Management, 9*(6), 23-41.

Kavale, S. (2012). The Connection between Strategy and Structure. *International Journal of Business and Commerce,* 1(6): 43-52.

Kubaisi, S. (2013). The effect of the principles of the resolution (OODA) on strategic agility of movement: a field study in a number of hospitals in the city of Baghdad. The Magazine of Dinars, 3, 162-194

Levenson, A. (2017). *Strategic analytics: Advancing strategy execution and organizational effectiveness*. New York: Barrett-Koehler Publishers.

Long, C. S., Mahanra, R. G. & Ajagbe, A. M. (2013a). Can employee share option scheme improve firm's performance? A Malaysian Case Study. *Information Management and Business Review*, 5(3), 119-128.

Maduenyi, S., Oluremi, O., & Fadeyi, O. (2015). Impact of organizational structure on organizational performance. *International Conference on African Development Issues; Social and Economic Models for Development Track*. Ota, Nigeria

Mohammad, M.M., Davoud, V. & Samaneh, A.N. (2015). Review of the effect of enterprise systems on agility in the organization. *Technical Journal of Engineering and Applied Sciences, 5*(5), 243-252

Mugo, I. N., Namusonge, S. G., & Sakwa, M. M. (2016). Effect of organizational core competences on performance in the insurance industry in Kenya. *The Strategic Journal of Change and Business management*, *3*(4), 1634-1668.

Okpara, J. O. (2015). Exploring the effects of intangible resources on competitive advantage and performance of listed firms in Nigeria. *Business and Applied Sciences Academy of North America*, *8*.

Rasmussen, T., & Ulrich, D. (2015). Learning from practice: How HR analytics avoids being *a management fad. Organizational Dynamics, 44(3), 236–242.*

Richards, N. M., & King, J. H. (2013). Three paradoxes of big data. *Stan. L. Rev. Online*, *66*, 41.

Sheehan, M., Garavan, T. N., & Carbery, R. (2014). Innovation and human resource development (HRD). *European Journal of Training and Development, 38*(1/2), 2–14.

Sibindi, N. (2014). Relationship between organizational structure and performance: A case study of the national railways of Zimbabwe. *International Journal of Commerce, Business and Management, 3*(2), 146-157.

Wenxiao, B., Yicheng, F., Yunju, Y., & Lijie, F. (2016). Organizational Structure, Cross Functional Integration and Performance of New Product Development Team. 13th Global Congress on Manufacturing and Management.

YeonLee, J., Kozlenkova, I., & Palmatier, R. (2014). Structural marketing; Using organizational structure to achieve marketing objectives. *Journal of the Academy of Marketing Science, 6*(2)

zachary, a. (2015). Organizational structures and performance of large manufacturing firms in Kenya: An empirical investigation. *Journal of Business and Economics, 6*(11), 1883- 1891

Zeb-Obipi, I. (2016). Competence planning in Nigerian organisations: A performance report. *Journal of Marketing Development, 1*(1), 114-120.

Zwitter, A. (2014). Big data ethics. *Big data & society*, *1*(2), 2053951714559253.