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Moderating effects of digital orientation on the relationship between job and work design amongst small and medium enterprises performance in Kaduna metropolis

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Abstract
Examining effect of job and work design on small and medium-sized enterprises (SMEs) performance in Kaduna Metropolis, with an emphasis on the moderating effects of digital orientation, is the study's goal and objective. The study employed a survey research design. A proportionate stratified random sample technique was used, cross-sectional data from the primary source were gathered using a verified and dependable questionnaire. Data collected from 401 out of 11,187 SMEs in the local government areas of Kaduna North, Kaduna South, Chikun, and Igabi, Kaduna State were run and analysed using the technique known as partial least square structural equation modelling, or PLS-SEM. The study's findings showed that the performance of SMEs and job and work design have a favourable and significant relationship. Additionally, the relationship between SMEs' performance and job and work design was moderated by digital orientation. Based on the results of the study, digital orientation is essential to improving the performance of SMEs in Kaduna Metropolis. Thus, the study suggests among others that, SMEs should make employee roles clear. This is because, the more clearly defined employee's role, the more satisfied they will be, and the more successful the SMEs would be.

Keywords: Digital orientation, Job and work design, Small and medium enterprises

1. Introduction

According to Murithi (2017), (SMEs) or small and medium-sized businesses are crucial to attaining sustainable economic growth and development, reducing unemployment, as well as diversifying the economy. Through the effective use of human and material resources, nations with highly performing (SMEs) or small and medium-sized businesses and those that are proactive, inventive, creative, and well-connected will witness rapid economic growth and development (Pulka, 2019). According to the International Labour Organization's ILO Report of 2022, small and medium-sized enterprises (SMEs) have been shown to contribute to the economic expansion and growth of many countries, including Ghana, Japan, and Taiwan. Regrettably, SMEs have continued to perform below expectations in Nigeria (SMEDAN, 2021). SMEs are important for wealth creation, economic expansion, fair income distribution, and the establishment of jobs (Oduntan; 2014; Seow, 2019; Adekoya, 2016). The SMEs subsector is not operating and performing as expected or anticipated despite the infusion of resources (Ukwu, 2017). For instance, the Nigerian GDP's contribution from SMEs is relatively small (at 48%) weighed against other countries such as China (GDP: 60%), Japan (GDP: 69.47%), Sri Lanka (GDP: 52%), Taiwan (GDP: 60%), and Ghana (GDP: 60%), according to the International Labour Organization (ILO Report of 2022). Comparably, despite having a labor force of over 80 million, SMEs do very poorly when it comes to contribution to GDP, creation of wealth and value, as well as long-term

economic growth (Hassan & Ogundipe 2017). In a similar line, Nigerian SMEs have a high death rate (UNIDO, 2017). According to the survey, only 20% of recently founded SMEs make it to their fifth year. It was reported by the Nigerian Bureau of Statistics (NBS 2022) and the Micro, Small and Medium Enterprises (MSME Survey of 2022) that just fifteen percent of newly founded SMEs made it through the first five years, with others going out of business in the six to ten years range.

The performance among SMEs is a serious concern in most developing countries, comprising Nigeria and Libya. This is because these businesses are less productive and face a number of challenges, including technological backwardness, a lack of human resource management expertise, weak management systems, poorly designed jobs and work environments, and a lack of a digital orientation (Tenga & Aigbavboa 2020, Fred & Omotayo 2018, Davidsson, 2018, SMEDAN, 2021). Because of this, SMEs perform at a poor level (Asian Productivity Organization, 2016, 2017). However, SMEs can function well if they establish, implement, and uphold appropriate job and work design (JWD), choices, and policies that will provide them a competitive edge in a market that is highly competitive (Zafar, & Mustafa, 2017). Appropriate digital orientation actions are required to ensure survival and improve performance of the firms (Matt, Modrak & Zsifkovit, 2020) as a result of many issues faced by SMEs owners-managers in managing their operations (Liu & Zhang, 2021). Accordingly, one of the main reasons preventing SMEs from performing effectively is their inability to implement efficient digital activities (Osmundsen, Iden & Bystad, 2018).

Furthermore, there is not enough proof found in the literature currently in publication about how small and medium enterprises performance and job and work design connected. Various research studies have presented conflicting results about the link between the performance of small and medium-sized businesses and job and work design. According to research conducted by Muna, Zain, and Shaju (2017), Broeck and Parker (2017), Radhika and Kapur (2017), Memoona, Kiran, and Mujtaba (2013), and Udeme (2018), for instance, the performance of SMEs is positively and significantly affected by job and work design. On the other hand, studies by Dimitrios and Dimitrios (2013), Daniel (2017), and Cigdem (2017) found no substantial evidence on the link in between job and work design as well as SMEs' performance. Hence, Barone & Kenny (1986) argue that this discrepancy calls for the introduction of digital orientation as a moderator in order to strengthen the relationship/link involving job and work design as well performance of SMEs. So, this study looks into moderating effects of digital orientation on the relationship between job and work design (JWD) amongst small and medium enterprises performance in Kaduna metropolis. The following hypotheses were developed in null form in order to achieve the previously described goals:

H_{01}: Job and work design has no significant effect on SMEs performance in Kaduna metropolis.

H_{02}: Digital orientation has no significant effect on SMEs performance in Kaduna metropolis.

H_{03}: Digital orientation does not moderate the relationship between job and work design and SMEs performance in Kaduna metropolis.

2. Literature Review

Job Work Design and SMEs performance

The relationship between job design and employee performance in Pakistan was studied by Memoona, Kiran, and Mujtaba (2013). This study examines the effect of job design on employee performance using

a review of the available literature and first-hand observations in the workplace, in order to highlight how employees, respond to a job design, the study also suggests a new dimension called psychological perception of employee. The extended theory of psychological theory was chosen to specifically examine the effect of job design and employee performance. Data was collected from 357 SMEs in Pakistan. The results demonstrated that the correlation between employee performance and job design significantly positively impacted by an employee's psychological perception. Accordingly, In Ibadan, Udeme (2018) conducted a research on work analysis and job design. The aim of the research is to determine impact of job design and analysis on employee performance. Motivation theory was adopted to specifically look at the impact of job analysis and job design on performance employees. The outcome demonstrates that job design and analysis significantly enhance employee's performance.

Digital Orientation and SMEs Performance

Kinderman et al. conducted a study in Germany in (2020) on the operationalization of a new digital orientation and performance of SMEs. Data was collected from 6,498 shareholders from large US firms. According to the survey, creating and sustaining a digital orientation aids business in better navigating the strategic needs resulted from the extensive use of digital technology. Furthermore, A study on "conceptualizing a digital orientation: antecedents of supporting SME performance in the digital economy in England" was conducted by Sarah, Ana, and Canhotob (2017). Data were collected from 390 SMEs. The study's results showed that digital orientation support performance of SMEs in a digital economy.

Rupeika, Pestrovka and Bule (2022) ascertained the effect of Digital Orientation and digital capability on digital transformation of SMEs during the COVID-19 Pandemic in Latvia. The theoretical framework employed was the resource-based theory. Data was collected from 246 SMEs in Latvia. The study's conclusions demonstrated that digital capacity and digital capability both directly improve digital transformation and have an impact on SMEs' performance.

SMEs' Performance

The performance of SMEs was examined from many angles by different experts. Adams (2021) states that the performance of SMEs is defined as their capacity to make effective and economical utilization of the available resources at their disposal so as to survive, satisfy their customers, and help create jobs. According to Maheswari and Karpagam (2018), SMEs' performance is measured by how well they completed their intended work in relation to their ultimate production at the end of a given business period. An organization's capacity to maximize commercial profitability from the material and human resources at its disposal is another way to characterize SMEs' performance (Wilden, Gudergan, Akaka, Averdung & Teichert 2018). Abel-Kader, 2014; Yousaf & Majid, 2016) describe SME performance as their successes in the past, present, and future. From an entrepreneurial perspective, SMEs' performance is measured by their capacity to survive, expand, and help reduce poverty and create jobs (Murtadlo, 2018).

Job and Work Design (JWD)

Definition of Job and Work Design is a written document helps employees to understand the nature of their work up front by specifying job responsibilities, duties, tasks, and qualifications in an effort to reduce job unhappiness (Cordery & Parker 2012). The process of setting up employment responsibilities, tasks, and duties to preserve job happiness and employee engagement is known as "job and work design" (Moccia, 2016). Holman (2017) posits that job and work design play a crucial role in enabling people to remain relevant and build jobs that meet the

demands of the individual as well as the business. However, according to Broeck (2017), job and work design is defined in this study as method of determining the functions and obligations of employees together with the protocols and systems that they have to follow or abide with. The primary goal of job and work design is to coordinate and optimize work processes in order to maximize performance and create value**.**

Digital Orientation (DO)

According to Gobakhloo and Iranmanesh (2021), digital orientation refers to the development of an adaptable digital business strategy through digital technology's advancement and its supporting capacities. Magistretti, Dell'Era, Messeni and Petruzzelli (2019), digital orientation is an act of bringing about notable modifications to the organizational features of enterprises as well as rebuilding operating system, conduct, as well as organizational structure by the combined application of computer, networking, communication, and information technology (IT). According to Wang (2021) digital orientation means a new corporate identity in addition to a major improvement in organizational capabilities. Therefore, the term digital orientation refers to the process of using digital technology to significantly alter the paths that businesses take to create value (2019, Vial). Digital orientation, according to Attaran & Attaran (2020), is the process of causing organizations to use digital technologies, like information, computation, and communication, to make strategic responses. This involves altering their boundaries, structure, and even the paths by which they generate value, as well of being aware of the enterprise entity evolution process.

Moderating Role of Digital Orientation

A number of digital technology aspects impact business firms; these technological factors are critical to all business organizations (Mahmoud 2021). Any business that fails to adapt to these technological factors or ignores them will inevitably perform below expectations (Constantinides, Henfridsson & Parker, 2018). According to several studies, correlation exists between SMEs' performance and digital orientations (Feng, 2019; Vrontis & Chaudhuri, 2022; Wang, 2022). Thus, SMEs' improved performance can be attributed to the generous, dynamic, and complex nature of digital orientation. For SMEs, digital orientation elements can occasionally be advantageous since they allow them to take calculated risks and reap large profits, utilize cutting-edge technology, and provide customers with greater value than their competitors (Adner & Kapoor, 2010; Kholi & Grover, 2008).

Theoretical Framework

The study was conducted using Resource Based View (RBV) framework. Achieving competitiveness can be achieved by inventively offering clients greater value, according to Wernerfelt's (1984) resource-based view perspective (RBV). In strategic management research, RBV theory is one of the theoretical viewpoints used to explain why inter-firm performance gaps exist (Barney & Griffin, 1992). Firms possess collections of rare, valuable, resources that are unique and cannot be replaced and talents which is able to give them an edge over competitors, according to RBV theory. Therefore, resources are both tangible and intangible assets that belong to or are under the control of a firm, while capabilities are the means by which a company can combine and utilize resources through organizational procedures to accomplish its goals (Amabile et al, 1996). Resource Based View (RBV) has been put to test in numerous empirical studies on the performance of businesses, and the results show that this theory is suitable for analyzing the performance of SMEs (Becker, Huselid & Urich 2016, Barney 2018, Boxall & Purcel, 2018, Finegold & Frenkel, 2016, Barney, 2015 & Wood & Bischoff, 2020). Therefore, this study

applied the RBV theory in accordance with (Barney, 2015), it implies that an organization's long-term competitive benefit actually results from a combination of valuable internal and external resources working together in a complimentary manner, based on the Vary, Rare, Imitable, and Non-Substitutable (VRIN) nature of these resources.

As a result, this theory can explain the variable of this study. Digital orientation and job and work design can both be viewed as intangible assets of SMEs in Kaduna State's metropolis. The theory also suggests that when the aforementioned variables are used appropriately, SMEs' performance may improve.

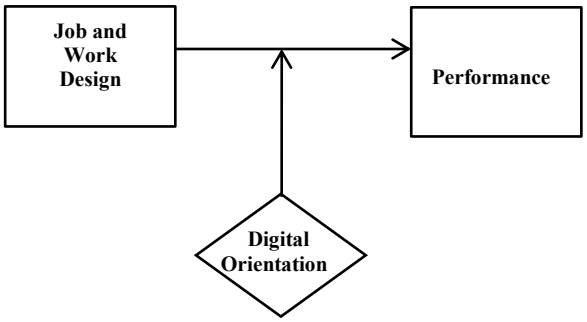

Figure 1 Conceptual Framework

3. Methodology

The study's research design was a cross-sectional survey. Self-administered questionnaires were used to get primary data from the respondents. According to Kaduna Bureau of Statistics (KDBS), Updated Frame of 2022, the study's population consisted of 11,187 managers and owners of SMEs located in Kaduna metropolis. (373) sample size which is the mean of 370 and 375 for 10,000 and 15,000 population, accordingly, was determined using the sample size table provided by Krejcie and Morgan (1970). In accordance with Hair, Wolfinbarger, Ortinau, and Bush's (2008) recommendation that a 30–50% increase in sample size be made so as to address missing questionnaires along with uncooperative subjects. 30% more was added to the sample size, bringing the new total to 485. 416 of the 485 distributed questionnaires were completed and returned, and questionnaire 15 was deemed unusable or rejected. Thus, the analysis was conducted using 401 valid questionnaires. Since the sample was selected from a variety of local governments, which functioned as the population's stratum, a technique known as proportionate stratified random sampling was employed.

Performance evaluation tool (PERF) consisted of seven (7) components were adapted from Ferguson and Reio (2010), and has a 0.71 Chronbach's alpha. Also, six (6) items with 0.78 for the Chronbach's alpha that measured job and work design (JWD) were modified from the work of Morgeson and Humphrey (2006). Lastly, utilizing a 0.78 Chronbach's alpha, ten (10) elements used to measure digital orientation (DO) were modified from Dantsoho et al 2020's work. Structural equation modeling was utilized to evaluate the data using the statistical application Smart-PLS 3.0.

4. Results and Discussion

Assessment of SMART PLS-SEM Path Model Results

In line with Henseler, Ringle, and Sarstedt (2013) recommendation, a two-step procedure was used to report the SMART PLS-SEM results of the study. As stated by Henseler (2013) and Hair et al. (2018), the two-step procedure used in this work comprising evaluating a structural model and a measurement model. Evaluation of measurement models includes assessing discriminant validity, convergent validity, content validity, individual item reliability, and internal consistency reliability (Hair et al., 2018). See figure 2 and table 1 below.

Individual Item Reliability

Outer loadings of each component's measure were all assessed in order to determine the dependability of each indicator as indicated in figure 2 (Hair et al., 2018). Findings indicated that every outer loading, with the exception of five items

(PERF1, PERF2, PERF3, JW6, and DO3), satisfied 0.5 and above of the recommended threshold (Hair et al, 2014). Thus, component with .40 and .70 loadings can also be accepted (Hair et al., 2014), according to the suggested rule of thumb, as long as their removal or other modification did not increase the AVE and composite dependability. Notably, eighteen of the twenty-three items measuring the study's constructs were kept because their loadings fell between 0.707 and 0.911. Because the loadings of the five items PERF1, PERF2, PERF3, JW6, and DO3 were below the established threshold, they were removed. The outer loadings exact values were displayed in figure 2 and Table 1 below.

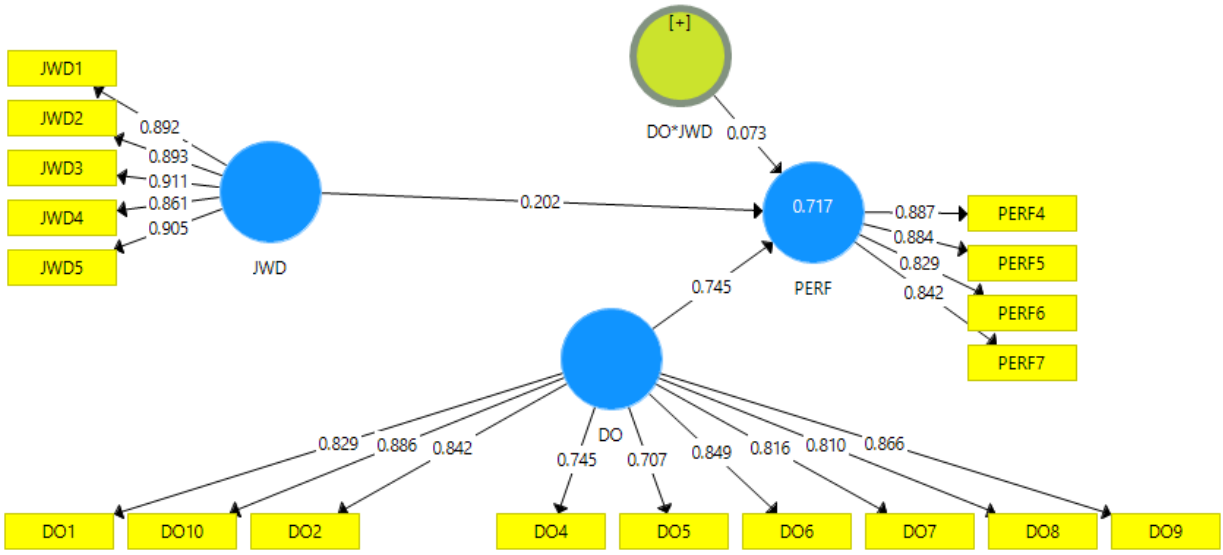

Figure 2, Measurement Model

Internal Consistency Reliability and Convergent Validity

The internal consistency and reliability were assessed using composite reliability and Cronbach's alpha. Furthermore, both Cronbach's alpha and composite index were used to assess reliability because, the internal consistency values are probably going to be overestimated, leading to logically higher reliability estimates, the Cronbach's alpha is a is a statistical measure that estimate the reliability of a test or assessment of reliability and probably will yield relatively minimal values (Hair et al., 2012). In other words, all indicators are assumed to have equal outer loadings on the construct by Cronbach's alpha and are similarly, dependable. But this conjecture's weakness is that PLS-SEM rates the indicators according to each one's dependability (Hair et al, 2018). However, composite reliability is the second alternative of internal consistency reliability measure. This measurement highlighted the indicators' unique outer loadings. Therefore, it makes sense to consider both (Hair et al, 2018). In this regard, any outer loading that has an indication value of 0.70 or above will be kept; if not, it will be discarded, according to the rule of thumb.

Table 1: Items Loadings, Average Variance Extracted, Reliability

Constructs	Items	Loadings	AVE	CA	CR
Job and Design	JWD1	0.892	0.797	0.936	0.951
	IWD2	0.893			
	JWD3	0.911			
	JWD4	0.861			
	JWD5	0.905			
Performance	PERF4	0.887	0.741	0.883	0.920
	PERF5	0.884			
	PERF6	0.829			
	PERF7	0.842			
Digital Orientation	DO1	0.829	0.670	0.938	0.948
	D02	0.842			
	DO4	0.745			
	D05	0.707			
	DO6	0.849			
	DO7	0.816			
	DO8	0.810			
	DO9	0.866			
	D10	0.829			

Figure 2 and Table 1 above displayed the validity and reliability results. Each and every latent component that evaluated showed composite reliability and croanbach alpha figures were higher than the recommended threshold of 0.7 (Hair et al, 2014, Henseler et al, 2009). Shown above in Figure 2 and Table 1, latent construct figures for the two reliability tests that were used ranged from 0.883 to 0.951, showing a

greater level of reliability (Hair et al. 2014). Convergent validity, evaluates the level of correlation between two variations on the same concept, was evaluated in addition to the reliability test (Hair et al., 2014). By looking at the (AVE) value, this was accomplished. As shown in table 1 every AVE value was higher than the threshold of 0.5 (Hair et al., 2014; Henseler et al., 2009). Convergent validity was achieved because the minimum value was 0.670. The next step is to assess discriminant validity, which shows how a construct differs from other constructs (Hair et al, 2014). Correlation's Heterotrait-Monotrait Ratio (HTMT), suggested by Henseler et al. (2015), was employed. They argued that, while being the most widely used techniques in order to assess discriminant validity, the Fornell-Larcker criterion and cross-loadings do not consistently identify instances of discriminant validity deficiency in typical research scenarios (Henseler et al. 2015). Based on the findings of the study, discriminant validity was established since the HTMT ratio figures were found to be lower than the threshold of 0.85 proposed by Kline (2011). As an indication of discriminant validity, Table 2 provided the HTMT ratio criterion.

Table 2: Discriminant Validity (Heterotrait-Monotrait Ratio (HTMT)

Construct	DO	JWD	PERF
DO	**0.819**		
JWD	0.620	**0.893**	
PERF	0.829	0.639	**0.861**

Assessment of Variance Explained in the Endogenous Latent Variables

The degree to which one or more predictor variables can account for the difference in endogenous variable(s) is indicated through the coefficient of determination (R-squired) figure. But the acceptable R^2 value varies depending on the research context. R-squared should have a minimum acceptable level of 0.10 (Hair et al. 2011). The R-squared values for the endogenous latent variables were displayed in Table 3.

Table 3. R Squared

Dependent Variable	R Square (R^2)
Performance	0.717 (71%)

The research model showed that 73% of the variance in the endogenous variable (PERF) outlined via the exogenous variables.

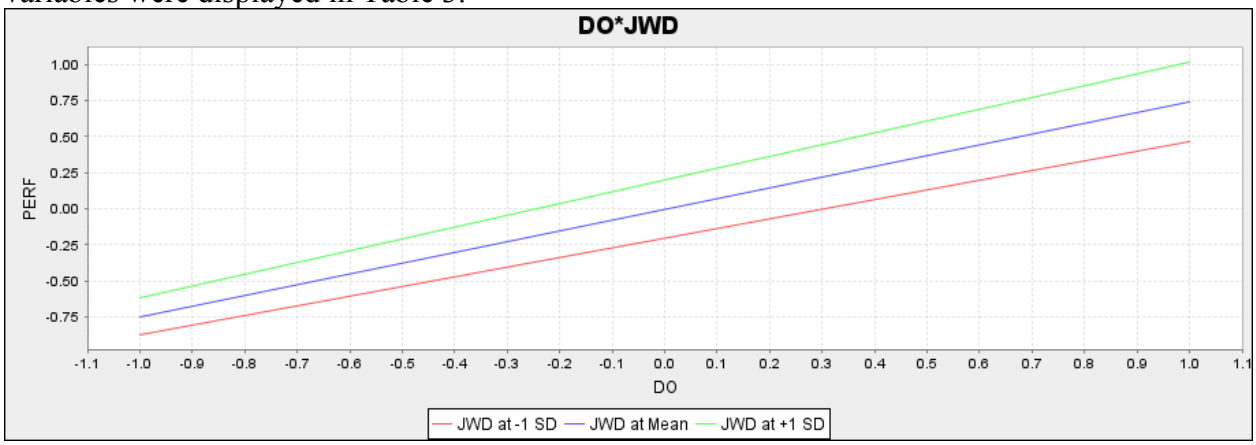

Figure 3, Moderating graph

As seen in Figure 3, the three lines illustrates the relationship in between job and work design (x-axis) and performance (y-axis). The upward movement of lines signified that the interacting variable moderated the relationship between the dependent and independent variables of the study.

Discussion of the findings

This study's main objective is to examine moderating effects of digital orientation on the relationship between job and work design and small and medium-sized enterprises (SMEs) performance in Kaduna metropolis. It was established in the study that job and work design have significant effect on performance. Accordingly, employee satisfaction and the performance of SMEs both increase when an organization makes clearer the responsibilities of its employees/personnel. Consequently, as the level of job and work design increases the performance of employees will also increase. This result shares a similar finding with some previous studies (Memoona, Kiran and Mujtaba (2013), Udeme (2018), Radhika and Kapur (2017) and Broeck and Parker (2017) which found a strong and positive correlation between job and work design and performance of SMEs; and contradict the findings of Dimitrios (2014), Daniel (2017)

and Cigdem (2017). This suggests that job and work design and digital orientation are very important in predicting SMEs performance. It was also established in the study that digital orientation (DO) possesses a substantial correlation with the performance of SMEs, which shows that there is a direct connection between digital orientation (DO) and performance of SMEs (Sarah et al 2017; Dantsoho et al 2020; Rupeika et al 2022; Xiaoyan et al 2022). Lastly, the study also showed that digital orientation moderates the relationship between job design and performance. According to the results, particularly in Kaduna metropolis, digital orientation can aid in enhancing SMEs performance as indicated in the study. This suggested that if digital orientation interacts with job and work design, it will increase the level of performance.

Besides evaluating the dependent variable (performance), or R^2 value, in this model, the assessment of F^2 i.e. the effect size which dictates the relative effect of a certain exogenous latent variable on the latent endogenous variable based on the changes in the R^2 value owing to the exclusion of the former (Chin, 1998) Values of F^2 are shown in Table 4 as follow

Table 4: Assessment of effect size: F-Square

Construct	f^2 (PERF)	Effect size
Digital Orientation	0.98	Large
Job and work Design	0.08	Small

Digital orientation has a significant effect size on the endogenous variable, as shown in Table 4 above. Additionally, job and work design also have slight effect size on performance. This clearly suggests that there is moderation between the dependent and independent variable (digital orientation) as the moderator, took up a

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sizable portion of the exogenous variables. As a measure of predictive significance, it is imperative to assess the Stone-Geisser Q^2 value in addition to the level of the R^2 value (Geisser, 1974; Stone, 1974). This standard indicates how predictively useful a model is (Hair et al, 2014). Thus, if a model's Q^2 is higher than zero, it is considered to have predictive relevance (Henseler et al., 2009). According to Duarte and Roposo (2010), the greater the Q^2, the higher the exogenous latent variables' predictive value on the endogenous latent variable. Table 5 displays Q^2 figures derived from blindfolding procedure.

Table 5: Predictive relevance on endogenous variables: Q-square

Construct	SSO	SSE	Q^2 (=1-SSE/SSO)
DO	3564.000	3564.000	
JWD	1980.000	1980.000	
PERF	1584.000	752.129	0.525

Obviously cross-validated redundancy (Q2) is higher than zero, as shown in table 5. This only indicates that a path model exists that is predictively relevant to performance (Chin, 1998; Hair et al, 2014; Hayes, 2009).

In this segment, every hypothesis formulated were tested to ensure its validity, as indicated in figure 4 and Table 6 below.

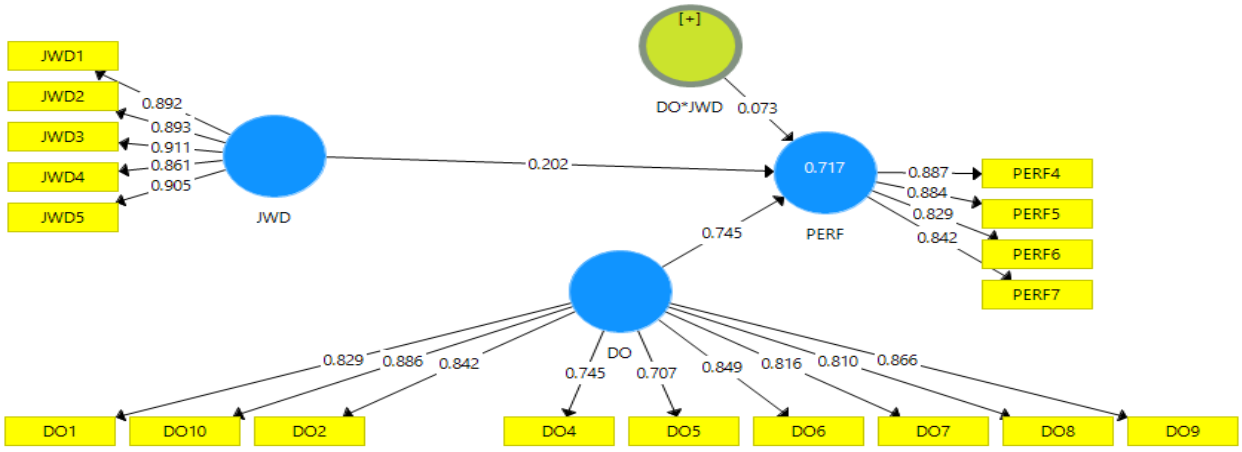

Figure 4, Structural Model

Table 6 (Hypothesis Test (direct and moderating relationship)

Hypotheses	Construct	Beta value	(STDEV)	T Stat	P Values	Decision
H_{01}						Rejected
	DO -> PERF	0.745	0.035	21.056	0.000	
H_{02}						Rejected
	JWD -> PERF	0.202	0.037	5.350	0.000	
H_{03}						Rejected
	DO*JWD->PERF	0.073	0.030	2.399	0.017	

The results of hypothesis one (H01) are shown in table 6 above, where a significant positive relationship (t= 21.056, p < 0.000) was found between digital orientation and performance (PERF). The outcome of hypothesis H02 also shown a significant positive relationship (t= 5.350, p<0.000) between job and work design (JWD) and performance. In the case of the indirect relationships, the results for hypothesis H03 showed that digital orientation had moderating effects on the relationship between job and work design and performance (t= 2.399, p <0.017). Because the hypothesis may not be supported when there is zero between the lower bound and upper limit of the confidence interval that depends on bootstrapping standard error, the confidence interval method is also relevant to support the significance of the moderating relationship (see Hair et al, 2014; Hayes & Preacher, 2013). According to Hair et al. (2017), it is crucial to report the bootstrap confidence interval in addition to the parameter's significance because it offers more details on the stability of a coefficient estimate. As shown in Table 6, the confidence interval estimation at 2.5 percent lower level (LL) and 97.5 percent upper level (UL) was automatically created with the 3.0 Smart PLS.

5. Conclusion and Recommendations

The study found that SMEs' performance can be enhanced and improved when job and work (JWD) and digital orientation (DO) interact within the study's context. Therefore, it is crucial for organizations to make clear the obligations of their staff members in order to foster a positive work environment that will increase employee happiness as well as output, particularly within the study's context.

In line with the above findings, the following were recommended:

The study recommends that employees should be provided with digitalize form of job and work design and should also be implored by SMEs as it has been established in the study that it has significant effect and has ability of improving the performance of SMEs. The study further recommend that SMEs should lay more emphasis on job and work design, as its inclusion would improve SMEs' performance in Kaduna metropolis.

6. Contribution to Knowledge and Suggestion for Further Study

The moderating effects of digital orientation on the relationship between job and work design and small and medium enterprises performance are documented in this study, which adds to the academic literature and advances our understanding of SMEs performance, a finding that is extremely rare in the extant literature. Future study may employ digital orientation as a mediator between dimensions of Human Resource Management Practice (HRMP) and performance of SMEs in Nigeria and another context.

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