

Sustaining Employee Engagement during the Covid-19 Pandemic Era: Effect of Remote Virtual Operations

Pauline, E.Onyeukwu.PhD.; Michael I.Elikwu.PhD &Helen E.Jekelle.PhD

*Department of Business Management
Baze University, Abuja, Nigeria*

&

*Department of Business Administration
Nnamdi Azikiwe University, Awka, Anambra State, Nigeria*

Abstract

In Nigeria, earlier challenges presented by the Covid-19 pandemic necessitated government organisations with critical public service functions to mandate employees to work from remote locations via virtual operations, to reduce the possible spread of the pandemic. This disruption, therefore, necessitated the need to determine the extent to which remote virtual operations will influence employees' engagement; to occupy their jobs roles and stayed committed to the assigned tasks. With a sample size of 119 respondents, the study adopted the descriptive statistical analytical tools comprising combined frequency tables, factor analysis, Pearson Product Moment Correlation and simple regression analysis to test the posited hypotheses. The finding established that Remote virtual operations (RVO) correlate to EOR with a coefficient value of 86.9% and P-value of 0.000, indicating a positive and significant relationship; which implied that employees that virtually operated from remote locations were influenced to occupy their job roles. The finding also established that Remote Virtual operations (RVO) correlate to employees' commitment (EMC) with a coefficient value of 92.1%, indicating a positive and significant relationship; which implied that, remote virtual operations influence employees' commitment. It is therefore recommended that, for organisations adopting remote virtual operations, adequate measures should be made to ensure tasks and minimum achievable targets are determined and agreed upon, as this will ensure employees' maximize every possible opportunity to occupy their job roles, stay engaged and be committed to achieving set departmental objectives and organisational goal.

Keywords: *Virtual Operations, Engagement, Commitment, Remote, Workplace*

Date of Submission: 29-03-2021

Date of Acceptance: 12-04-2021

I. Introduction

The unexpected outbreak of the recent Coronavirus (Covid-19) pandemic in late 2019 and the first quarter of 2020 ravaged the operational activities of business organisations across various sectors, government institutions, and economies of the world and severely hampered global trades in the countries where the outbreak was experienced. This adversely affected the operations of these institutions, resulting in loss of cash inflow, interruption of production operations, academic activities, and the implementation of public projects critical to the provision of public good for the sustenance of social order and the wellbeing of the citizenry.

The loss of revenue buys private sector operator resulted in the inability of firms across the board to sustain remuneration of labour, inability to service accessed credit facilities, thereby leading to an increase in the value of debts, while production capacity dropped significantly as a result of the inactivity of the factors of production. The severity of the pandemic resulted in the abrupt shutdown of small manufacturing firms in Nigeria, yet to be fully accounted for. This compelled some service delivery firms, manufacturers of consumables and essential public goods, to initiate measures to minimise revenue, stem losses from increasing overhead cost without commensurate operational activities. Owing to the inability of organisations to continue physical operations; measures were initiated to stem the ravaging effect of the pandemic on the functions of these firms, to prevent and minimise the increasing spread of the virus. One of such measures included the planned alteration of some operations, considered very important to the survival of firms is the introduction of virtual operations to support remote workplaces.

Virtual operations are described as a 21st-century innovative approach that involves technological connections and internet supported network work-stations, but transcends operating from any specific geographic boundaries (Demirdjian, 2018). Importantly, such geographically dispersed work capabilities require employees' to be actively engaged to ensure a shared value-driven commitment (Duque, et al., (2020), and to

avoid a possible shutdown of critical organisational functional areas. Hence, the scope of employee commitment in the absence of the usual workplace location forms the basis for this study.

Problem Statement

In Nigeria, the use of a virtual approach for the performance of essential organisational operations by employees can be described as very low or almost non-existent, owing to the importance placed on employees' physical presence as a parameter for measuring commitment. Earlier challenges presented by the Covid-19 pandemic required employees' to work virtually to reduce the possible spread of the virus, which subsequently necessitated a paradigm shift in the mode of operations for employees and firms willing to adapt to the new global Norm. This disruption, therefore, necessitated the need to determine how remote virtual operations influenced employees' to occupy their jobs and also the level of commitment displayed by employees' who virtually operated from remote locations during the Covid-19 pandemic.

Research Question

- i. To what extent were employees' who virtually operated from remote locations influenced to occupy their jobs during the Covid-19 pandemic?
- ii. What is the level of commitment displayed by employees' who virtually operated from remote locations during the Covid-19 pandemic?

The objective of the Study

The specific objectives of this study focused on:

- i. Determination of the extent employees' that virtually operated from remote locations was influenced to occupy their jobs during the Covid-19 pandemic
- ii. Determination of the level of commitment displayed by employees' that virtually operated from remote locations during the Covid-19.

Statement of Hypotheses

H₀₁: Employees that virtually operated from remote locations were not influenced to occupy their jobs during the Covid-19 pandemic

H₀₂: Remote virtual operations have no significant effect on the level of employees' commitment during the Covid-19 pandemic in Nigeria

II. Literature Review

2.1 Concept of Remote Virtual Operations

A review of extant literature reveals that virtual operations have been described variously as organisational tasks digitally performed by employees notwithstanding time and location (Brunelle, 2013); as remote operations that involves telecommuting (Benjamin, 2020); as official tasks remotely performed by employees with the use of technology to ensure the sustenance of processes technologically linked to numerous geographically dispersed workstations (Demirdjian, 2018), for perform critical job functions outside the firm's physical work environment (ILO, 2017).

Categorizing remotely performed work operations as virtual operations rely primarily on some features of virtual operations considered significant. These significant features include remotely operating outside the firm's physical office structure (Greenbaum, 2019); availability and use of technological devices (Benjamin, 2020); employees' proficiency in the use of available technological devices (Kohntopp & McCann, 2020); and involves minimal employee supervision (Kuscu & Hasan, 2016), based on flexible work hours (Glaudemans, 2019).

These features are considered significant owing to their ability to support employees' to independently solve work-related problems and promptly share necessary information with team members (Benjamin, 2020), across numerous workstations connected through the use internet (Bordia, 2017). These features support the elimination of possible delays in performing assigned tasks, elimination of related risks (Thorstensson, 2020); supports the ability of individuals to remotely operate without or minimal supervision (Kuscu & Hasan, 2016). Though working from remote virtual arrangement has been described as mutually beneficial to firms and employees, however, it has also been established that the challenge associated with remote virtual operations is primarily the relative isolation feelings, being physically separated from work colleagues, team members, mentorship of supervisors and the challenge to achieve work-life balance (Zhang 2016) during the period of remote virtual operations.

2.2 Concept of Employee Engagement and Commitment

Employee engagement has been described as a concept comprising a mixture of attitudinal and behavioural attributes (Shaik & Makhecha, 2019). As a behavioural attribute, employee engagement explains the commitment of employees to achieving team and departmental objectives (Thorstensson, 2020), which are however stimulated by attitudinal attributes which ensure the integration of employees' into the firm's shared values and goals (Vance, 2006), for the attainment of long-term goals of the firm (Chanana & Sangeeta, 2020).

Commitment denotes the willingness to continue unabated in pursuit of a course with no plans to deviate or change stance, premised on a conviction and perceived obligation to continue. Within organisations, employee commitment largely depends on personal attributes relative to the employee's outlook (Chanana & Sangeeta, 2020), which is possibly an inroad towards career advancement (Meyer & Herscovitch, 2001), or an offshoot of personal developmental objectives, work ethics, affective or continuance commitment (Cooper, 2001).

Commitment is a process of identifying organisational goals across various interest groups. These interest groups could include a commitment to the firm's customers, top management, unions, and possible commitment to societal interests (Reichers, 1985). Thus, work commitment denotes the synergizing energy that influences employee behaviours towards defined courses of actions perceived as critical towards the realisation of diversely predetermined goals (Meyer, Vandenberghe & Becker, 2004). Commitment is also described as a dynamic norm of reciprocity that necessitates employees degree of affection or reliability towards the organisation (Zheng, Sharan & Wei, 2010), enhancing firm capacity and competencies by producing a highly motivating work environment (Tahir, 2016), which helps stimulate employees' participation and employee retention to appropriately predict firm performance (Elikwu et al., 2017),

2.4 Empirical Review

In a very recent study, Duque, et al., (2020) investigated the correlation existing between virtual workplace being a contemporary way of working and employees' engagement within corporate organisations. In achieving the objective, 126 participants were adopted as the sample size, aligned with the survey research design which was used in data collection. The study adopted the structural equation model in analysing collated data. The findings established that there exists a positive and significant correlation between virtual workplace system and employee's engagement.

Also, Kohntopp and McCann (2020) in a recent study conducted a review of existing works of literature to scrutinise how leadership in virtual firms influences workplace engagement. The study adopted the exploratory and content analysis for research design, specifically focused on leaderships within virtual environments, the attributes of virtual workplaces and related challenges. The study also conducted a review of relevant studies related to workplace engagements. The study established that employees' assigned tasks that require a virtual environment are affected by the isolation feeling compared to working among colleagues within the same physical workplace facility, which is likely to have a significant effect on commitment. However, the study was not empirical in its approach.

Also in another recent study, Benjamin (2020) conducted an examination of factors that influences virtual employees' engagement and commitment within virtual workplaces. The study employed a sample size of 120 virtually working participants across different industries, while descriptive tools for data analysis were used in analysing the collected data. The results established that appropriately outlined team target; interactive connections with colleagues and work with minimal supervision are critical factors influencing employee engagement and commitment within virtual environments.

Glaudemans (2019) examined how telecommuting and flextime influences employee well-being and firm performance. Adopting an exploratory research design, the study established that a positive correlation exists between the duo of telecommuting and flextime and employee well-being. The findings in this study revealed that premised on an employee-oriented perspective, the duo of telecommuting and flextime has a positive effect on employee commitment, firm profitability and performance. However, the study was purely exploratory devoid of any empirical inputs.

Schall (2019) examined the correlation in existence between remote work and levels of employees' job satisfaction. Using mediating variables, the study adopted the intensity of telecommuting, work-family conflict and perceived autonomy as proxies for remote work. The study adopted an online survey to acquire data from a sample size of 185 participants. The findings indicated that a positive correlation exists between remote work and job satisfaction. The findings also indicated that intensity of telecommuting, work-family conflict and perceived autonomy each mediated the correlation between work and job satisfaction. The finding also indicated the existence of an inverted u-shaped curvilinear correlation between the intensity of telecommuting (working remotely) and job satisfaction was absent; however, the finding indicated a positive, linear correlation. This implies that an increase in the intensity of telecommuting (remote work) may be a more cost-efficient approach to enhancing levels of employees' job satisfaction, owing to the influence of remote work on employees

achieving an intensified telecommuting, minimised work-family conflict, higher perceived autonomy, which also significantly influences employees' job satisfaction.

Lee (2018) conducted an exploratory study on how remote employees' experience affects workplace engagement, using a critical incident technique of 14 remote employees as a sample size. The study adopted the qualitative data collection techniques, which entailed open-ended interview questions, open and selective coding, and thematic analysis from the data provided by the sample size. The findings established that engagement of remote employees is directly related to the primary theme of connectedness and firm culture; while disconnectedness within the firm erodes workplace engagement.

Mansfield (2018) investigated employee job satisfaction and attitudes derivable from virtual workplace environments. The study adopted the use of 145 out of 295 virtual operations fit parameters, while the correlation and multiple regression statistical analytical tools. The results indicated that a significant correlation exists between attitude toward telecommuting and job satisfaction, while leadership style significantly and negatively affected the relationship between attitude and job satisfaction.

Osborne and Hammoud (2017) conducted a study to ascertain the effectiveness of employee engagement within workplaces. The study employed a semi-structured research instrument, while collected data were coded. Based on the triangulation of collated data, the study established that recognition and rewards, empowering employees with technological work devices and know-how helps build a bond between employees and leaders.

III. Methodology

This study adopts the cross-sectional survey research design (Creswell, 2014), which supported the collection of data from participants who worked virtually during the 2020 Covid-19 lockdown in Nigeria, needed to descriptively depict participants' involvement and engagement in their assigned tasks during this period. For this study, 167 staffs at the headquarters of a federal government revenue-generating agency were adopted as the population of this study; however, only one hundred and nineteen participants completed and returned the research instrument emailed to them. Hence, 119 formed the sample size of this study. In selecting the sample size from the entire population, the study adopted the stratified and simple random sampling technique (Creswell, 2014), which ensured that every member of the selected population actively involved in remote virtual operations had an equal opportunity of being selected, for the credibility of the collected data.

3.1 Methods of Data Analysis and Model Specification

To analyse collected data and test the posited hypotheses, this study adopts descriptive statistical analytical tools comprising combined frequency tables, factor analysis, Pearson Product Moment Correlation and simple regression analysis to test the posited hypotheses. Therefore, to empirically test the posited hypothesis, the following statistical model is specified to determine if remote virtual operations have no significant effect on the level of employees' commitment in private academic institutions during the Covid-19 pandemic in Nigeria.

Remote virtual operations (RVO) being the independent variable was proxied by Information Communication and Technological Devices (ITD), Work Knowledge (WKN) and Flexible Work Hours (FWK); while the level of Engagement is proxied by Employees' Occupying Jobs (EOJ) and Employees' Commitment (ECO).

Dependent Variable

Y = Employees' Engagement (EEG)
(EEG) = f(EOJ, ECO)

Independent Variable

X = Remote Virtual Operations (RVO)
RVO = f(ITD, WKN, FWK)

The functional form of the econometric model is therefore given as:

$$Y = f(X_1, X_2, X_3)$$

Where, Y is dependent variable

X₁ is independent variable or explanatory variable.

f = represents the functional notation.

The explicit form of a model for the two posited hypotheses is stated thus:

Model One

EOR = f(RVO)

$$EOR = \beta_0 + \beta_1 RVO_1 + u_1 \dots \dots \dots (1)$$

Model Two

$EMC = f(RVO)$

$EMC = \beta_0 + \beta_1 RVO_1 + u_i \dots\dots\dots (2)$

Where:

- RVO = Remote Virtual Operations
- ITD = Information and Communication Technological Devices
- WKN = Work Knowledge
- FWK = Flexible Work Hours
- EOR = Employees' Occupying Jobs
- EMC = Employees' Commitment
- β_0 = Unknown constant to be estimated
- β_1 = Unknown coefficients to be estimated
- U_i = Error Term
- $\beta_1 > 0$

IV. Results and Discussions

Table 1: Remote Virtual Operations and Employees Involvement/Occupying Jobs Roles

Variables	SA (%)	A (%)	ME (%)	D (%)	SD (%)
Availability of operational task approaches gives a sense of shared goals and direction	13%	74%	13%	0	0
Usage of the firm's MIS applications knowledge & digital expertise improves work outcomes	17%	56%	25%	2%	0
Flex-time associated with virtual operations makes employees less effective in meeting task deadlines	1%	15%	30%	38%	16%
Knowledge of the Organisation's MIS & digital expertise makes me focus on designated tasks and group works	11%	61%	25%	3%	0%
Frequent communication with my team enhances my perceived sense of involvement	27%	61%	12%	0%	0%

Source: Field Survey (2021)

Participants' responses analysed in statement one of Table 1 indicates that 74% and 13% of the sample size agree and strongly agree respectively that, availability of operational task approaches while working virtually, gives a sense of shared goals and direction. Participants' responses analysed in statement two of Table 1 indicates that participants making up 56% and 20% of the sample size agree and strongly agree respectively, while 25% of the participants agree to a moderate extent that, usage of the firm's MIS applications' knowledge and digital expertise improves work outcomes. Participants' responses analysed in statement three of Table 1 indicates that participants constituting 38% disagree while those constituting 16% of the sample size strongly disagree that, flex-time associated with virtual operations makes employees less effective in meeting task deadlines.

Also, participants' responses analysed in statement four of Table 1 indicates that participants constituting 61% and 11% of the sample size agree and strongly agree respectively that, knowledge of organisation's management information system and digital expertise makes them focus on designated tasks and group work, while those representing 25% of the sample size agree to a moderate extent. Finally, participants' responses analysed in statement five of Table 1 indicates that participants representing 61% and 27% of the sample size agree and strongly agree respectively that, frequent communication with teams enhanced perceived sense of involvement while working virtually.

Table 2: Remote Virtual Operations and Employees' Commitment

Variables	SA (%)	A (%)	ME (%)	D (%)	SD (%)
Functional internet connections are strong enough to support virtual operations	16%	43%	28%	10%	3%
Knowledge of the organisation's management information system and digital device experience is adequate for virtual operations	19%	48%	27%	5%	1%
Available virtual operational devices support timely information sharing among team members	22%	46%	29%	3%	0
Approaches to perform assigned operational tasks are always outlined	9%	50%	37%	4%	0%
Functionality and steady connections of virtual devices supports active participation in operations	26%	51%	17%	6%	0%
Remotely performing my job slightly hindered me from meeting my assigned targets	0%	8%	23%	48%	20%

Source: Field Survey (2021)

Participants' responses analysed in statement one of Table 2 indicates that participants constituting 43% and 16% of the sample size agree and strongly agree respectively that, functional internet connections were strong enough to support virtual operations. However, 28% of the participants agree to a moderate extent based on their location. Participants' responses analysed in statement two of Table 2 indicates that participants constituting 48% and 19% of the sample size agree and strongly agree respectively that, their knowledge of the organisation's management information system and digital device experiences were adequate for virtual operations, while 27% of the participants agree to a moderate extent. Likewise, participants' responses analysed in statement three of Table 2 indicates that participants constituting 46% and 22% of the sample size agree and strongly agree respectively that, available virtual operational devices supported timely communication and information sharing with group members, while 29% of the sample size agree to a moderate extent.

Furthermore, participants' responses analysed in statement four of Table 2 indicates that participants representing 50% and 9% of the sample size respectively, agree and strongly agree that, approaches to perform assigned operational tasks were always outlined, while 37% of the sample size agree to a moderate extent. Also, participants' responses analysed in statement five of Table 2 indicates that participants constituting 51% and 26% of the sample size respectively, agree and strongly agree that, functionality and steady connections of virtual devices supports active participation in virtual operations. Finally, participants' responses analysed in statement six of Table 2 indicates that 48% and 21% of the sample size disagree and strongly disagree respectively that, performing assigned jobs remotely slightly hindered meeting of assigned targets.

4.2 Pre-Data Analysis

Table 3: Test of Reliability

S/N	Questionnaire Constructs	Cronbach Reliability	Alpha Result	Number of Items	Remark
1	Remote Virtual Operations and Employees' occupying job roles	0.928		5	Reliable
2	Remote Virtual Operations and Employees' commitment	0.963		6	Reliable
3.	Overall	0.946		11	Reliable

Source: SPSS 25.0 Output

Test for Reliability for each measurable latent variable was conducted, with the results showing the Reliability of all the variables; hence, they are declared fit for further analysis. All the variables show Cronbach Alpha values well above 0.7 (RVO & EOR 0.928, RVO & EMC 0.963), with an overall Cronbach Alpha value of 0.946. Based on the assumption that the Reliability value ranges between 0 and 1; it denotes that while the value of 0 implies low reliability, 1 implies high reliability.

Table 4: Correlation Matrix

		EOR	EMC	RVO
EOR	Pearson Correlation	1**	.902**	.869**
	Sig. (2-tailed)	.	.000	.000
	N	118	118	118
EMC	Pearson Correlation	.902**	1	.921**
	Sig. (2-tailed)	.	.	.000
	N	119	119	118
RVO	Pearson Correlation	.869**	.921**	1
	Sig. (2-tailed)	.000	.000	.
	N	118	118	118

Table 4 above showing correlation results for both the dependent and independent variables reveals that all the independent variables have a positive relationship to all the dependent variables. RVO correlates to EOR with a coefficient value of 86.9% with a P-value of 0.000, indicating a positive and significant relationship. Also, RVO correlates to EMC with a coefficient value of 92.1% at a significant level of 5% given that the p-value is 0.000, indicating a positive and significant relationship.

4.3 Test of Hypotheses

4.3.1 Test of Hypothesis One

Table 5: Regression result: EOR and RVO

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.981	.156		6.282	.000		
	RVO	.740	.042	.869	17.799	.000	1.000	1.000

a. Dependent Variable: EOR

Source: SPSS 23.0

The standardized regression results in Table 5 for RVO on EOR is 0.740, which means that Remote virtual operations (RVO) have a positive and significant influence on how employees' occupy job roles (EOR). This denotes that, an increase in Remote Virtual operations (RVO), will lead to a relative increase in the level at which employees' occupy job roles (EOR). A 1% increase in the level of Remote Virtual operations (RVO) will bring about a 74% increase in the level at which employees' occupy job roles (EOR). Therefore, given that the p-value of Remote Virtual operations (RVO) is 0.000 which is less than the significant level of 0.05 as shown in Table 5, we reject the null hypothesis and accept the alternate hypothesis which states that Employees that virtually operated from remote locations were influenced to occupy their jobs during the Covid-19 pandemic.

4.3.2 Test of Hypothesis Two

H₀₂: Remote virtual operations have no significant effect on the level of employees' commitment during the Covid-19 pandemic in Nigeria

Table 6: Regression result: EMC and RVO

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.627	.125		5.028	.000		
	RVO	.796	.033	.921	23.997	.000	1.000	1.000

a. Dependent Variable: EMC

Source: SPSS 23.0

As shown in Table 6, the standardized regression result for RVO on EMC is 0.796. This means that Remote Virtual operations (RVO) have a positive and significant influence on employees' commitment (EMC). It implies that an increase in Remote Virtual operations (RVO), will lead to increases in the level of employees' commitment (EMC). A 1% increase in the level of Remote Virtual operations (RVO) will bring about a 79.6% increase in employees' commitment (EMC). Therefore, given that the p-value of Remote Virtual operations (RVO) is 0.000 which is less than the significant level of 0.05 as shown in Table 6, we reject the null hypothesis which states that Remote Virtual operations do not influence employees' commitment, while the alternate hypothesis is accepted; hence, Remote Virtual operations influence employees' commitment.

4.4 Discussion of Findings

For hypothesis one, the findings established that RVO correlates to EOR with a coefficient value of 86.9% with a P-value of 0.000, indicating a positive and significant relationship. The standardized regression results for tested hypothesis one, which revealed that RVO on EOR is 0.740, which means that Remote virtual operations (RVO) have a positive and significant influence on how employees' occupy job roles (EOR). The result also revealed that the p-value of Remote Virtual operations (RVO) is 0.000, which is less than the significant level of 0.05 as shown in Table 5; hence, we reject the null hypothesis and accept the alternate hypothesis which states that Employees that virtually operated from remote locations were influenced to occupy their jobs during the Covid-19 pandemic.

This finding for hypothesis one is supported by the results of Duque, et al., (2020) that, there exists a positive and significant correlation between virtual workplace system and employee's engagement. This finding also agrees with the result of Schall (2019) that, a positive, linear correlation between the intensity of telecommuting (working remotely) and job satisfaction. Which implied that an increase in the intensity of telecommuting (remote work) may be a more cost-efficient approach to enhancing levels of employees' job satisfaction, owing to the influence of remote work on employees achieving an intensified telecommuting,

minimised work-family conflict, higher perceived autonomy, which also significantly influences employees' job satisfaction. Also, the finding aligns with the results of Mansfield (2018) that, a significant correlation exists between attitude toward telecommuting and job satisfaction.

For hypothesis two, the findings established that RVO correlates to EMC with a coefficient value of 92.1% at a significant level of 5% given that the p-value is 0.000, indicating a positive and significant relationship. The standardized regression result for RVO on EMC is 0.796. This means that Remote Virtual operations (RVO) have a positive and significant influence on employees' commitment (EMC). The result also revealed the p-value of Remote Virtual operations (RVO) is 0.000 which is less than the significant level of 0.05 as shown in Table 6; hence, we reject the null hypothesis and accept the alternate hypothesis that Remote Virtual operations influence employees' commitment.

The results of hypothesis two agree with the findings of Kohntopp and McCann (2020) that, employees' assigned tasks that require a virtual environment are affected by the isolation feeling compared to working among colleagues within the same physical workplace facility, which is likely to have a significant effect on commitment; the findings of Benjamin (2020) that, appropriately outlined team target; interactive connections with colleagues and work with minimal supervision are critical factors influencing employee engagement and commitment within virtual environments. Also, the findings align with the results of Glaudemans (2019) that, the duo of telecommuting and flextime has a positive effect on employee commitment; Lee (2018) that, engagement of remote employees is directly related to the primary theme of connectedness and firm culture; while disconnectedness within the firm erodes workplace engagement; and also aligns with the result of

V. Conclusions and Recommendation

Based on the analysis and findings of this study, it has been established that availability of operational task approaches while working virtually, gives a sense of shared goals and direction, however, flex-time associated with virtual operations makes employees less effective in meeting task deadlines. Usage of the firm's MIS applications' knowledge and digital expertise improves work outcomes, knowledge of the organisation's management information system and digital expertise makes them focus on designated tasks and group work, while frequent communication with teams enhanced perceived sense of involvement while working virtually. These affirm that remote virtual operations correlate with how Employees' Occupy Job Roles; hence the existence of a positive and significant relationship.

Also, based on the analysis and findings of this study, it has been established that functional internet connections are strong enough to support virtual operations; employees' knowledge of the organisation's management information system and digital device experiences are adequate for virtual operations; available virtual operational devices support timely communication and information sharing with group members, and performing assigned jobs remotely sometimes hinder meeting of targets. The finding affirms that remote virtual operations correlate to employees' commitment; hence establishes a positive and significant relationship.

This study, therefore, concludes that employees' that virtually operated from remote locations during the Covid-19 pandemic were positively and significantly influenced to occupy their job roles, hence displayed a significant level of commitment. This implies that employees were significantly engaged in performing assigned tasks virtually while operating remotely.

It is therefore recommended that, for organisations adopting remote virtual operations, adequate measures should be made to ensure tasks and minimum achievable targets are determined and agreed upon, as this will ensure employees' maximize every possible opportunity to occupy their job roles, stay engaged and be committed to achieving set departmental objectives and organisational goal.

References

- [1]. Benjamin, L. (2020) "Achieving the dream through a screen: exploring employee engagement and commitment in virtual environments: *Master of Science in Organisational Dynamics Thesis*, 103. https://repository.upenn.edu/od_theses_msod/103
- [2]. Bordia, N. (2017) Role of Technology Selection in Supporting Collaboration and Communication in Globally Distributed Virtual Teams: *A Dissertation Submitted for the Master of Science Degree* in Construction Management University of Washington
- [3]. Brunelle, E. (2013). "Virtuality in Work Arrangements and Affective Organizational Commitment:" *International Journal of Business and Social Science*; 3(2):56–62.
- [4]. Chanana, N. & Sangeeta, V. (2020) Employee engagement practices during COVID-19 lockdown: *Journal of Public Affairs*, DOI: 10.1002/pa.2508
- [5]. Chandani, A. Mehta, M. Mall, A. & Khokhar, V. (2016). Employee engagement: A review paper on factors affecting employee engagement. *Indian Journal of Science and Technology*, 9(15), 1–7. 10.17485/ijst/2016/v9i15/92145 [CrossRef] [Google Scholar]
- [6]. Cooper, D.J. (2001) Employee Commitment: The Motivational Role of Senior Management
- [7]. Theory of Action: *PhD Thesis submitted to School of Management*, University of Salford, Salford, UK
- [8]. Creswell, J.W. (2014) *Research design: Qualitative, quantitative and mixed methods approach*; Thousand Oaks, CA: Sage.
- [9]. Demirdjian, Z.A. (2018) To Evaluate the Efficiency and Performance of Virtual Workplaces in SMEs in Lebanon: *MBA Dissertation*, Cardiff Metropolitan University. https://scholarworks.waldenu.edu/sm_pubs/141

- [10]. Duque, L. Costa, R. Dias, A. Pereira, L. Santos, J. & António, N. (2020) New Ways of Working and the Physical Environment to Improve Employee Engagement: *Sustainability*, 2, pp, 2-8
- [11]. Elikwu, M.I., Tende, S.B.A, Adio, A.I. & Ogbu, J.O. (2017) Employees' Commitment and Productivity Sustenance: Rewards System Approach for SMEs in a Recession Era: *International Journal of Entrepreneurship and Development Studies*; 1(1), pp 77-103
- [12]. Greenbaum, Z. (2019). The Future of Remote Work. *American Psychological Association*, 50. Retrieved from <https://www.apa.org/monitor/2019/10/cover-remote-work>
- [13]. Glaudemans, E. (2019) The impact of flextime and telecommuting on employee well-being and organizational performance: A Thesis Submitted to the Tilburg University
- [14]. International Labour Organization (ILO, 2017). *Working Anytime, Anywhere: The Effects on the World of Work*; Publications Office of the European Union: Luxembourg; ILO: Geneva, Switzerland, 2017.
- [15]. Kohntopp, T. & McCann, J. (2020) Leadership in Virtual Organisations: Influence on Workplace Engagement; *School of Management Publications*. 141.
- [16]. Kuscü M, & Hasan A (2016) Virtual leadership at distance education teams: *Turk Online Journal of Dist Educ* 17(3):136-156 Google Scholar (http://scholar.google.com/scholar_lookup)
- [17]. Lee, A.M. (2018) An Exploratory Case Study of How Remote Employees Experience Workplace Engagement: Walden Dissertations and Doctoral Studies
- [18]. Mansfield, R.K. (2018) Employee Job Satisfaction and Attitudes in Virtual Workplaces: *PhD Thesis Submitted to Walden Dissertations and Doctoral Studies*;
- [19]. Meyer, J.P. & Herscovitch, L. (2001). Commitment in the Workplace: Towards a General Model. *Human Resource Management Review*, 11:299-326.
- [20]. Meyer, J.P., Vandenberghe, C. and Becker, T.E. (2004) Employee Commitment and Motivation: A Conceptual Analysis and Integrative Model. *Journal of Applied Psychology*, Vol. 89, 991-1007
- [21]. Osborne, S. & Hammoud, M.S. (2017) Effective Employee Engagement in the Workplace: *International Journal of Applied Management and Technology*; 16(1), Pages 50-67
- [22]. Schall, M.A. (2019) The Relationship Between Remote Work and Job Satisfaction: The Mediating Roles of Perceived Autonomy, Work-Family Conflict, and Telecommuting Intensity; *Master's Thesis*, San Jose State University. DOI: <https://doi.org/10.31979/etd.2x82-58pg>. https://scholarworks.sjsu.edu/etd_theses/5017
- [23]. Shaik, F.F. & Makhecha, U.P. (2019) Drivers of Employee Engagement in Global Virtual Teams: *Australasian Journal of Information Systems*; Vol 23,
- [24]. Tahir, U (2016) Impact of Salary Structure, Employee Perception and Working Conditions on the Organizational Commitment in SME: *European Journal of Business and Management*: 8(7), 2016
- [25]. Thorstensson, E. (2020) *The Influence of Working from Home on Employees' Productivity*: Karlstad Business School, Karlstad University
- [26]. Zhang, J. (2016). The Dark Side of Virtual Office and Job Satisfaction. *International Journal of Business and Management*, 11(2), pp, 40-46. <https://doi.org/10.5539/ijbm.v11n2p40>
- [27]. Zheng W. Sharan K. & Wei J. (2010). New Development of Organizational Commitment: A Critical Review (1960-2009); *African Journal of Business Management*, 4(1), pp 12- 20.

Pauline, E.Onyeukwu.PhD, et. al. "Sustaining Employee Engagement during the Covid-19 Pandemic Era: Effect of Remote Virtual Operations." *IOSR Journal of Business and Management (IOSR-JBM)*, 23(04), 2021, pp. 07-15.