

## Human Resource Skills Adjustment and Organisational Resilience in Times of Global Crisis

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**Abstract:** Covid-19 pandemic has changed the structures and methodologies of both service and manufacturing organisations across the globe. Thus, to resuscitate these organisations, human resource managers need to upskill and reskill the human resource who are saddled with the responsibility of driving the vehicle conveying the goals of the organization. It is based on this premise that this study examines the effects of human resource skills adjustment on organizational resilience in times of global crisis. Twenty manufacturing companies serves as the target population. Questionnaire was used as instrument for data collection. Operations Managers, Middle Managers, HR Managers, and Supervisors represent the participants. Linear regression was used to analyse the hypotheses. Result of the study showed that human resource skill adjustment has significant effect on organizational resilience. Based on the findings, the study concludes that human resource skills adjustments measured in terms of upskilling and reskilling enhances organisational resilience.

**Keywords:** Covid-19, Human Resource Skills Adjustment, Organisational Resilience, Situation Awareness, Upskilling

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### Introduction

Since the outbreak of coronavirus (Covid-19) across the globe, some organisations have resorted to downsizing as an alternative approach for survival rather than reskilling and upskilling their human resources skills to adapt to new changes orchestrated by the pandemic. However, in the event of these uncertainties, disruptions, economic dislocations and transfiguration in technological tools caused by covid-19 pandemic, the researchers are of the view that adjusting the skills of organisational

human resources is the key to sustainability in times of uncertainties. When organisations resort to downsizing as an alternative to remain in business, little did they know that they are also increasing the number of unemployment in the country which is one of the factors that engenders societal menace such as armed robbery, kidnapping, rape, banditry, and terrorism to mention but a few.

However, it is based on the above maladies that the researchers propose upskilling and reskilling as HR strategies for human resource skills adjustment. Human resource skills



adjustment is concerned with modifications of individual skills, abilities and behaviour that will be appropriate for evolving technology, products, services, processes and methods in the workplace (Edeh et al., 2021d). Thus, for organisations to be sustainable and competitive after covid-19 pandemic, human resources behaviour, attitude and knowledge must be adjusted or modified by teaching the workers and other members of the organisation new skills that will match with the new norm of global work culture.

From the foregoing, skills adjustments are very significant in promoting organisational resilience consciousness especially in post covid-19 pandemic work setting. It has been shown that upskilling human resource will enhance organisational productivity which in turns increases organisational profitability (Miron, 2020). Upskilling helps in bridging skill gaps and prepare organisations for emerging needed skills (Chiappetta, 2020). Chiappetta (2020) added that upskilling employees will help organisations to prepare for future skill gaps. On another hand, Feldmann (2018) argued that human resource upskilling reduces talent turnover, attract new talents and make succession planning very easy for organizational leaders to emerge.

Drawing from the above, organisational resilience is a predictor of business growth, performance and sustainability (Boin & Van Eeten, 2013; Parsons, 2010). It has been revealed that organisation resilience consciousness prevent disruptions and vulnerabilities from harming businesses across different industries

(Sapeciay et al., 2017; Witmer & Mellinger, 2016; Akgun & Keskin, 2014). In addition, organisations employ situation awareness as resilience strategy to anticipate and withstand uncertainties that would have adverse effects on their sustainability (Ortiz-de-Mandojana & Bansal, 2016; Castellacci, 2015). On another hand, Duchek (2020) argued that organisations that want to remain in business must be fully aware of happenings in and around their business environment. However, previous studies revealed that apart from being aware of situations occurring within and outside the external business environment, organisations must possess adaptive capacity that would strengthen their resilience anchor (Al-Ghattas & Marjanovic, 2021; Kim et al., 2020; Suryaningtyas et al., 2019; Flandin et al., 2018).

Nevertheless, this study is entirely new because there are no prior empirical studies that have examined how organisational resilience would be improved with human resource skill adjustment across the globe. This is what motivated the researchers to investigate how organisational resilience would be enhanced with human resource skills adjustment in manufacturing companies. The choice of manufacturing companies is because it is manufacturing companies account for 16% GDP as well as 14% of employment globally (Manyika et al., 2012). Secondly, manufacturing companies contribute 8.99% to Africa's gross domestic product (Omokolade, 2021). Reports revealed that most manufacturing companies across the globe downsized their

employees as a result of covid-19 pandemic thereby increasing the number of global unemployment rate (Yinka, 2020). For instance, Osita et al. (2020) contended that when lockdown policy on covid-19 pandemic was lifted by federal government of Nigeria, most manufacturing companies operating in southern parts of Nigeria were unable to restart their businesses citing lack of skills to handle new technological tools. The significance of this study can be enumerated into practical and theoretical. In terms of practical significance, this study would be beneficial to human resource professionals, managers as well as HR government policymakers in different industries across the globe by building the resilience capacity of their organisations through upskilling and reskilling of their human resources. On the other hand, the theoretical significance of this study is that it will add to HR body of knowledge; human resource management scholars, students and other organisational based researchers would also find it interesting especially human resource skills adjustment that has not been propounded in HR and organisational literature.

## **Literature Review and Hypotheses Development**

### **Human Resource Skills Adjustment (HRSA)**

The year 2020 was a remarkable year that may not easily be forgotten by individuals, organisations and government as a result of covid-19 pandemic global health crisis. The adverse effect that was caused by coronavirus (covid-19) pandemic has

changed HR policies, strategies and structures of many organisations. These global pandemic has also engendered fear of job losses by employees in various industries thereby making unplanned culture of working from home as new philosophy for many organisations. However, since former forms of training have been utilized before the emergence of covid-19 pandemic, the new ultimate approach now is to upskill and reskill employee's skills especially in the Sub-Saharan Africa work environment. Human resource skills adjustment (HRSA) is new concept that was conceived by the authors of this study as a mechanism for employees' behaviour, skills, abilities and knowledge modification to fit into new workplace order orchestrated by covid-19 pandemic and other external environmental factors. It is a well-known fact that due to the uncertainties that befell organisations every hour, managers and HR professionals cannot just fold their hands without finding alternative ways to improve or sharpen the skills of their employees. This is what propels the scholars to propound human resource skills adjustment (HRSA) as new approach for upgrading of employee skills. When there is change in customers' taste, product or services, the best thing to do is for the organisation to adjust to customer's demand since they determine their corporate existence. Secondly, global sudden change in ordering of raw materials, travelling and customer relationship behaviour such as covid-19 pandemic can be mitigated through the adjustment of employee behaviour, attitude and skills.

Thus, the researchers propounded two human resource skills adjustment (HRSA) dimensions which can be employed in the workplace by organisational leaders as upskilling (US) and reskilling (RS). The World Economic Forum in 2019 came up with a finding that skill shortages are given CEOs sleepless night and the only way is through upskilling and reskilling programmes (Apostolopoulos, 2020). Apostolopoulos (2020) went further to reveal that it was based on the World Economic Forum finding that TalentLMS, Workable and Training Journal carried out another survey on upskilling and/or reskilling in different organisations and found that: 42% of companies stepped up their upskilling/reskilling efforts after the coronavirus outbreak; 42% of organisations have pursued training on their own after covid-19 pandemic outbreak; 68% of organisations have invested in reskilling/upskilling training to take care of changes within the organisation while 65% was invested to train their workers on new technologies; 50% of company owners target both hard and soft skills through upskilling/reskilling programmes and that organisations believe strongly that workers are lacking leadership, communication/collaboration and proactive thinking skills; 91% of organisations and 81% of employees agreed that upskilling/reskilling training has boosted their performance and productivity at work; 62% of workers agreed that reskilling and upskilling programmes would positively affect their job level including their salary. On the other hand, only 33% and 35%, believed there has been a significant change in compensation and advancement within

the organization; 74% of workers agreed that their managers require reskilling and upskilling training; 66% of workers ranked the joy of acquiring new ideas, knowledge and developing new skills as top upskilling motivator, and 80% of workers agreed that upskilling/reskilling training has boosted their confidence and morale to perform their work.

Drawing from the above, the researchers of this study defined upskilling (US) as a process of teaching employee's new competencies; skills, abilities and knowledge that they require to perform their current job while reskilling (RS) is concerned with retraining employees to help them adapt to new position which they have not occupied before. In upskilling, employees do not need to change their job rather what they require is to acquire latest skills needed in their current job. Reskilling is acquiring new (fresh) skill entirely to perform another job different from the one a worker was performing. For instance, assuming during covid-19 pandemic, an employee who is saddled with the responsibility of packaging finished products failed to report to duty for several days as a result of being infected with the scourge, management can quickly teach any of the administrative staff how to use the packaging machine to complete the product packaging. In addition, Chopra-McGowan & Reddy (2020) contended that reskilling does not only mean learning new technical skills for new job but it also refers to acquiring core competencies; adaptability, collaboration, communication and creativity. For instance, job position occupied previously by an employee

maybe given to another person to handle that will require the second employee to adjust his/her behaviour in order to fit with the current job position. It has been shown that upskilling workers improve their performance as well as that of the organisation (Rogers, 2020; Lee et al., 2020; Creighton, 2019). Again, recent research on human resource skills adjustment carried out in selected manufacturing firms in south eastern region of Nigeria revealed that upskilling and reskilling promotes organisational learning dimensions (Edeh et al., 2021d). On the other hand, Friedman (2020) posited that in the phase of uncertainty, HR managers quite apart from other functional managers must move away from the traditional method of training employees to modern approach of upskilling. Gurchiek (2020) added upskilling human resource skills would drastically reduce displacement of organisational workforce. Before the advent of covid-19 pandemic, McKinsey Global Institute in 2017 predicted that 375 million workers across the globe would switch jobs or be upskilled by 2020 as a result of job computerization and artificial intelligence deployment (Agrawal et al., 2020). However, reskilling the workforce in post covid-19 pandemic workplace will not only improve employees' skills, but organisation will be healthy in terms of skill availability to withstand their competitors. The ILO Global Commission on the future of work in 2019 submitted that skills of today may not match the jobs of tomorrow and new skills may become obsolete quickly (Chopra-McGowan & Reddy, 2020). The commission went further to recommend that employers,

governments and employees should invest more in education and training of human resources (Chopra-McGowan & Reddy, 2020).

### **Organisational Resilience**

Organisational resilience was introduced into management, HRM and organisational behaviour disciplines as a remedy to tackle unforeseen crisis, circumstances or uncertainties and disruptions that organisations usually experience as a result of manmade or natural disaster (Edeh et al., 2019; Fukofuka et al., 2017; Ortiz-de-Mandojana & Bansal, 2016; Lee et al., 2013; Lengnick-Hall et al., 2011; Burnard & Bhamra, 2011; McManus et al., 2008; Gittell et al., 2006). In this study, organisational resilience is the capability of an organisation to prepare, act, learn, respond to unexpected disaster, events or crises and bounce back to normal. For instance, covid-19 pandemic is a global crisis that has damaged many organisations but some organisations that are resilience consciousness are not affected negatively due to their preparedness to handle the situation. On another hand, other organisations that are not ready to withstand the shock of covid-19 pandemic has no option than to lay-off their workers, downsize their structures or even exit from the industry. On the one hand, some scholars perceived organisational resilience as organisation's robustness to anticipate, absorb shock, survive and adapt to dynamic environmental turbulences (Stoverink et al., 2020; Gonçalves et al., 2019; Ishak & Williams, 2018; Akgün & Keskin, 2014). The above definition is in consonant with preparing for disaster

that is unseen and develop antenna to withstand any threats arising from the external environment. The main essence of organisational resilience is for organisation to prepare for unexpected crisis and also plan to withstand it when it comes (Sanjeev, 2019; Johnson, 2010). Covid-19 pandemic is one unexpected events that took place across the world without prior notice to anybody which made it very difficult for individuals and organisations all over the world to understudy the pandemic before learning. Indicators of organisational resilience as drawn from literature include adaptive capacity, organisational learning, and dynamic capability (Sanjeev, 2019); staff engagement, innovation & creativity (Edeh et al., 2021c). Other validated dimensions of organisational resilience are situation awareness, adaptive capacity, management of keystone vulnerabilities (McManus et al., 2008); robustness, flexibility, adaptability, resourcefulness, staff engagement, resilience ethos, improvisation, agility, anticipation, innovation & creativity, responsiveness, redundancy (Mafabi et al., 2015; Kantur & Say, 2015; Pal et al., 2014; Lee et al., 2013; Gibson & Tarrant, 2010; Tompkins, 2007; Coutu, 2002); openness, proaction and authenticity (Edeh et al., 2019); avoidance, role dependence, resource access, critical understanding, goal-directed solution seeking, source reliance (Somers, 2009; Mallak, 1998); organisational value, organisational competitiveness, organisational adaptation (Mafabi et al., 2012).

Nevertheless, prior studies on organisational resilience were also captured in this paper. The study

conducted by Ahiauzu and Jaja (2015) on process innovation with organisational resilience in public universities in South-South, Nigeria revealed that process innovation has positive significant relationship with situation awareness, adaptive capacity and keystone vulnerability. Another study that examined how strategic HRM will impact on organisational resilience revealed that strategic HRM policies impacted organizational resilience positively (Al-Ayed, 2019). Meanwhile, organisational resilience study conducted in Nigerian work environment shows that organizational resilience dimensions (organisational learning, adaptive capabilities) has positive significant association with performance of deposit money in Port Harcourt, Nigeria (Oparanma & Ulunma, 2019). In addition, Kim (2020) investigations which examined the relationship between organizational resilience and employee work-role performance in post crisis situation revealed that organizational resilience has positive significant association with employees' intentions for adaptivity, proficiency and proactiveness of members of the organisation. Recent study on organisational resilience in China shows that situation awareness, resource redundancy and building strong organisational structure are the ways to improve the resilience of railway industry in China under covid-19 pandemic. Drawing from the above, this study employed situation awareness (SA) and adaptive capacity (AC) based on the previous validation by Ahiauzu and Jaja (2015); Lee et al. (2013); and McManus et al., 2008 as well as their significance in enhancing organisations proactiveness in times of

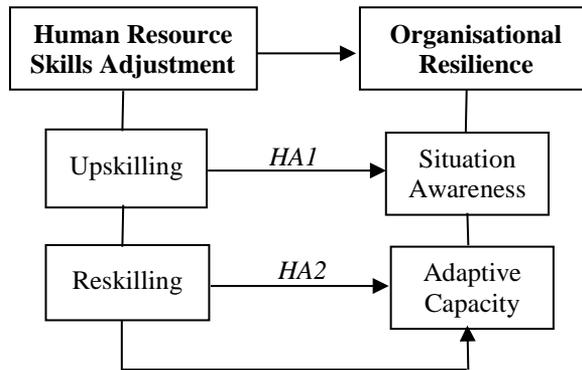
crisis across different industries. From the organisational view, situation awareness (SA) is concerned with organisation's ability to assess any external environment uncertainties and come up with solutions on how to withstand such adverse effects (Mafabi et al., 2012). What this implies is that, organisations must be consciously aware of what is happening within and outside its surroundings. However, in order to effectively carry out this investigation, top level managers must encourage free flow of communication amongst various departments in the workplace (Collier, 2018). This can be done through knowledge sharing across departments. On the other hand, adaptive capacity (AC) refers to organisation ability to alter its strategy and structure and withstand perturbations and disruptions (Starr et al., 2004).

### **Relationship between Human Resource Skills Adjustment and Organisational Resilience**

Human resource that execute organisational goals need to learn the modus operandi regarding the new work culture engendered by covid-19 pandemic through upskilling and reskilling methodologies. Reshaping, upgrading and readjustment of skills required in the present post covid-19 pandemic work environment are very necessary in withstanding future occurrences. Thus, HR managers and other organisational executives that are saddled with the responsibilities of coaching and mentoring employees must embrace human resource skills adjustment in order to make their

respective organisations resilience competent. This is because, a resilience organisation may not be vulnerable to disaster or crisis compared to weak organisations. It is this reason that Herbane (2019) assert that organisation that possess adaptive capacity would hardly face disruptions. In addition, adjustment and readjustment of human resource skills are the strengths for future workplace. The above argument concerning skill adjustment is the string that hold organisation firmly during and after crisis. However, human resource skills adjustment (HRSA) which serves as medication to behavioural and attitudinal skills modification is related to resilience capacity of organisations that distinguishes itself from other organisations that does not imbibe resilience consciousness.

From the foregoing, upskilling human resource would not just improve the skills of the employees but would enhance the adaptive capacity of the organisation. It has been shown that organisation can be sustained when its members are acquainted with adaptive capacity (Kim, 2020; Ahiauzu & Jaja, 2015). Again, reskilling human resource strengthens their skills to be able to know when turbulence or disaster is about causing havoc to the organisation through situation awareness consciousness. Studies have also indicated that organisational crisis can be mitigated if organisational members are able to anticipate both economic and natural disaster through situation awareness (Al-Ayed, 2019; Kantur & Say, 2015).



**Figure 1: Conceptual Framework Showing HRSA and OR**

*Source: Author (2022)*

### **Upskilling (US) and Situation Awareness (SA)**

The skills needed in the organisation changes overtime and hence requires that human resource managers and professionals need to update their employees' skills especially in post covid-19 pandemic work environment where methods, processes and technology has changed. Therefore, to attain the above objective, employee's skills must be upskilled to match with new methodologies of manufacturing, marketing and service delivery (Rogers, 2020). It has been shown that since most employees do not change their jobs, it therefore implies that for them to be relevant in the workplace, their skills must be upskilled so that they can perform their jobs very well following government policies of social distancing and remote working culture employed by many organisations (Lee et al., 2020). In line with the above, organisations that adopted remote working policies would upskill their employees' skills especially how to work from home with the use of Zoom, Google Meet, Skype and Microsoft Teams to mention

but a few. Albeit, upskilling employees is as a result of the situation awareness in the business environment which is eminent during and after covid-19 pandemic. The situation in the external business environment determines the type of strategy that would be crafted by different organisations (Tamunosiki-Amadi & Okolai, 2019). Thus, business environment scanning is necessary at every point in time even when uncertainties are not expected (Nini, 2020). However, it has been established that employee skill update is a strategy for organisational resilience, competitiveness, growth and sustainability (Cramer et al., 2018). It is against this premise the first proposition is hypothesized.

*HA1. Upskilling of employee skills is directly and positively related to situation awareness*

### **Reskilling (RS) and Adaptive capacity (AC)**

Reskilling have numerous benefits to the organisation as well as to the employee. As a result of the uncertainties and disruptions in the

external business environment, managers and other organisational leaders prepare their employees ahead of time by reskilling their skills in order to enhance their capacity to perform different jobs (Agrawal et al., 2020). It has been shown that organisation that do not prepare for uncertainties or disruptions cannot be sustainable (Sonnet, 2016). In addition, for organisational adaptive capacities to be effective, the skills of every member of the organisation must be updated to enable them withstand the technological changes that would arise in the future. Skill update usually improves employees' chances for securing future job opportunities in case they decide to leave their present organisation. Reskilling reduces employee skill shortage and prevent disruption of production process (Chopra-McGowan & Reddy, 2020). What this implies is that, when employees are reskilled, it become very difficult for production to be disrupted. On another hand, Nathan & Rajamanoharane (2016) argued that without skill enhancement most reputable multinationals would have extinguished from the world of business. Drawing from the above arguments, researchers are of the view that reskilling employee's skills would give organisations an edge over their competitors and improve their adaptive capacity to withstand uncertainties. Based on this premise, the second proposition is hereby hypothesized.

*HA2. Reskilling of employee skills is directly and positively related to adaptive capacity*

In general, organisational resilience has been employed in organisational

studies and human resource management literature. Albeit, scholars have empirically examined its relevance in resolving crisis situations in the organisation, but the adjustment of human resource behaviour and attitudes through upskilling (US) and reskilling (RS) as an enhancement of organisational resilience have not been investigated. This study tends to fill this gap by investigating the relationship between human resource skills adjustment and organisational resilience in manufacturing companies operating in Nigeria. Based on this, this study is aimed at contributing to organisational resilience literature by identifying two resilience dimensions; situation awareness and adaptive capacity with upskilling and reskilling which are indicators of human resource skills adjustment in Nigerian manufacturing companies.

## **Theoretical Underpinning**

The baseline theory that best explains human resource skills adjustments and organizational resilience is contingency theory of socialization developed by Feldman (1976). The premise of this theory that there is no one best way to adjust to organisational changes rather, new order can be initiated based on the geographical work locations of the organisation. This shows that upskilling and reskilling of human resource in the manufacturing industries are the best strategies to modify skills, capabilities, knowledge and behaviour of the workforce to withstand external disruptions of work methods. In addition, manufacturing companies in southern Nigeria are bouncing back to normal after the pandemic as a result of

the utilization of upskilling and reskilling to adjust the skills of their human resource personnel.

## **Objectives of the Study**

The main objective of this study is to investigate the effect of human resource skills adjustment on organizational resilience in manufacturing companies in Nigeria. Specifically, this study sought to;

- i. investigate the significant effect of upskilling on situation awareness.
- ii. determine the significant effect of reskilling on adaptive capacity.

## **Research Methodology**

Research design employed in this study is cross-sectional research survey because it supports the use of questionnaire to collect data from participants at once over days, weeks or months to answer formulated research questions (Aliyu, Muhammad, Rozilah & David, 2014; Bryman & Bell, 2007). The research approach employed in this study is deductive. Saunders et al. (2009) accentuates that deductive research approach supports the collection of quantitative data that must be analysed, interpreted and simplified for policymakers' consumption. In addition, scholars revealed that deductive research approach owes more to positivism research philosophy that support the use of questionnaire for data collection (Sekaran & Bougie, 2016). Again the features of deductive research approach include availability of testable hypotheses, structured

methodology, and operationalization of variables (Saunders et al., 2009).

## **Population and Research Technique**

Target population of this study consists of twenty selected manufacturing firms in Enugu State totaling three thousand four hundred (3400) staff. Sample size of three hundred and forty-four (344) was drawn from the population using Krejcie and Morgan (1970) (see; Edeh et al., 2021a; Edeh et al., 2021b; Eketu & Edeh, 2015). Simple random sampling technique was used to select twenty manufacturing companies from fifty registered manufacturing companies with Enugu State Ministry of Commerce & Industry, Nigeria.

## **Method of Data Collection**

Questionnaire was used to collect data from Operations Managers, Middle Managers, Human Resource Managers, and Supervisors. The choice of the above category of personnel is because of their hierarchy and experience in manufacturing companies over the years concerning resilience and skill adjustment. Three hundred and forty-four (344) copies of questionnaire was administered to twenty manufacturing companies in one month. When the researchers returned to retrieve the questionnaire it was discovered that some of the participants were unable to complete it as a result of their tight schedule. It was found that some respondents that were able to fill the questionnaire left some sections unanswered which was sorted out as invalid. After data cleaning the study found only three hundred and one (301) copies of the questionnaire useful for analysis.

## Measures

Situation awareness was measured with 5-items validated scale by Rai et al. (2021), McManus et al. (2007), and Sonnet (2016). Respondents were asked to rate their organisation's situation awareness on 5-point Likert scale 5=Very great extent - 1=Very low extent. Sample of the items include "our company was able to forecast the regular disruption to operations", and "our company was able to predict the crisis before it hit our operations". Adaptive capacity was measured with 5-items validated scale by Rai et al. (2021), McManus et al. (2007), and Sonnet (2016). Respondents were asked to rate their organisation's adaptive capacity on 5-point Likert scale 5=Very great extent - 1=Very low extent. Sample of the items include "our company was able to respond faster to the changes", and "our company is fast recovering from the losses caused by the pandemic". On the other hand, 16-item validated and tested Human Resource Skills Adjustment Questionnaire (HRSAQ) containing upskilling and reskilling was adapted from Edeh et al. (2021d). Upskilling was measured with 8-items. Respondents were asked to rate how their skills were upskilled to fit the new work norms on 5-point Likert scale 5=Very great extent - 1=Very low extent. Sample of the items include "We have acquired new skills on covid-9 protocols in our organization" and "We are gradually conforming to the

*new normal*". Reskilling was measured with 8-items. Respondents were asked to rate how their skills were reskilled to fit the new work norms on 5-point Likert scale 5=Very great extent - 1=Very low extent. Sample of the items include "Our company have taught us new skills that will help us in another job" and "Covid-19 pandemic has really helped us to learn that we can do types of businesses on our own".

## Validity and Reliability of the Instrument

Instrument validity was determined using face validity while Cronbach  $\alpha$  (Cronbach, 1951) was employed to determine instrument reliability. Dimensions of organizational resilience (situation awareness 0.72; adaptive capacity 0.81), and human resource skills adjustment (upskill 0.77; reskill 0.82) fall within 0.7 $\alpha$  - 0.8 $\alpha$  benchmarks. This supports the affirmation of instrument reliability between 0.7 and 0.8 alpha coefficients by Nunnally & Bernstein, (1994).

## Method of Data Analysis

The study employed linear regression with the aid of IBM SPSS Statistics (20.0) to analyse the hypotheses. Participants' demographic profiles such as gender, age bracket, number of years in the company, educational qualification was analysed with frequency distribution.

## Analysis & Results

**Table 1: Demographic profiles of respondents**

<b>Demographics Profiles</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Gender</b>		
Male	206	68.4
Female	95	31.6
<b>Age Bracket</b>		
51 years & above	72	23.9
41-50 years	125	41.5
31-40 years	56	16.6
18-30 years	48	15.9
<b>Years in the Industry</b>		
6-10 years	131	43.5
11 years & above	93	30.9
1-5 years	77	25.6
<b>Educational Qualifications</b>		
PhD Degree	42	14.0
Master degree	124	41.2
Bachelor degree	135	44.9

*Source: Field Survey (2022)*

Demographic profiles of respondents revealed that 206 participants representing 68.4% were males; while 95 participants representing 31.6% were females. On another hand, 72 participants representing 23.9% are within 51 years and above; 125 participants representing 41.5% are within 41-50 years; 56 participants representing 18.6% are within the age brackets of 31-40 years; and 48 participants representing 15.9% are within 18-30 years. On the number of years worked with the manufacturing companies; 131 participants representing 43.5% have worked with their company between 6-10 years; 93 participants representing 30.9% have worked with their company between 11 years and above, and 77 participants representing 25.6% have worked with their company between 1-5 years and above. Educational qualifications of

the participants revealed that 38 participants representing 12.6% hold PhD degree; 84 participants representing 27.9% hold Master degree; 54 participants representing 17.9% hold diploma certificates; and 125 participants representing 41.5% hold Bachelor degree.

**Table 2: Results of Hypotheses Testing**

<b>R</b>	0.790 <sup>a</sup>	0.892 <sup>a</sup>
<b>R<sup>2</sup></b>	0.624	0.795
<b>Adjusted R<sup>2</sup></b>	0.623	0.794
<b>T-stat.</b>	22.286	34.040
<b>Beta (β)</b>	0.790*	0.892*
<b>Df</b>	3.90	3.90
<b>N</b>	301	301
<b>Fstat.</b>	496.668	1158.688
<b>Std. error</b>	0.039	0.026
<b>Sig.</b>	0.000	0.000

Predictor: Human Resource Skills  
 Adjustment (HRSA). Criterion:  
 Organisational Resilience (OR)

Regression results of hypothesis one and two on table 2 revealed that human resource skills adjustments have significant effect on organizational resilience. Specifically, upskilling has significant effects on situation awareness with high correlation ( $p < 0.05$ ;  $\beta = 0.790^*$ ).  $R^2$  of the model shows that 79% of the total variation in upskilling can be explained by situation awareness. The difference between  $R^2$  and adjusted  $R^2$  are less than 5% which indicates no sample error. Goodness of fit for the model was authenticated to be significant since F-statistics (496.668\*\*) calculated is greater than tabulated (1, 299 = 3.90). From the result, it was shown that sig.  $< 0.05$  which implies that the null hypothesis is rejected and alternate hypothesis accepted. Based on the above decision rule; the overall results revealed that upskilling predicted situation awareness. Secondly, it was also shown from the table 2 that reskilling has significant effect on adaptive capacity with high correlation ( $p < 0.05$ ;  $\beta = 0.892^*$ ).  $R^2$  of

the model shows that 62% of the total variation in reskilling can be explained by adaptive capacity. The difference between  $R^2$  and adjusted  $R^2$  is less than 5% which indicates no sample error. Goodness of fit for the models was confirmed to be significant because F-statistics (1158.688\*\*) calculated is greater than the tabulated (1, 299 = 3.90). From the result, it was revealed that sig.  $< 0.05$  which indicated that the null hypothesis is hereby rejected and alternate hypothesis accepted. Based on the above decision rule; the result revealed that reskilling predicted adaptive capacity.

## Discussion

Drawing from the results it was found that human resource skill adjustment has significant effect on organisational resilience. This implies that human resource skill adjustment has the capacity to enhance organizational resilience in turbulent times such as covid-19 pandemic. The findings of this study are in congruence with prior empirical studies such as Al-Ayed (2019); Oparanma and Ulunma (2019); Ahiauzu and Jaja (2015). However, it was discovered from the analysis that hypothesis one result revealed that upskilling has significant positive effect on situation awareness. This is in line with Ahiauzu and Jaja (2015) result which showed that process innovation has positive significant relationship with situation awareness, adaptive capacity and keystone vulnerability. Furthermore, hypothesis two result shows that reskilling has significant positive effect on adaptive capacity. This result corroborates with Al-Ayed (2019) finding which revealed that strategic human resource

management practices have significant effect on organisational resilience dimensions such as adaptive capacity and agility. Another similar result by Oparanma and Ulunma (2019) shows that organisational learning, adaptive capabilities has significant positive correlation with high performance of deposit money banks in Nigeria. Another research that corroborated with the findings of this study is Mama and Onuoha (2020) study on organisational sensing. Their result revealed that organisational sensing has significant positive effect on organisational resilience dimensions measured with adaptive capacity and agility.

## Conclusion

Based on the findings, the study concludes that human resource skills adjustments measured in terms of upskilling and reskilling enhances organisational resilience. The study recommends that manufacturing industry should train their employees

to be able to withstand the pressure that was triggered by Covid-19 pandemic. In addition, human resource professionals and experts should adopt upskilling and reskilling as an instrument for constant transformation of their workforce to enhance the organisational performance, prosperity, survival and sustainability of their organisation. One of the implication of this research is that upskilling of employees' skills is paramount to building the resilience capacity of any organisation especially in times of crisis such as Covid-19 pandemic as well as other challenging disruptions that may be triggered by external work environmental factors such as technology. Secondly, where there is a sudden change in the skills required to achieve the goals of the organisation, it is the responsibility of human resource professionals to organise a training programme or workshop that would be targeted at adjusting the skills (reskilling) of the workforce.

## References

- Akgün, A.E., & Keskin, H. (2014). Organisational resilience capacity and firm product innovativeness and performance. *International Journal of Production Research*, 52, 6918–6937.
- Ahiauza, L.U., & Jaja, S.A. (2015). Process innovation and organizational resilience in public universities in South-South Nigeria. *International Journal of Managerial Studies and Research*, 3(11), 102-111.
- Al-Ayed, S.I. (2019). The impact of strategic human resource management on organizational resilience: An empirical study on hospitals. *Verslas: Teorija Ir Praktika / Business: Theory and Practice*, 20, 179–186.
- Apostolopoulos, A. (2020). *Employee upskilling & reskilling statistics: Casting light on the trend*. <https://www.talentlms.com/blog/reskilling-upskilling-training-statistics/>

- Agrawal, S., Smet, A.D., Lacroix, S., & Reich, A. (2020, May 7). *To emerge stronger from the COVID-19 crisis, companies should start reskilling their workforces now*. <https://www.mckinsey.com/business-functions/organization/our-insights/to-emerge-stronger-from-the-covid-19-crisis-companies-should-start-reskilling-their-workforces-now>
- Al-Ghattas, H., & Marjanovic, O. (2021). Business analytics capabilities for organisational resilience. *Proceedings of the 54th Hawaii International Conference on System Sciences, 2021*, 228-235.
- Barasa, E., Mbau, R., & Gilson, L., (2018). What is resilience and how can it be nurtured? A systematic review of empirical literature on organizational resilience. *Int. J. Health Policy Manage.* 7 (6), 491–503. <https://doi.org/10.15171/ijhpm.2018.06>.
- Boin, A., & Van Eeten, M.J. (2013). The resilient organization. *Public Management Review*, 15(3), 429-445.
- Burnard, K., & Bhamra, R. (2011). Organisational resilience: Development of a conceptual framework for organisational responses. *Int J Prod Res*, 49(18), 5581–5599.
- Castellacci, F. (2015). Institutional voids or organizational resilience? Business groups, innovation, and market development in Latin America. *World Development*, 70, 43-58.
- Chiappetta, C. (2020, January 24). *The benefits of upskilling*. <https://www.hrci.org/community/blogs-and-announcements/hr-leads-business-blog/hr-leads-business/2020/01/24/the-benefits-of-upskilling>
- Chopra-McGowan, A., & Reddy, .S.B. (2020, July 10). *What would it take to reskill entire industries?* <https://hbr.org/2020/07/what-would-it-take-to-reskill-entire-industries>
- Collier, D.Y. (2018). *An examination of the impact of diverse internationalization experience on organizational resilience and a test of the resilience architecture framework*. PhD Dissertation, Auburn University. [https://etd.auburn.edu/bitstream/handle/10415/6133/Collier\\_Dissertation.pdf?isAllowed=y&sequence=2](https://etd.auburn.edu/bitstream/handle/10415/6133/Collier_Dissertation.pdf?isAllowed=y&sequence=2)
- Coutu, D.L. (2002). How resilience works. *Harvard Business Review*, 80(5), 46–56.
- Cramer, K.M, Ross, C., Plant, L., & Pschibul, R. (2018). Efficacy of learning modules to enhance study skills. *International Journal of Technology and Inclusive Education*, 7(1), 1251-1259.
- Creighton, K. (2019). *5 skills every employee should have or acquire ahead of 2020*. <https://hrdailyadvisor.blr.com/2019/10/31/5-skills-every-employee-should-have-or-acquire-ahead-of-2020/>
- Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. *Business Res.* 13, 215–246. [https://doi.org/10.1007/\\*s40685-019-0085-7](https://doi.org/10.1007/*s40685-019-0085-7)

- Edeh, F.O., Chukwu, A.U., & Osueke, N.C. (2019). Effect of customer relationship management on organisational resilience of deposit money banks in Nigeria. *International Journal of Economics, Business and Management Studies*, 6(2), 272-284.
- Edeh, F.O., Edeoga, G., Ugboego, C.A., & Dialoke, I. (2021a). Green HRM: Resilience strategy for organisational sustainability. *Ilorin Journal of Human Resource Management*, 5(1), 61-70.
- Edeh, F.O., Yeo, S.F., & Abid, H.N. (2021b). The effects of structural capital on organisational efficiency. *Gomal University Journal of Research*, 37(1), 1-11.
- Edeh, F.O., Edeoga, G., Ugboego, C.A., & Dialoke, I. (2021c). Green HRM: Resilience strategy for organisational sustainability. *Ilorin Journal of Human Resource Management*, 5(1), 61-70.
- Edeh, F.O., Adama, L., Nwali, A.C., Udeze, C.C.G, Achilike, N.I., Aleke, S., Irem, C.O., Okwu, P.I., & Ogbu, I. (2021d). Organisational learning: Covid-19 strategy for human resource skill adjustment. *International Journal of Knowledge & Learning*, 1(1). <https://doi:10.1504/IJKL.2022.10048780>
- Eketu, C.A., & Edeh, F.O. (2015). Social intelligence and employee intention to stay (A study of selected hotel workers in Port Harcourt City, Nigeria). *International Journal of Novel Research in Marketing Management and Economics*, 2(1), 27-34
- Feldmann, J. (2018, October 2). *Knowledge is power: The benefits of upskilling for employers and employees*. <https://www.forbes.com/sites/forbeshumanresourcescouncil/2018/10/02/knowledge-is-power-the-benefits-of-upskilling-for-employers-and-employees/?sh=5540b30523c1>
- Feldman, D.C. (1976). A contingency theory of socialization. *Administrative Science Quarterly*, 21, 433– 452.
- Flandin, S., Poizat G., & Durand, M. (2018). Improving resilience in high-risk organizations: Principles for the design of innovative training situations. *Development and Learning in Organizations: An International Journal*, 32(2), 9-12.
- Friedman, E. (2020, July 22). *What upskilling means for workforce development in 2020*. <https://www.forbes.com/sites/forbeshumanresourcescouncil/2020/07/22/what-upskilling-means-for-workforce-development-in-2020/?sh=33dc4a8f33ab>
- Fukofuka, S., Fukofuka, P.T. & Loke, D.T. (2017). Predictors of organizational resilience: A path analysis. *Global Journal of Human Resource Management*, 5(9), 31-42.
- Gibson, C., & Tarrant, M. (2010). A conceptual models approach to organisational resilience. *The Australian Journal of Emergency Management*, 25(2), 8–14.

- Gittell, J.H., Cameron, K., Lim, S., & Rivas, V. (2006). Relationships, layoffs, and organizational resilience: Airline industry responses to September 11. *The Journal of Applied Behavioral Science*, 42(3), 300-329.
- Gonçalves, L., Navarro, J.B., & Sala, R. (2019). Spanish validation of the benchmark resilience tool (short-form version) to evaluate organisational resilience. *Saf. Sci.* 111, 94–101.
- Gurchiek, K. (2020, January 2). *Look for these training trends in 2020*.  
<https://www.shrm.org/resourcesandtools/hr-topics/organizational-and-employee-development/pages/look-for-these-training-trends-in-2020.aspx>
- Ishak, A.W., & Williams, E.A. (2018). A dynamic model of organizational resilience: Adaptive and anchored approaches. *Corporate Communications: An International Journal*, 23, 180–196.
- Johnson, N. (2010). *Social capital and organisational resilience*. PhD Dissertation, University of Liverpool.  
[https://livrepository.liverpool.ac.uk/2775/7/JohnsonNoe\\_June2010\\_2775.pdf](https://livrepository.liverpool.ac.uk/2775/7/JohnsonNoe_June2010_2775.pdf)
- Kantur, D., & Say, A. (2015). Measuring organizational resilience: A scale development. *Journal of Business Economics and Finance*, 4 (3), 456-472.
- Kim, Y. (2020). Organizational resilience and employee work-role performance after a crisis situation: Exploring the effects of organizational resilience on internal crisis communication. *Journal of Public Relations Research*, DOI: 10.1080/1062726X.2020.1765368.
- Kim, K., Andrew, S.A., & Jung, K. (2020). Building resilient organizations: Organizational resilience as a network outcome. *International Journal of Public Administration*, 2,1-10.
- Krejcie, R.V., & Morgan, D.W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.
- Lee, D., Pino, M., & Johnston, A. (2020, March 12). *Six keys to unlocking upskilling at scale*. [https://www.strategy-business.com/article/Six-keys-to-unlocking-upskilling-at-\\_\\_\\_scale?gko=34466](https://www.strategy-business.com/article/Six-keys-to-unlocking-upskilling-at-___scale?gko=34466).
- Lee, A.V., Vargo, J., & Seville, E. (2013). Developing a tool to measure and compare organizations' resilience. *Nat Hazards Rev*, 14(1), 29–41.
- Lengnick-Hall, C.A., Beck, T.E., & Lengnick-Hall, M.L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243-255.
- Mafabi, S., Munene, J.C., & Ahiauzu, A. (2015). Creative climate and organisational resilience: The mediating role of innovation. *International Journal of Organizational Analysis*, 23(4), 564–587.

- Mafabi, S., Munene, J., & Ntayi, J. (2012). Knowledge management and organisational resilience: Organisational innovation as a mediator in Uganda parastatals. *Journal of Strategy and Management*, 5(1), 57-80.
- Mallak, L. (1998). Measuring resilience in health care provider organizations. *Health Manpower Management*, 24(4),148-152.
- Mama, C.K., & Onuoha, C.B. (2020). Sensing and organizational resilience of oil and gas companies in Nigeria. *International Journal of Management Sciences*, 7(4),48 – 60.
- Manyika, J., Sinclair, J., Dobbs, R., Strube, G., Rasse, L., Mischke, J., Remes, J., Roxburgh, C., George, K., O'Halloran, D., & Ramaswamy, S. (2012, November 1). Manufacturing the future: The next era of global growth and innovation. <https://www.mckinsey.com/business-functions/operations/our-insights/the-future-of-manufacturing>.
- McManus, S., Seville, E., Vargo, J., & Brunson, D. (2008). Facilitated process for improving organizational resilience. *Natural Hazards Review*, 9(2), 81–90.
- McManus, S., Seville, E., Brunson, D., & Vargo, J. (2007). *Resilience management: A framework for assessing and improving the resilience of organisations*. In a framework for assessing and improving the resilience of organizations. University of Canterbury: Christchurch, New Zealand. [https://ir.canterbury.ac.nz/bitstream/handle/10092/2810/12606763\\_Resilience%20Management%20Research%20Report%20ResOrgs%2007-01.pdf?sequence=1&isAllowed=y](https://ir.canterbury.ac.nz/bitstream/handle/10092/2810/12606763_Resilience%20Management%20Research%20Report%20ResOrgs%2007-01.pdf?sequence=1&isAllowed=y)
- Miron, A. (2020, July 20). *What are the benefits of upskilling your employees?* <https://www.eskill.com/blog/what-are-the-benefits-of-upskilling-your-employees/>
- Nathan, S.K., & Rajamanoharan, S.W., (2016). Enhancement of skills through e-learning: Prospects and problems. *The Online Journal of Distance Education and e-Learning*, 4(3),24-32.
- Nini, M. (2020, January 01). *Situational awareness: What it is and why it matters as a management tool*. <https://www.ckju.net/en/dossier/situational-awareness-what-it-and-why-it-matters-management-tool>
- Omokolade, A. (2021, February 18). *Nigeria's manufacturing sector contracts by 2.75% in 2020*<https://nairametrics.com/2021/02/18/nigerias-manufacturing-sector-contracts-by-2-75-in-2020/#:~:text=At%20the%20end%20of%202020,Nigeria's%20GDP%20stood%20at%208.99%25>.
- Oparanma, A.O., & Ulunma, E.P. (2019). Organizational resilience and corporate performance of deposit money bank in Port Harcourt, Nigeria. *International Journal of Business and Management Future*,3(2),1-13.

- Ortiz-de-Mandojana, N., & Bansal, P. (2016). The long-term benefits of organizational resilience through sustainable business practices. *Strategic Management Journal*, 37(8), 1615-1631.
- Osita, F.C., Maduka, O.D., & Nkechi, C.O. (2020). Impact of Covid-19 on the survival of Igbo owned businesses in Nigeria: The nexus. *International Journal of Financial, Accounting, and Management*, 2(2), 121-130.
- Pal, R., Torstensson, H., & Mattila, H. (2014). Antecedents of organizational resilience in economic crises - An empirical study of Swedish textile and clothing SMEs. *International Journal of Production Economics*, 147(PART B), 410-428.
- Parsons, D. (2010). Organizational resilience: Parsons argues that a modern organization's ability to survive and prosper against the flow-on effects of natural disasters will depend on its resilience capacity. *Australian Journal of Emergency Management*, 25(2), 18-20.
- Rai, S.S., Rai, S., & Singh, N.K. (2021). Organizational resilience and social-economic sustainability: COVID-19 perspective. *Environment, Development and Sustainability*, 23, 12006-12023.
- Rogers, K. (2020, January 17). *Manufacturers to spend \$26.2 billion on 'upskilling' in 2020 to attract and keep workers*. <https://www.cnbc.com/2020/01/17/manufacturers-to-spend-26point2-billion-on-upskilling-workers-in-2020.html>
- Sanjeev, K.S.T. (2019). Relationship between knowledge management and organizational resilience in northern healthcare sector. *International Journal of Scientific & Technology Research*, 8(12), 3099-3105.
- Sapeciay, Z., Wilkinson, S., & Costello, S.B. (2017). Building organisational resilience for the construction industry: New Zealand practitioners' perspective. *International Journal of Disaster Resilience in the Built Environment*, 8(1), 98-108.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5<sup>th</sup> edn.). England: Pearson Education Limited.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7<sup>th</sup> edn.). United Kingdom: John Wiley & Sons Ltd.
- Somers, S. (2009). Measuring resilience potential: An adaptive strategy for organizational crisis planning. *Journal of Contingencies and Crisis Management*, 17(1), 12-23.
- Sonnet, M.T. (2016). *Employee behaviors, beliefs, and collective resilience: An exploratory study in organizational resilience capacity*. Ph.D. Thesis, Fielding Graduate University, Santa Barbara, CA, USA. <https://www.proquest.com/openview/16c5a44a3bfdd0b443c19310e1b3e0cc/1?pq-origsite=gscholar&cbl=18750>

- Starr, R., Newfrock, J., & Delurey, M. (2004). Enterprise resilience: Managing risk in the networked economy. *Strategy + Business*, 30, 1–10
- Stoverink, A.C., Kirkman, B.L., Mistry, S., & Rosen, B. (2020). Bouncing back together: Toward a theoretical model of work team resilience. *Academy of Management Review*, 45(2),395-422.
- Suryaningtyas, D., Sudiro, A., Troena, E.A., & Irawanto, D.W. (2019). Organizational resilience and organizational performance: Examining the mediating roles of resilient leadership and organizational culture. *Academy of Strategic Management Journal*, 18(2), 1-7.
- Tamunosiki-Amadi, J.O., & Okolai, D.G. (2019). Situational awareness and employee commitment in the health sector of Bayelsa State. *International Journal of Engineering Technologies and Management Research*, 6(8), 1-11.
- Tompkins, J.A. (2007). 4 Steps to business resilience. *Industrial Management* (Norcross, Georgia), 49(4), 14–18.
- Witmer, H., & Mellinger, M.S. (2016). Organizational resilience: Nonprofit organizations' response to change. *Work*, 54(2), 255-265.
- Yinka, O. (2020, August 12). *Why COVID-19 could mean a new dawn for Nigeria's manufacturing sector*. <https://www.weforum.org/agenda/2020/08/covid-19-opportunity-nigeria-manufacturing-sector/>
- Zhang, Y., & Pan, K. (2020). Research on organizational resilience of railway transport industry under covid-19 epidemic. *Advances in Social Science, Education and Humanities Research*, 500,113-119.