

Assessing the impact of employee-centric digital transformation initiatives on job performance: the mediating role of digital empowerment

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Abstract

Background: The wave of digital disruption has been experienced across different industries in the fourth industrial revolution, altering processes and procedures as well strategies of many industries.

Purpose - As businesses strive to attain supremacy in their respective industries, reliance on technology has become an inevitable tool for sustainability and competitive advantage. Firms are employing novel business strategies and streamlining their operations by adapting to technology in order to transform digitally. Based on the theory of structural empowerment, we assess, from employees' perspective, the efficacy of key employee-centric digital transformation initiatives, namely, digital skills training and access to digital platforms on employees' performance through the mediating role of employee digital empowerment.

Design/methodology/approach - Survey data was collected from a sample 214 employees and their 89 direct supervisors across four banking institutions in China for the purpose of this study. Correlation and regression analysis were conducted to test the hypotheses.

Findings - The result of the study showed support for the positive impact of both digital skills training and employees' access to digital platforms at the workplace on job performance and also for the mediating role of employee digital empowerment. This study contributes to the empowerment literature by identifying key structural empowerment initiatives in an organization that enhance employee digital empowerment and performance at the workplace as firms transform digitally.

Practical implications - The results of the study suggest that firms should view digital transformation as an employee empowerment tool which, when implemented properly, could help enhance employees' performance and the overall organizational goal achievement potentials. Hence, organizations should align their digital transformation strategy with the needs of its human resource in order to ensure overall success of such transformations.

Limitations/future research - The study focuses on the banking sector only. Further research could focus on other industries that are equally affected by the waves of digital disruptions.

Keywords

digital transformation, digital skills training, access to digital platforms, employee digital empowerment, job performance, theory of structural empowerment

Introduction

In today's ever-dynamic business world, digital transformation is regarded as critical and it necessitates the development and integration of digital innovation into all areas of business from products to organizational processes and business models, with the ultimate goal of enhancing organizational effectiveness, business operations, and customer value (Nambisan, 2017; Ceipek, Hautz, De Massis, Matzler & Ardito, 2021). Faced with this reality, organizations are compelled to adapt and modify their operations continuously (Ubiparipović, Matković & Pavličević, 2023). Organizations worldwide are prioritizing investment in digital technologies as means for dealing with digital disruptions effectively, ensuring sustainability and gaining competitive advantages, as evident by the surge in the global direct digital transformation investments (Carosella et al., 2021). These transformations require complete integration of digital technology across all aspects of businesses' operations and procedures, hence, having significant influence on organizations, and their stakeholders (Ubiparipović et al., 2023; Matt, Hess & Benlian 2015).

Key among organizational stakeholders affected directly by such transformations are the human resources. This is because digital transformation takes place in exceedingly human establishments with employees as the core of these organizations. It is therefore an undeniable fact that such transformations have significant consequences on the human resources of every organization (Rezaei, Rezaei, Zare, Akbarzadeh & Zare, 2014) since they play pivotal roles in equating, rethinking, and redefining human resource skills and capabilities of various organizations (Lerch & Gotsch, 2015; Leao & Mira da Silva, 2021). In the words of Westerman (2016), "digital transformation needs a heart", emphasizing that, "it is the human resources that make an organization work"; hence, careful alignment of an organization's digital transformation strategy with employees' needs is required for organizational effectiveness (Kozanoglu & Abedin, 2020). For this reason, firms are adopting key employee-centric digital transformation initiatives to help their employees

adapt to various changes that come with technological advancements at the workplace.

Digital skills training has been adopted by most firms as a key employee-centric initiative for developing, empowering and enhancing employees' digital abilities at the workplace (Galazova & Magomaeva, 2019; Leao & Mira da Silva, 2021). Such training aims at re-skilling, upskilling and enhancing the digital competences that are needed for improved task delivery and overall employees' performance. Additionally, in the quest to enhance communication and effective knowledge and information sharing at the workplace, firms are providing readily available and easily accessible digital platforms to employees as part of their employee-centric initiative to adapt to various digital transformations (Forbesinsights, 2017; Bartczak, 2021; Verhoef et al., 2021). The primary objective of this initiative is to expedite communication and facilitate the exchange of knowledge among employees at the workplace. This will result in accelerated decision-making processes, enhanced collaboration and improved accessibility to resources for employees (Singh, Bala, Dey & Filieri, 2022), with the ultimate goal of empowering and enhancing the performance of employees in their professional endeavors (Ghani, Ali, Musa & Omonov, 2022).

Kanter's (1977) theory of structural empowerment describes contextual organizational factors and work conditions needed for an effective work environment, empowerment, task accomplishment and organizational effectiveness (Hagerman, Högberg, Skytt, Wadensten & Engström, 2017). According to Kanter's (1977) theory, there are four key structures that employees need to have access to at the workplace in order to enhance their empowerment and task accomplishment at the workplace. These are: **opportunity** to grow and advance within the organization; **support** in terms of timely and effective feedbacks from subordinates, colleagues and management; **information** regarding the work and organization; and **resources** in terms of communication tools, platforms, materials and sufficient time (Hagerman, Högberg, Skytt, Wadensten & Engström, 2017). Based on Kanter's (1977) theory, we argue that digital skills training at the workplace is an effective and efficient way of providing access to opportunity and support since it aims at reskilling, upskilling, learning and

developing of employees so as to meet their digital transformation needs at the workplace. We also argue that access to digital platforms at the workplace is in line with Kanter's (1977) access to information and resources. This is because, by providing a common communication platform at the workplace, it is easy for employees to share relevant organizational information both amongst themselves and management, which is the surest path to enhancing task accomplishment at the workplace. Hence, digital skills training and access to digital platforms are key employee-centric structural empowerment initiatives that are embraced by most firms as they transform digitally.

Despite the growing adoption of digital skills training and access to digital platforms as key employee-centric digital transformation strategy by most firms, the effectiveness of such initiative has not seen much exploration especially from the perspective of employees (Kozanoglu & Abedin, 2020). It is for this reason that this study aims to assess from employees' perspective, the impact that these key employee-centric digital transformation initiatives have on the performance of employees. We therefore draw from the theory of structural empowerment to examine how digital skills training as well as access to digital platforms influence employees' job performance through the mediating role of digital empowerment.

Our study makes the following contributions to literature. Firstly, with massive digital transformations in various organizations, our study contributes to literature by identifying key employee-centric initiatives needed to enhance employees' job performance as organizations transform their businesses digitally. We identify digital skills training and access to digital communication platforms as key contextual organizational (structural empowerment) factors that enhance employee digital empowerment and performance at the workplace. Secondly, the study adds to empowerment literature by examining from employees' perspective how their organizations' digital transformation initiatives influence their digital empowerment which eventually enhance task accomplishment at the workplace. This is important since such initiatives are aimed towards accomplishing a positive outcome among employees and as such, their firsthand assessment of these initiatives are noteworthy. Finally, as the theory of structural empowerment is mostly applied in the healthcare (nursing) setting, the study adds to literature by examining the theory in

a setting outside the healthcare field by testing the relevance of the theory in the banking setting. By doing so, we tend to contribute towards the generalize application of the theory in settings other than the healthcare arena.

1. Theoretical background and hypotheses

1.1. Theory of structural empowerment

Kanter's (1977) structural empowerment theory focuses on contextual factors that enhance healthy working environments for individuals' effectiveness and organizational efficiency. According to Kanter's (1977) theory, the employees' task accomplishment would be greatly enhanced in an empowered work environment; thus, employees who are empowered with faceless work pressure and burnout, and are therefore more likely to complete their tasks successfully and be satisfied with their jobs (Yang, Liu, Chen & Pan, 2014). Thus, structural empowerment is at the heart of the work environment and includes organizational strategies for individuals to work in an empowered environment and accomplish their tasks effectively (Lautizi, Laschinger, & Ravazzolo, 2009).

Kanter (1977) argues that there are four main sources of empowerment structures, namely, access to information, access to resources, access to opportunities and support (Yang et al., 2014). Kanter (1977) explained that, access to information requires employees to be updated with all relevant information regarding the organization and also equipping employees with the required technical knowledge and expertise for effective goal attainment in an organization. Access to resources refers to the ability to obtain all relevant work-related resources for task accomplishment. Also, work conditions that enhance knowledge and skills development, training and learning are referred to as access to opportunity. Finally, when there are timely and effective feedbacks being offered to employees from their co-workers, subordinates and superiors, they are said to have received support. These four sources of empowerment structure influence employees' task accomplishment at the workplace significantly (Kanter, 1977). Furthermore, Kanter (1977) adds that as an organization provides its employees with access to conducive conditions at the workplace (i.e., structural empowerment), an improve sense of control and empowerment can be accomplished.

1.2. Digital skills training and job performance

Digital transformation necessitates firms to upgrade their workforce's skills and capabilities in order to remain competitive (Ostmeier & Strobel, 2022). Aligning organizations' digital strategies and initiatives with the needs of their employees has become inevitable in the fourth industrial revolution, hence, the need for the adoption of digital skills training at the workplace (Montero Guerra, Danvila-del-Valle & Méndez Suárez, 2023). Digital skills refer to the ability to use information and communication technologies (ICTs) to increase productivity and discover novel approaches to running a business (Drydakis, 2022). Achieving these skills requires re-skilling or upskilling employees through digital skills training (Karacay, 2018). We define digital skills training as the acquisition and mastery of the knowledge and abilities necessary to use digital resources at the workplace effectively, and argue based on the human capital theory that digital skills training of employees goes a long way to strengthen the employees' competence base, which ensures effective and efficient job performances on the parts of employees.

According to the human capital theory, investments in employees' training will lead to an increase in their stock of human capital, which will in turn lead to greater performance. Thus, training makes employees more productive, effective, and adaptive in their responsibilities due to the new information, knowledge and abilities acquired during training. Several studies (Drydakis, 2022; Fawehinmi, Yusliza, Mohamad, Noor Faezah & Muhammad, 2020; Munawar, Yousaf, Ahmed & Rehman, 2022; Pham, Vo Thanh, Tučková & Thuy, 2020; Karacay, 2018) have highlighted the significant influence of training on employees' productivity and performance.

We therefore argue that, as firms transform their operations digitally, digital skills training is certainly an effective remedy to addressing skills mismatch in the changing work trends in organizations and a surest way to improve and enhance employees' digital ability and their overall job performance at workplace. Hence, we hypothesize that:

Hypothesis 1: Digital skills training has a positive impact on employees' job performance.

1.3. Employees' access to digital platforms and job performance

With digital transformation leading to intelligent organizations and knowledge revolution, reliance on digital platforms has become inevitable if organizations are to ensure effective knowledge and information flow among their employees at the workplace (Bartczak, 2021; Sousa & Rocha, 2019). Sedera, Lokuge, Grover, Sarker & Sarker, 2016) described digital platform as "a technology architecture that allows development of its own computing functionalities and allows the integration of information, computing, and connectivity technology platforms available to an organization". Digital platforms have the ability to connect people, organizations and resources with the aim of facilitating the core interactions between businesses and consumers as well as assuring a greater efficiency for the business management (Ruggieri, Savastano, Scalingi, Bala & D'Ascenzo, 2018). In the banking industry, digital banking platforms have revolutionized the banking sector (Levy, 2022), and are viewed as organizational innovations with the potential to generate new ideas, making it readily available and easily accessible to employees to help develop employees into knowledge employees, enhancing their decision-making ability and ultimately improving their productivity at the workplace (Mariani, Wamba, Castaldo & Santoro, 2023; Ahmad, Lodhi, Zaman & Naseem, 2017). Such banking platforms enable knowledge sharing among employees at the workplace, ensure company-wide collaboration and enhance knowledge management in an organization (Bartczak, 2021; Slack, 2019). The interdependence and interconnectedness among firms' branches and departments have heightened the need for making digital platforms easily available and accessible to employees in order to ensure timely communication and knowledge sharing within and among employees belonging to different firms, branches and departments (Sousa & Rocha, 2019). Through these platforms, employees are able to identify, access, create, organize, share and use information and knowledge effectively to improve their performance (Bartczak, 2021; Sousa & Rocha, 2019).

A study by Forbesinsights (2017) revealed that there are faster decision making, better collaboration, higher job satisfaction and increased productivity among employees who have easy access to digital communication platforms and tools at the workplace. The research further

revealed that workers exposed to such platforms mostly outperform their counterparts who do not have such access in the sense that there are reduced levels of errors and better decision-making ability on the part of employees exposed to various digital communication platforms at the workplace, which ultimately help improve their tasks fulfilment and their overall job performance. This eventually goes a long way to ensure sustainability and competitive advantage on the part of the organization. In view of this, we hypothesize that:

Hypothesis 2: Employees' access to digital platforms has a positive impact on their job performance.

1.4. Mediating role of employee digital empowerment

Empowerment has attracted considerable attention in the fields of psychology and social science due to its influence on individual and organizational outcomes, as well as on groups and societies at large (Ochoa Pacheco & Coello-Montecel, 2023). While there are several perspectives of empowerment, key amongst them are the structural empowerment and psychological empowerment. Structural empowerment represents the social structures that organizations put in place to aid employees' task fulfillment while psychological empowerment refers to productive outcomes that employees achieve directly from tasks when their cognitions of meaning, competence, self-determination and impact are satisfied (Amor, Xanthopoulou, Calvo & Vazquez, 2021; Spreitzer & Quinn, 2001). As organizations provide social conditions, policies and environment that facilitate access to opportunities, information, support, and resources at the workplace (structural empowerment), it goes a long way to influence employees' psychological empowerment which ultimately influence employees' work attitudes and behavior as well as their task accomplishment (Kanter, 1977). Thus, in a supportive working environment, employees with a sense of support feel positive about themselves and are therefore more likely express themselves and feel empowered for task accomplishment (Hsieh, Lee & Tseng, 2022; Monje Amor, Xanthopoulou, Calvo & Abeal Vázquez, 2021).

In the present era of rapid digital transformation, digital empowerment is key to competitiveness and efficiency at the workplace (Baptista, Stein, Klein, Watson-Manheim & Lee, 2020). According to Wu, Sun, Chang, Zhang and

Qi, (2022), digital empowerment refers to the use of and the reliance on digital technology as a means of empowering every aspect of an organizations' operation in order to ensure sustainability and competitive advantage. It is essential in achieving efficiency, motivation and overall productivity of grassroots employees in this digital age (Peng & Tao, 2022). Employee digital empowerment requires providing and enabling workers with the digital resources, skills, and tools they need in order to use digital platforms and technology in their job efficiently so as to ensure tasks accomplishment at the workplace (Lingling & Ye, 2023). Based on several studies that have found significant mediating role of employee empowerment between structural empowerment and employees work effectiveness and productivity outcomes (Monje Amor et al., 2021; Hagerman et al., 2017; Hagerman, Skytt, Wadensten, Högberg & Engström, 2016; Meng, Jin & Guo, J. (2016), we argue in the digital age that, as organizations put structural empowerment initiatives in place (digital skills training and access to digital platforms) as they transform digitally, employees' digital empowerment is enhanced, which ultimately translates into efficient and effective task accomplishment. Thus, employees' digital empowerment is the outcome of organizations' structural empowerment initiatives which eventually results in enhanced performance at the work place. We therefore propose that:

Hypothesis 3a: Digital empowerment mediates the relationship between digital skills training and employee's performance.

Hypothesis 3b: Digital empowerment mediates the relationship between access to digital platforms and employees' performance.

2. Methodology

2.1. Sample and procedure

We collected data from employees of four banks in Shanghai, China. The banks are Merchant Bank (Bank 1), Construction Bank (Bank 2), Bank of Communications (Bank 3) and Industrial Bank (Bank 4). These banks were chosen because they serve diverse customers nationwide and are constantly adapting to the rapid technological changes, providing their employees with relevant digital training, tools, and platforms to help them perform at their best.

We developed and administered separate questionnaires to 240 subordinates and their 106 direct supervisors for the purpose of this study.

Respondents serve in different roles as well as in different departments. Subordinates' questionnaires were designed to collect data relating to demographic information, digital skills training, access to digital platforms and employee empowerment. Their direct supervisors provided ratings regarding job performance of each subordinate. Through the help of the HR department of each bank, we chose randomly, through systematic sampling, three subordinates for each supervisor in order to ensure objectivity in the assessment of job performance. Also, respondents were assured of confidentiality of their responses in order to ensure objectivity and to reduce appraisal apprehension. Respondents completed and returned the questionnaires to our team with the help of the HR department.

Out of the 240 subordinate questionnaires that were administered, 214 questionnaires representing 89.2% response rate were retrieved. Also, 89 questionnaires representing 84% response rate were retrieved from their respective supervisors. This represents an average of 2.40 employees per supervisor. Within the final sample, 49.5% were female and 50.5% were male, and the average age of respondents was 28.36 years. Also, 24.3% were employees of Bank 1, 27.1% were employees of Bank 2, 26.2% work for Bank 3 while the remaining 22.4% were with Bank 4. In terms of departmental affiliation, 36% were from Sales and Marketing department, 26% were from the HR department, 10% were from the Compliance department, 8% were from Research and Development, 12% were from Operations, while 8% belong to other departments. As for educational background, 5.1% had college diplomas, 44.9% had bachelor's degrees and 50% had master's degrees.

2.2. Measures

The variables used in this study were measured using multiple items from different studies in extant literatures. All items were measured using a five-point Likert-type scale; respondents had to indicate their level of conformity with the different statements (5= strongly agree to 1= strongly disagree).

Digital skills training (DST) was measured using 5 items previously used by Sicilia et al. (2018). Items were adapted to assess employees' satisfaction and effectiveness of their organizations' digital skills training. Sample items include "digital skills training is crucial for adapting to technological changes in my line of

work". Cronbach's alpha for this scale was 0.783

Access to digital platforms (ADP) was measured using 6 items from the work of Bartczak (2021) and Forbesinsights (2017). Some modifications were, however made in order to suite the current study. Sample items include "access to digital platforms help me get relevant and timely work information". Cronbach's alpha for this scale was 0.786

Employee empowerment was measured using 6 items from the work of Kirti and Singh (2015). Some modifications were, however, made in order to suite the current study. Sample items include "I am mostly encouraged to rely on my bank's digital resource to solve work-related issues". Cronbach's alpha for this scale was 0.819

Job performance as a dependent variable was measured using 6 items adopted from previous research by Tahir, Yousafzai, Jan and Hashim, (2014). The performance variable covers employees' efficiency, creativity and innovation, work-desired behaviors and normative measures in achieving individual objectives. This questionnaire was filled out by the participants' immediate superiors, and the results were afterwards matched with the employees' self-reported ratings for digital skills training, access to digital platforms, and digital empowerment as done in Ochoa Pacheco and Coello-Montecel (2023). Sample items include "ability to execute assigned tasks in a reasonable amount of time and at less cost". Cronbach's alpha for this scale was 0.791

Control variables. Respondents' age, gender, and tenure were used as control variables in the study. This is in line with past studies (Islam & Jawad, 2018). Additionally, considering that data for the study was taken from employees of four different banking institutions, we controlled for the effect of bank affiliation. Three dummy variables were created for bank affiliation (Bank 1, Bank 2 and Bank 3) with Bank 4 serving as a referent group. Respondents' gender was dummy coded with male = 0; and female = 1 as done in Liang and Gong (2013).

2.3. Confirmatory factor analysis

We carried out a confirmatory factor analysis (CFA) using the AMOS software to test the validity and the overall fitness of our research model. The CFA shows an acceptable model fit. The respective values of Normed- χ^2 , CFI, IFI, TLI, RMSEA, and SRMR were used for the assessment. The model fit indices showed values that are within various satisfactory thresholds. The Normed- χ^2 (χ^2

to df, $\chi^2 = 639.789$, $df = 446$) is 1.435. The SRMR is 0.067, which is below the desired cut-off value of 0.10. RMSEA is 0.045, which is lower than 0.08, thereby indicating a good fit. CFI = 0.936; IFI = 0.952 and TLI = 0.940, are all greater than the 0.90 threshold and hence showing a sufficient goodness of fit of the model. In sum, these CFA results confirm the discriminant validity of our variables. Additionally, the Cronbach's alpha values of the constructs range from 0.783 to 0.819, all of which are equal to or greater than 0.70, thus demonstrating the study's sufficient internal consistency.

3. Result

Table 1 presents the means, standard deviations and correlations of our study variables. The table shows a positive correlation between digital skills

training and access to digital platforms at significant level of 0.01 ($r = .385$; $p < .01$). Also as predicted, both digital skills training and access to digital platforms were positively related to employee empowerment ($r = .312$, $p < .01$, for digital skills training and $r = .345$, $p < .01$, for access to digital platforms); and employees' job performance ($r = .248$, $p < .01$, for digital skills training and $r = .334$, $p < .01$, for access to digital platforms). The latter results show support for Hypothesis 1, which predicts a positive relationship between digital skills training and employees' performance; and Hypothesis 2, which predicts a positive impact on employees' access to digital platforms on their performance respectively. Moreover, employee empowerment was positively related to job performance ($r = .476$, $p < .01$).

Table 1 Means, Standard deviations and Correlations

	Mean	SD	1	2	3	4	5	6	7	8
1. Gender	0.50	.501	1							
2. Age	1.29	.838	-.035	1						
3. Bank Affiliation	1.47	1.090	-.073	.116	1					
4. Tenure	0.71	.757	.194**	.599**	.176**	1				
5. Digital Skills Training	4.08	.576	.026	-.003	-.061	.075	1			
6. Access to Digital Platforms	4.19	.435	.083	-.008	-.090	-.061	.385**	1		
7. Empowerment	4.42	.460	.046	.009	-.069	.086	.312**	.345**	1	
8. Job performance	4.28	.437	.004	-.004	.084	.016	.248**	.334**	.476**	1

Note: Employee N = 214; Supervisor N = 89; for gender, 0 = male, 1 = female
 * $p < 0.05$; ** $p < 0.01$

Source: the authors

To test Hypotheses 3a and 3b, which predict the mediation role of employee empowerment on the relationships between digital skills training and job performance; and access to digital platforms and job performance respectively, a hierarchical regression analysis was performed. Firstly, the mediator variable was regressed on the two independent variables in order to ascertain the strength of their relationships. As shown in Model 2 of Table 2 below, employee empowerment showed a significant positive relationship with digital skills training ($\beta = .198$; $p < .01$) and access to digital platforms ($\beta = .275$; $p < .01$). The model also recorded an R2 value of 0.176. The total effects of the control variables were, however, not significant ($p\text{-value} > 0.05$).

We then carried out a regression analysis in order to determine the strength of the mediation. As presented in Table 3 below, Model 1, which recorded an R2 value of .008, showed the entire effects of the control variables were not significant

($p\text{-value} > 0.05$). In Model 2, both the independent variables (digital skills training and access to digital platforms) were incorporated. An R2 value of 0.143 was recorded with both digital skills training ($\beta = .140$; $p < 0.05$) and access to digital platforms ($\beta = .293$; $p < 0.01$) recording significant values. In the third model, the mediator variable (employee empowerment) was incorporated. The direct effects of only access to digital platforms and employee empowerment were significant. Also, the model recorded an R2 value 0.283. Beta values for predicting and mediator variables were: digital skills training ($\beta = .059$; $p > 0.05$), access to digital platforms ($\beta = .180$; $p < .01$) and employee empowerment ($\beta = .412$; $p < 0.01$). These results indicate that employee empowerment fully mediates the impact of digital skills training on employees' performance and partially mediates the impact of employees' access to digital platforms on employees' performance.

To confirm the indirect effect of employee empowerment on the relationships between the independent variables and the dependent variable, Model 4 in Hayes' (2021) PROCESS macro for SPSS with 5000 bootstrap sample was used. As presented in Table 4 below, digital skills training had a significant indirect effect on job performance through employee empowerment (thus, effect =

.1044, SE = 0.0602, 95% CI = (.0041, .2316)). This suggests that employee empowerment fully mediates the relationship between digital skills training and employees' job performance.

Table 2 Regression Analyses predicting Employee Empowerment by Digital Skills Training and Access to Digital Platforms

Variables	DV: Employee Empowerment			
	Model 1		Model 2	
	β	t	β	t
Control Variables				
Gender	.010	.144	-.016	-.241
Age	-.060	-.680	-.062	-.761
Bank 1	.124	1.400	.087	1.064
Bank 2	.100	1.126	.083	1.009
Bank 3	.116	1.324	.123	1.512
Tenure	.142	1.553	.145	1.697
Independent Variables				
Digital Skills Training			.198**	2.843
Access to Digital Platforms			.275**	3.938
F	.788		5.491	
R Squared (R ²)	.022		.176	
Adjusted R ²	-.006		.144	
R ² Change	.022		.154	

Note: Employee N = 214; Supervisor N = 89. ** p < 0.01

Sources: the authors

Furthermore, access to digital platform had a significant indirect effect on job performance through employee empowerment (thus, effect = .1415, SE = .0816, 95% CI = (.0086, .3187)). This also suggests that employee empowerment partially mediates the relationship between access to digital platforms and employees' performance. These findings support the predictions of employee empowerment as a mediator between digital skills training and employees' job performance; and between access to digital platforms and employees' job performance. Hence, hypotheses 3a and 3b are supported.

Table 3 Results of Regression Analysis for Mediation

Variables	DV: Job Performance					
	Model 1		Model 2		Model 3	
	β	t	β	t	β	t
Control Variables						
Gender	.010	.139	-.019	-.274	-.011	-.181
Age	-.016	-.186	-.025	-.301	.005	.062
Bank 1	-.106	-1.192	-.140	-1.676	-.176*	-2.286
Bank 2	-.091	-1.023	-.109	-1.305	-.143	-1.863
Bank 3	-.067	-.756	-.063	-.763	-.114	-1.489
Tenure	.008	.085	.021	.244	-.041	-.513
Independent Variables						
Digital Skills Training			.140*	1.970	.059	.885
Access to Digital Platforms			.293**	4.125	.180**	2.658
Mediator Variable						
Employee Empowerment					.412**	6.306
F	.285		4.287		8.949	
R Squared (R ²)	.008		.143		.283	
Adjusted R ²	-.021		.110		.251	
R ² Change	.008		.135		.140	

Note: Employee N = 214; Supervisor N = 89.
 * p < 0.05; ** p < 0.01

Source: the authors

Table 4 Results of PROCESS Mediation Analyses

Indirect effects of Employee Empowerment:	Coefficient	SE	Confidence Interval (CI)	
			Lower	Upper
Digital Skills Training	.1044*	.0602	.0041	.2316
Access to Digital Platforms	.1415*	.0816	.0086	.3149

Note: Employee N = 214. *p < 0.05

Source: the authors

4. Discussion

Given the widespread influence of digital disruption in various sectors, the implementation of digital transformation has become an essential strategy for attaining sustainability and competitive advantage (Höyng & Lau, 2023; Marsh, Vallejos & Spence, 2022; Amankwah-Amoah, Khan, Wood & Knight, 2021). Hence, due to the swift progression of technology and heightened digital disruptions, organizations are compelled to endure substantial transformations in their operational procedures and strategic approaches (Chen, Li, Wang & Wu, 2023; Llopis-Albert, Rubio & Valero, 2021; Kraus et al., 2021). As part of the transformation, key employee centric digital transformation initiatives, namely, digital

skills training and access to digital platforms have been adopted by various firms so as to improve employees' adaption to these transformations. We therefore examine the efficacy of the two initiatives on employee empowerment and job performance.

A primary contribution of this study lies in understanding from the perspective of employee, the impact of key employee-centric digital transformation initiatives on their performance through the mediating role of employee empowerment. Based on Kanter's (1977) theory of structural empowerment, we argued and proposed that employee-centric initiatives namely; digital skills training, and access to digital platforms influence employee empowerment, which eventually leads to better job performance. A test of our hypotheses found support for the positive

relationship between digital skills training and employees' job performance and also on the relationship between access to digital platforms and employees' job performance. We also found support for the mediating role of employee empowerment on the relationships between the two independent variables and the dependent variable.

The findings of our study offer empirical evidence that aligns with Kanter's (1977) theory of structural empowerment. Specifically, we found a statistically significant and favorable impact of employee-centric digital transformation initiatives on employee empowerment. Thus, we argued and found support based on Kanter's theory that, empowerment is achieved and enhanced at the workplace when employees are provided with access to opportunity and support (digital skills training), as well as access to information and resources (access to digital platforms) which ultimately leads to improved job performance. This is also in line with Spreitzer's (2008) argument that employees' psychological empowerment is the outcome of organizations' structural empowerment, which ultimately results in improved performance among employees. Thus, these employee-centric initiatives significantly influence employees' empowerment and task accomplishment at the workplace. Furthermore, our findings are in line with existing research highlighting the relevance of digital skills training on employee empowerment and job performance (Lingling & Ye, 2023; Cirillo et al., 2023; Straub et al., 2023; Sam et al., 2022; Drydakis, 2022; Munawar et al., 2022; Monje Amor et al., 2021; Fawehinmi et al., 2020; Pham et al., 2020; Karacay, 2018). Also, the results of our study are in line with extant literature that highlights the importance of employees' access to digital platforms at the workplace on empowerment and job performance (Anderski et al., 2023; Jiang et al., 2023; Wang, Wan, Ma, Zhou & Chen, 2023; Bartczak, 2021; Sousa & Rocha, 2019).

Additionally, in transforming and streamlining their operations and processes in order to conform with various technological changes in the banking industry, our findings suggest that organizations should align their policies with the needs of their human resources in order to ensure overall success of digital transformation (Lerch & Gotsch, 2015). This is because human resources are regarded as the most important resource of every organization and, as such, careful management approach is required in order to get their full potentials (Rezaei et al., 2014). Thus, firms should communicate their

digital transformation strategy to their employees in a clear, objective, simple and unambiguous manner and also create various initiatives in order to make them conversant with changing processes and procedures at the workplace.

Finally, findings in this study suggest that firms should view digital transformation as an employee empowerment tool which, when implemented properly, could help in an organization's objective achievement potentials. By providing employees with the appropriate digital skills training and the right digital communication platforms, employees feel more empowered and proactive in their decision making, tasks delivery and objective attainment (Hsieh et al., 2022). Hence, employees become more results driven, more satisfied with their jobs and more productive, which translates to increased revenue, reduced cost, increased market shares, sustainability, dominance and above all competitive advantage (Hagerman et al., 2017; Hagerman et al., 2016).

5. Implications of the study

In terms of the theoretical implication, this study adds to the empowerment literature by identifying digital skills training and access to digital communication platforms as key contextual organizational (structural empowerment) factors that enhance employee digital empowerment and performance at the workplace in the era of rapid digital transformation. Also, by examining the relevance of the theory of structural empowerment in the banking setting, this study contributes towards the general application of the theory.

In terms of the practical implication of this study, this study suggests that management should recognize digital transformation as an important and powerful strategic tool for industrial dominance and sustainability. However, organizations could only recoup its benefits if it is properly implemented. Proper implementation requires aligning these transformational strategies with the needs of employees in the sense that employees understand and can relate to various digital strategies that are been implemented in an organization. This, therefore, focuses on the effectiveness of training and development that seeks to improve and perfect the digital abilities and potentials of employees; and access to digital platforms that seek to enhance communication as well as knowledge and information sharing at the workplace. These initiatives do not only improve the knowledge, skills and abilities of employees, but also go a step further to empower, motivate and

enrich the potentials of employees which is in effect a healthy recipe for improved performance, goal attainment and task fulfillment for employees and the organization at large.

Finally, policy makers should acknowledge that digital disruptions are unavoidable in the fourth industrial revolution and that these digital disruptions have a socioeconomic and political implications on every economy. When managed properly through effective implementation of digital transformation policies, these disruptions could be used as a weapon for sustainability, competitive advantage and development. Therefore, policy makers just like managers should consider the workforce as core to their digital transformation strategy and implement favorable policies that would help harness the digital potentials of the labor force.

Conclusion

Based on a survey of 214 employees and their 89 direct supervisors in four banking institutions in China, this study found support for the positive impacts of key employee-centric digital transformation initiatives, namely, digital skills training and access to digital platforms on employee performance. Support was also found for the mediating role of employee empowerment on the relationships between digital skills training and employee performance and access to digital communication platforms and employee performance. The results of the study suggests that it is imperative for the digital needs of employees to be given the utmost attention as an organization digitally transforms. Thus, organizations must align their digital strategy with the needs of employees in order to ensure the fruition of such digital transformation strategies.

Our study has a number of shortcomings that need to be addressed in future research. First, the study was conducted among employees of just four banking institutions only. Notwithstanding this limitation, efforts were made to minimize this limitation by selecting banks with national coverage and also with global digital transformation practice. Further research could include several other banking institutions for easy generalization of the study. Secondly, since digital transformation takes place not only in the banking industry, further research could focus on other industries that are equally experiencing the full impacts of digital transformation in the fourth industrial revolution. These industries include but not limited to the insurance industry, the

automobile industry, the healthcare industry, the fashion industry, the legal services industry, the hospitality industry among others. Finally, future research could examine the influence of employee-centric digital transformation initiatives on other dependent variables such as employee engagement, customer satisfaction, employee creativity and innovation, employee inspiration, organizational effectiveness etc., as well as the roles of other moderators like learning orientation, reward systems, morale and among others.

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