

Porkodi, S.; Balushi, Shahla Said Khamis Al; Balushi, Marwa Khalid Mohammed Al; Hadi, Khulood Othman Rashid Al; Murad, Zulfa Is'haq

Article

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DIGITAL EMPLOYEE EXPERIENCE AND ORGANIZATIONAL PERFORMANCE: A STUDY OF THE TELECOMMUNICATIONS SECTOR IN OMAN

S. PORKODI , Shahla Said Khamis AL BALUSHI, Marwa Khalid Mohammed AL BALUSHI, Khulood Othman Rashid AL HADI, Zulfa Is'haq Murad AL BALUSHI

*Department of Business Studies, College of Economics and Business Administration,
University of Technology and Applied Sciences, Muscat, Sultanate of Oman*

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Abstract. Purpose – The study aims at assessing the effect of digital employee experience on organisational performance, particularly in the telecommunications sector in the Sultanate of Oman, using quantitative and qualitative analysis.

Research methodology – The techniques used in this empirical research include scientific literature analysis, correlation analysis, multiple regression, and sentiment analysis.

Findings – The results indicate that organisational performance has a higher association with elements of the digital employee experience like work environment, organisational culture, training availability, technology accessibility, digital tool usability, and leadership support and is statistically significant at the 5% level. Also, 80% of respondents were favourable or indifferent about their digital experience.

Research limitations – The study exclusively covers Oman's telecoms industry and six important digital employee experience elements, so additional factors and industries may be examined further. A direct interview may improve findings since self-reported responses from individuals with demanding work schedules may be biased.

Practical implications – Telecommunication companies must increase their efforts to engage employees in the use of digital tools and encourage their employees to utilise the different digital technologies.

Originality/Value – The study investigated the six elements of the digital experience of telecom employees and its impact on organisational performance with multiple regression and sentiment analysis.

Keywords: digital employee experience, digital tool usability, organizational culture, work environment, organizational performance.

JEL Classification: J24, L20.

 Corresponding author. E-mail: dr.porkodi@gmail.com

Introduction

The digital employee experience (DEX), one of the outcomes of pervasive digital transformation in the workplace, completely transformed the way businesses operate by reorienting organizations' priorities away from managers' needs and toward the needs of all employees and their experiences at work (Gheidar & ShamiZanjani, 2020). DEX is considered a critical factor in creating a positive work environment and driving business outcomes. According to Deloitte Insights (2019), DEX-prioritizing companies have four times more engaged workers than others. Further, Burnett and Lisk (2019) insisted that DEX also increases employee engagement, productivity, and customer satisfaction in a considerable way. A human-centred

design approach to digital tools and platforms may increase DEX by knowing employee requirements, preferences, and behaviours and building digital solutions to satisfy them (Deloitte Insights, 2019).

The DEX may be affected by various elements, including digital tool usability, technological accessibility, training availability, leadership support, organisational culture, and the working environment (Gheidar & ShamiZanjani, 2021). Digital tool usability is determined by its workers' ability to use digital products and services, and technology accessibility is described as the availability of the same technology to everyone, regardless of how they use it, and both are vital for the digital experience (Martínez-Caro et al., 2020). Additionally, the available training sessions that organisations can provide for their workers to develop their digital experience and skills, how effectively leaders support in enhancing their employees' abilities and knowledge, and the working environment of the employee are also significant (Chandwani et al., 2021; Taheri et al., 2020; Kareem et al., 2019). Moreover, leaders must also collaborate with their employees to encourage them to share ideas while utilising digital tools (Paderna et al., 2020). Organizational culture is the set of values and beliefs that are shared within the organisation and is also influence the DEX as it determines the behaviour of its members (Ravasi & Schultz, 2006). The two most important factors for better DEX are the ability of employees to adapt to new technologies and the readiness of their workplace for digital interaction. Thus, the organisation must deliver employees' requirements on technology tools and other equipment to improve their job effectiveness (Syahchari et al., 2021).

1. Problem of the research

DEX can be a tool to get employees more involved, motivated, and productive by letting them learn and improve their skills while using digital devices. As a result, it will increase organisational performance, thus increasing organisational output and results. However, a number of factors might have an impact on an organization's effectiveness, including a lack of qualified HR experts and a lack of awareness of the DEX in the workplace, which pose challenges in the organization's journey. Moreover, some employees might not be well educated or trained in dealing with AI tools, and this might not create a positive experience for them (Moganadas & Goh, 2022). Also, digital transformation needs lots of time and detailed planning, which underlines the need for further investigation on this topic.

Any industry may leverage digital technology to enhance employee experience and performance if they understand DEX and its implications on organisational performance and employee sentiments. Research shows that enhancing the DEX may improve productivity, employee engagement, and customer satisfaction. Equally, Oman's telecommunications industry has revolutionised digitally with 5G networks and IoT devices (Pandurengan et al., 2022). The way workers use digital technology has changed due to this revolution, which may affect organisation performance. Due to restricted access to digital technologies and minimal training, the Omani telecoms sector has struggled to provide its workers with a positive DEX (Al Jabri et al., 2017).

Several researchers have shown that DEX can have a significant impact on employee engagement, productivity, and job satisfaction (Deloitte Insights, 2019). A few studies have

shown that employees' attitudes on DEX may affect company performance. However, there is little study on how DEX affects the performance of Oman's telecommunications companies. Positive employee sentiment towards DEX is associated with job satisfaction, productivity, and retention, whereas negative sentiment may contribute to poor morale, absenteeism, and high turnover rates (Hee et al., 2018). To improve engagement, satisfaction, and performance in Oman's telecoms industry, firms must understand employee opinions about DEX.

Thus, this research aims at examining DEX, its effects on organisational performance, and employee attitudes regarding DEX. The findings of this study may help organisations improve DEX and understand DEX's role in Oman's telecommunications industry. Thus, the primary objective of the research study is to analyse the impact of DEX on organisational performance and the sentiments of employees towards their digital experience and its influence on their job performance in Oman's telecommunications sector. To achieve the above research objective, the following research questions have been framed:

1. How does DEX impact organisational performance in the telecommunications sector in Oman?
2. What are the sentiments of employees in Oman's telecommunications sector regarding their digital experience and its impact on their job performance?

2. Review of literature

The digital revolution has made DEX a crucial part of the work experience, particularly after the pandemic (Soñta, 2021). DEX provides a digital workplace and seamless technologies for business events to engage workers. Human resources have been greatly impacted by digitalization and modernization. According to Moganadas and Goh (2022), the DEX's core constructs are digital technologies and environment, digital culture and work practice, individual traits, and demography. Expert analysis by Gheidar and Zanjani (2021) found eight major DEX components: business strategies, leadership, career, brand, personal, cultural, technological, and physical, as well as 70 sub-components. Although employee experience depends on how companies connect with their customers or workers, DEX emphasises how employees interact with their digital devices and the digital workplace. Thus, worker-supervisor and other company relationships may change (Stone et al., 2015).

The report published by Chandwani et al. (2021) reveals that businesses should emphasise investing in upgrading their workforces' skill sets as technological advancements offer sustained benefits across all company sectors. Though the significance of digital transformation was acknowledged by Martínez-Caro et al. (2020), the authors insisted that the adoption of a digital organisational culture is essential if businesses are to realise the full benefits of digital transformation and use it to accelerate the growth of value-creating activities. The research conducted among the digital employees also revealed that the efficiency of the business is affected by the digital worker's expertise and agility (Syahchari et al., 2021). Further, the analysis of employee service orientation on digital employee experience revealed that both DEX and ambidexterity positively affect employee agility (Sudrajat et al., 2021). Further, the analysis of employee service orientation on digital employee experience revealed that both DEX and ambidexterity positively affect employee agility (Sudrajat et al., 2021). Moreover, an

employee experience scale is used by certain companies to assess employees' job satisfaction and interactions with management, colleagues, customers, and the public.

Commonly, the communication, lifestyle, and work habits of young employees have changed as technology has become more ubiquitous. According to Ingham (2017), the technological collaboration of the digital workforce with the organisation is crucial to customer experiences and thus, HR practices must provide suitable tool, training and enough access to digital technologies. Therefore, owing to the significance of technology and DEX, most firms have integrated employee experience into their employee engagement strategy (Tucker, 2020; Porkodi & Ghosal, 2015). The next subsections provide a summary of the more in-depth literature analysis that was conducted on the various key components of the DEX and the impact that it had on the overall performance of the organisation.

2.1. Elements of DEX

Digital tool usability: It helps individuals efficiently do tasks by allowing them to readily access information through phones, apps, and software. Usability is defined as the user's ability to comprehend, learn, and interact with the software programme. Usability is crucial while implementing new technology in the workplace, and thus, simple, easy-to-use tools enable workers to perform swiftly and without issues (Wilson & Daugherty, 2018; Kareem et al., 2019). The usability of digital technologies improves the employee experience by making it easier to learn and adapt to changes. It makes task completion and learning new technologies easier (Abdeldayem & Aldulaimi, 2020).

Technology Accessibility: Due to the ongoing digital transformation, employees need access to technical resources as well as digital technologies in the workplace. Since workplace accessibility is essential in all firms, employees' digital tools, technology, and other resources should meet their needs (Dhanpat et al., 2022). Accessible technology removes barriers and delivers a fully digital experience for diverse employee groups. Employees can maximise their productivity when technology is easily accessible, and it improves DEX as they use easily available and easy-to-use technology at work every day (Burnett & Lisk, 2019). Assistive and accessible technology benefits both employees and the organisation (Dash et al., 2019). Thus, successful performance and improved employee experience require sufficient technology accessibility, which is rarely evaluated in research studies.

Training Availability: Investing in digital workforce training, improving Internet connections, and integrating technology may help developing nations improve their industrial growth (Wiles, 2022). Everyone benefits from technology's broad adoption, and with a well-educated digital workforce, employee engagement will grow considerably (Molino et al., 2020). Pires (2017) noted that baby boomers are retiring quickly and leaving crucial organisational roles to Millennials and Generation Z, whose digital experiences have already been established. Thus, they merely need more training and improved conditions to adapt to the digital shift (Gheidar & ShamiZanjani, 2020). Chandwani et al. (2021) also claimed that employee development initiatives that involve basic technological skills help firms sustain their business strategies and profitability.

Leadership Support: Organizations need capable leaders to accelerate their development. Stock prices of formerly dominant companies decrease because they lack the leadership and resources to maintain their position (Gheidar & ShamiZanjani, 2020; Paderna et al., 2020). The employee-superior relationship is essential for employee engagement (Rahmadani et al., 2019; Porkodi & Tabash, 2022). Engaging leadership enhances job resources, which mediates the connection between leadership and basic needs fulfilment. According to Meng et al. (2017), managers must boost employee satisfaction and engagement. Good leaders understand their employees, invest time and resources in them and create positive work experiences.

Organizational Culture: Values, ethics, goals, and beliefs define organisational culture. Despite cultural variations, the company seeks to create and promote its own culture (Is-mail Al-Alawi et al., 2017). Moreover, the organisational culture and employee trust always affect their performance. Employer branding also has an impact on employee engagement and satisfaction (Porkodi & Jahan, 2022). Gochhayat et al. (2017) found that organisational culture affects efficiency more. Thus, organisational culture substantially impacts digital employee satisfaction, and digital employees are more skilled if the firm has a digital culture. In particular, if the organisational culture promotes technology and digital experience, workers may aspire to improve their digital abilities (Martínez-Caro et al., 2020; Paderna et al., 2020).

Work Environment: Employees work in the workplace, which includes the office, tools, air conditioning, electronic devices, work policies and systems (Gheidar & ShamiZanjani, 2021). Employees are satisfied and more productive in a favourable work environment (Moganadas & Goh, 2022). Digital technology and the provision of all electronic requirements to employees improve the workplace and make it easier for them to improve their digital experience. With the advent of digital technology, it is important to provide all technical equipment in the workplace to enable employees to work and develop, which lifts business productivity (Taheri et al., 2020).

A pilot study was performed to assess the DEX elements, including intensity of digital tool usability, technology accessibility, training availability, leadership support, organisational culture, and working environment, and to examine the relationship between DEX and employee demographic characteristics like gender, age, education level, work experience, digital literacy, and job tenure in Oman's telecommunications sector (Porkodi et al., 2023a). The results revealed that the usability of digital tools has a disproportionately large effect on the DEX, and all demographic characteristics, with the exception of gender, affect the digital experience of employees.

2.2. DEX and organizational performance

Rapid technological advancements alter the digital and online experience, and workers compare each connection to their best online experiences, which raises the standards for the digital experience. Employers that invest in their workers' digital experiences may improve performance and employee satisfaction (Kurdi & Alshurideh, 2020). Companies also consider the impact of their digital infrastructure on employees. According to Robertson (2018), DEX evaluates workplace digital engagement. From building connections with remote workers to finding the right digital tools, employees' work lives must be considered (Kareem et al., 2019).

Then, what can be done to improve productivity, employee satisfaction, and efficiency can be determined (Martínez-Caro et al., 2020). The result is a DEX without departmental silos, increased remote workers, digital resources, and employee engagement.

According to Syahchari et al. (2021), DEX and flexibility affect the organization's performance. The research showed that DEX, employee agility, and dry port business effectiveness are correlated while service orientation and staff ambidexterity both affect agility. DEX, as a moderator, was found to level out the effects (Sudrajat et al., 2021). However, these studies focused on dry port companies. The previous studies that were conducted by different researchers showed different information; however, the studies that focus on DEX are very limited. Moreover, the studies have many limitations, such as the limited experts' participation (Gheidar & ShamiZanjani, 2021), missing empirical analysis (Moganadas & Goh, 2022), a limited number of samples (Syahchari et al., 2021; Sudrajat et al., 2021), consideration of few DEX elements (Chandwani et al., 2021), missing quantitative analysis, focusing on a single event or department (Stone et al., 2015), and more. Thus, this study is conducted to fill the research gap identified from past research and to examine the impact of various DEX elements that result in positive organisational performance in the telecommunications sector in Oman.

Thus, the study hypothesis has been designed based on the influential elements of employee experience to quantify DEX's influence on organisational performance in Oman's telecommunications industry.

- H1: There is a positive relationship between DEX (elements) and organisational performance in the telecommunications sector in Oman.
- H1a: Digital tool usability affects organisational performance positively.
- H1b: Technology accessibility has a positive effect on organisational performance.
- H1c: Training availability positively impacts organisational performance.
- H1d: Leadership support impacts organisational performance positively.
- H1e: Organizational culture affects organisational performance positively.
- H1f: The working environment positively impacts organisational performance.

3. Research framework and methodology

Based on literature analysis, a conceptual framework has been developed to show the research objectives and hypotheses, including DEX's influential factors. Figure 1 depicts the conceptual framework. With the elements of DEX as independent variables, organisational performance is considered a dependent variable, based on which their relationships are assessed. Thus, the proposed framework intends to clearly analyse the impact of DEX on organisational performance in the telecommunications sector.

This exploratory study employs a mixed approach to acquire and analyse data. This aids in understanding the study subject, making complex research challenges easier to handle (Enosh et al., 2014). With the aid of information gathered from the questionnaire, the study investigates the six elements of DEX (independent variables), and the impact of the DEX on organisational performance (a dependent variable). Specifically, the research targeted approximately 11,200 employees working in the telecommunications sector, regardless of their gender, age, etc. (Companies include Omantel, Ooredoo, Awasr, Vodafone, Renna Mobile,

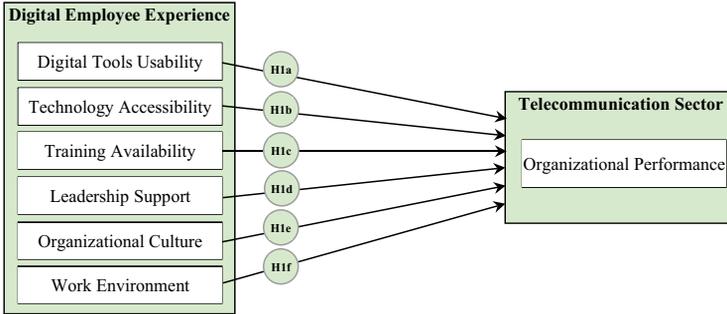


Figure 1. Conceptual framework of the proposed study

and FRIENDi Mobile). The size of the samples n for estimating the portion of the overall population (11,200) is determined with a 95% confidence level and a 5% margin of error, as in (1) and (2) (Daniel, 1999).

$$n = N \times \frac{X}{(X + N - 1)}; \tag{1}$$

$$X = \frac{Z_{\alpha/2}^2 \times p \times (1 - p)}{MOE^2}, \tag{2}$$

where $Z_{\alpha/2}$ is the critical value of the normal distribution at $\alpha/2$, MOE is the margin of error, p is the sample, and N is the population size.

The sample size calculation suggests targeting 137 respondents in Oman’s communications firms. However, after consulting with experts, it was agreed to survey 150 employees from a population of 11,200. The study also employs quota sampling, a non-probability method that splits a population into homogeneous subgroups called quotas before sampling (Hayes, 2022). To conduct quota sampling, the population is first divided into subgroups or quotas based on the companies they work for. The proportion of employees in each company is determined based on their representation in the population, which is mentioned in Table 1. Further, the snowball method is used to gather the data, which recruits or recommends responders to obtain data quickly and conveniently.

Table 1. Distribution of sample size among telecom companies

Quota	Company	# Employees	Sample size proportion
1	Omantel	+5,000	67 (44.6%)
2	Ooredoo	+5,000	67 (44.6%)
3	Awahr	+300	4 (2.7%)
4	Vodafone	+500	6 (4.5%)
5	Renna Mobile	+200	3 (1.8%)
6	FRIENDi Mobile	+200	3 (1.8%)
	Total	11200	150

This research used a structured questionnaire issued online to 150 Omani telecom company employees to examine the relationship between DEX and organisational performance. Specifically, the questionnaire has a total of 45 questions, out of which, 40 are closed-ended and 5 are open-ended. For the closed-ended questions, the study uses a 5-point Likert scale: (5) strongly agree, (4) agree, (3) neutral, (2) disagree, and (1) strongly disagree. To ensure the quality of the structured questionnaire, research professionals were consulted and discussed throughout questionnaire development. The questionnaire was developed with input from a variety of previously conducted research studies by Kareem et al. (2019), Kurdi and Alshurideh (2020), Paderna et al. (2020), and Wiles (2022) that are relevant to the research analysis.

Generalisability of the research

The point of conducting research is to draw general conclusions, which may be proved through the consolidation of evidence. The ability to account for the characteristics of the study's intended sample is an important component of generalizability (Gobo, 2004). In general, the study's generalisations depend on the sample's accuracy and population representation for quantitative research and the researcher's interpretation and understanding of conditions for qualitative research (Carminati, 2018). In spite of the fact that each nation is located in a unique part of the world, it is home to people with a diverse range of characteristics (Porkodi et al., 2023b). Today's culture relies on telecommunications to easily communicate and share information over large distances, which contributes to the economic growth of the country. These digital technologies also help organisations connect with clients and provide excellent service.

In general, various factors such as religious belief, language, time, business norms, country, race, and culture clearly differ among employees working in the telecommunications sector. However, skills such as technical expertise, a discerning mind, flexibility and adaptability, innovativeness, collaboration, willingness to learn, and the ability to collaborate and communicate effectively are required for employees working in the telecom sector all over the world. The study therefore makes the assumption that these employees' key characteristics are the same everywhere. Thus, the influence of various basic DEX elements, including digital tool usability, technology accessibility, training availability, leadership support, organisational culture, and working environment, and their impact on organisational performance as analysed for the sample employees working in the telecommunications sector in Oman, can be generalised to the total population. The reliability of the extension of these study results and conclusions is therefore statistically reasonable but not absolutely certain due to the fact that different countries have distinct business rules, which also does not mean that the reliability is compromised.

4. Research results

This section demonstrates the various quantitative and qualitative data analyses performed on the data collected through a survey questionnaire. The research employed SPSS 22.0 for correlation and regression and Orange 3.31.1 for sentiment analysis.

4.1. Quantitative analysis

To assess the effect of DEX on organisational performance, the collected data is examined using correlation and regression analysis. Correlation analysis is used in market research to find significant relationships, patterns, and trends in quantitative data from surveys. High correlations imply a strong association between two variables, whereas low correlations suggest a weak relationship. In this study, Pearson's correlation analysis (r) is used to determine the strength/degree of the relationship between DEX and organisational performance. Thus, the correlation between DEX elements like digital tool usability (DU), technology accessibility (TAC), training availability (TA), leadership support (LS), organisational culture (OC), and working environment (WE) and organisational performance (OP) was examined. The overall reliability score is 0.953, indicating strong reliability of the measurement. Individual scores also indicate the responses are consistent, each group assess the same properties. Table 2 displays the findings.

Table 2 shows that all DEX factors are substantially correlated with organisational performance, and all DEX elements share the same significance level of 0.001. Precisely, work environment, organisational culture, and training availability are more significant for organisational performance than other DEX elements, with correlation values of 0.788, 0.735, and 0.702, respectively. Also, technology accessibility, digital tool usability, and leadership support exhibit modest association with organisational performance (0.609, 0.529, and 0.485, respectively). The average correlation between DEX elements and organisational performance is 0.641, indicating that DEX is highly significant for organisational performance at a 0.001 significant level.

Table 2. Correlation between DEX and organisational performance

Elements (Reliability Scores)	Method	DU	TAC	TA	LS	OC	WE	OP
DU (0.835)	Correlation	1	.652**	.470**	.350**	.460**	.479**	.529**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001	<.001	<.001
TAC (0.804)	Correlation	.652**	1	.618**	.549**	.569**	.601**	.609**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	<.001	<.001
TA (0.864)	Correlation	.470**	.618**	1	.645**	.719**	.754**	.702**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001	<.001
LS (0.808)	Correlation	.350**	.549**	.645**	1	.607**	.636**	.485**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001	<.001
OC (0.822)	Correlation	.460**	.569**	.719**	.607**	1	.820**	.735**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001	<.001
WE (0.816)	Correlation	.479**	.601**	.754**	.636**	.820**	1	.788**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001		<.001
OP (0.847)	Correlation	.529**	.609**	.702**	.485**	.735**	.788**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	<.001	

Note: ** indicates significance at 0.01 (2-tailed) and N = 150.

Furthermore, multiple regression is also employed to assess the impact of DEX on organisational performance. Regression analysis is used to determine the interplay between the dependent variable (the major focus of the study) and the independent variable (which is explored to see whether it influences the dependent variable). It also determines which variables are significant, which are easily neglected, and which affect one another. In this study, the dependent variable is organisational performance, and the independent variable is DEX. Thus, the study employs regression analysis to determine the kind of impact that DEX elements (an independent variable) may have on organisational performance (a dependent variable). The result also emphasises the major effect that DEX will have on organisational performance. Thus, regression equation for the proposed study is formulated as in (3):

$$Y = a + b(X_1 + X_2 + X_3 + X_4 + X_5 + X_6), \quad (3)$$

where Y and X are the dependent and independent variables; a is the estimate of the regression or intercept, and b is the estimate of the slope coefficient. Here, Y signifies organisational performance, and X_i is a DEX element, including digital tool usability (X_1), technology accessibility (X_2), training availability (X_3), leadership support (X_4), organisational culture (X_5), and work environment (X_6). The correlation and coefficient of determination (R^2) of the regression model are shown in Table 3.

Table 3. Model summary of regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.833 ^a	0.694	0.681	0.31403

Note: Predictors- Constant, digital tool usability (x_1), technology accessibility (x_2), training availability (x_3), leadership support (x_4), organisational culture (x_5), and work environment (x_6).

The multiple correlation coefficient of 0.833 in Table 3 shows the strong and positive association between the dependent variable (organizational performance) and the independent variable (DEX). Here, the resultant values are a linear combination of digital tool usability (X_1), technology accessibility (X_2), training availability (X_3), leadership support (X_4), organisational culture (X_5), and work environment (X_6). The R^2 value of 0.694 indicates that organisational performance (the dependent variable) and DEX elements (the independent variable) vary by 69.4%, and it is significant at $p < 0.001$. The analysis of variance (ANOVA) is performed to see whether the regression model explains a statistically significant fraction of the variation. Table 4 shows the ANOVA result for the proposed regression model.

Table 4. Results of the ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	31.928	6	5.321	53.960	<0.001 ^b
	Residual	14.102	143	0.099		
	Total	46.030	149			

Note: Dependent variable-organizational performance; Predictors-constant, digital tool usability (x_1), technology accessibility (x_2), training availability (x_3), leadership support (x_4), organisational culture (x_5), and work environment (x_6).

Also, Table 4 shows that the F-ratio is 53.960 and the significant value is <0.001 (<0.05). This rejects the null hypothesis and shows that organisational performance and DEX are substantially related. Table 5 shows multiple regression values. Thus, after determining the regression coefficients, the regression equation may be modified as in (4):

$$Y = 0.921 + 0.089X_1 + 0.107X_2 + 0.157X_3 - 0.112X_4 + 0.175X_5 + 0.405X_6. \quad (4)$$

Table 5. Results of multiple regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.921	0.202		4.554	<.001
Digital Tool Usability (X_1)	0.089	0.053	0.105	1.684	0.049
Technology Accessibility (X_2)	0.107	0.065	0.118	1.648	0.041
Training Availability (X_3)	0.157	0.066	0.187	2.374	0.019
Leadership Support (X_4)	-0.112	0.049	-0.149	-2.289	0.024
Organizational Culture (X_5)	0.175	0.072	0.206	2.427	0.016
Work Environment (X_6)	0.405	0.082	0.452	4.966	<.001

Note: Dependent Variable-Organizational Performance.

As indicated in Table 5, the work environment variable, X_6 has a p -value < 0.001 , indicating that the work environment strongly affects organisational performance and is highly statistically significant. On the other hand, for all the other variables such as digital tool usability (X_1), technology accessibility (X_2), training availability (X_3), leadership support (X_4) and organisational culture (X_5), the p -values are 0.049, 0.041, 0.019, 0.024, and 0.016, respectively. Since, $p < 0.05$, the elements are significant at the 5% level.

Thus, the results indicate that DEX has an impact on organisational performance, rejecting the null hypothesis and accepting H1: DEX elements positively affect organisational performance in Oman's telecommunications industry. This also supports the sub-hypotheses H1a, H1b, H1c, H1d, H1e, and H1f, which show that DEX elements including digital tool usability, technology accessibility, training availability, leadership support, organisational culture, and work environment improve organisational performance.

4.2. Qualitative analysis of employees' sentiments

To explore the sentiments of employees in Oman's telecommunications sector towards their DEX and its influence on their job performance, qualitative analysis has been carried out on the responses given by the respondents to the open-ended questions of the survey questionnaire. Qualitative data analysis collects and analyses non-numerical data to understand people's attitudes, beliefs, and motivations. The respondents' opinions on DEX have been thoroughly investigated using a variety of qualitative and sentimental analytic techniques. Generally, sentiment analysis evaluates subjective statements about a subject or object. Each response is characterised by its emotional value using Vader, a lexicon- and rule-based

sentiment analysis. This method scores the input string as negative, neutral, positive, or compound (aggregated normalised scores). The sentiment is positive if its compound score is ≥ 0.05 , negative if it is ≤ -0.05 , and neutral if it is between -0.05 and 0.05 .

In the study, stop words were removed before evaluating their sentiment scores. The result has four columns: positive, negative, and neutral sentiment scores, and a compound score that combines the previous scores. The k-means clustering approach is used to cluster rows with closer data points (cluster size = 50) to produce positive and negative categories. The average employee sentiments about DEX and its influence on job performance are used for analysis. For easy interpretation, Figure 2 graphs the average sentiment values, and Figure 3 graphs the compound score sentiment distribution.

Figure 3 shows that 120 responses are positive (compound score ≥ 0.05), 29 are neutral (compound score between -0.05 and 0.05), and 1 is negative, indicating that most respondents are positive about their DEX. Similarly, while assessing the compound score of DEX on organisational performance, 107 positive sentiments, 38 neutral sentiments, and 5 negative sentiments indicate that most respondents believe their DEX affects their job performance. Figures 4 and 5 show a heatmap, a data visualisation approach that employs colour-coding to indicate values for respondents' sentiments, where white indicates positive responses (positive compound score), blue is negative and green neutral.

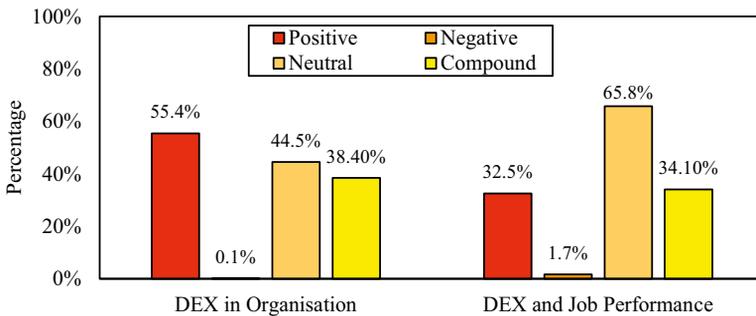


Figure 2. Average sentiments on DEX's effects

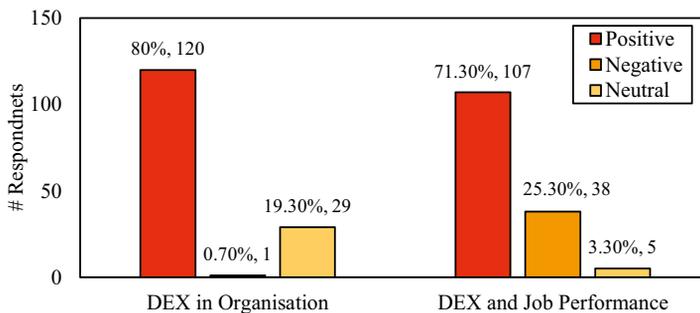


Figure 3. Sentiment distribution on DEX's effects

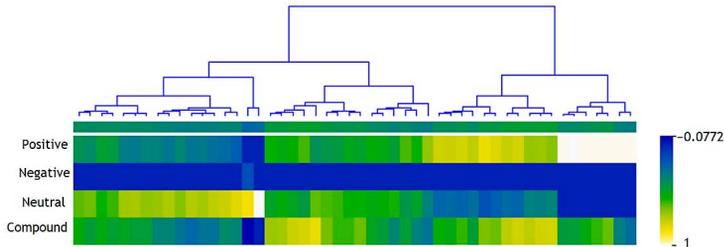


Figure 4. Heatmap for sentiments on DEX in the organisation

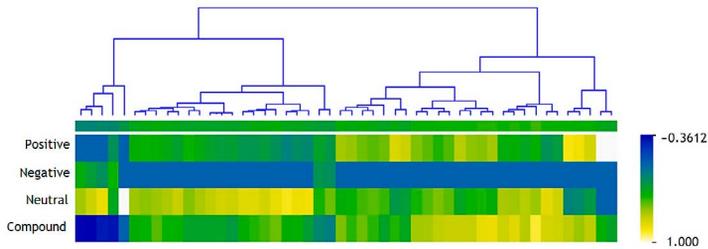


Figure 5. Heatmap for sentiments of DEX and job performance

Sentiment analysis of the employees' responses shows that most employees view DEX favourably, with some holding negative opinions. However, it also reveals that most responses from respondents regarding their DEX and its impact on overall job performance are neutral rather than positive. Although the evaluation reveals a lower degree of negative sentiments, the responses are positive, with negative statements like "fewer mistakes", "reduce errors", "fewer performance mistakes", and "fewer human errors". Conclusively, respondents had a more favourable and neutral impression of DEX's effect on overall work performance.

Further, a network diagram was used to analyse the firm's attempts to assist its employees in improving their digital skills by visualising the frequently occurring terms and their associations from the responses given by the respondents. Figure 6 shows the resulting network diagram, in which the size of the circle and the thickness of the lines are both proportional to the frequency with which the phrases occur together. A close examination reveals that most firms provide training courses, weekly practical sessions, and seminars to help employees improve their digital skills. Other strategies include giving the essential digital tools and encouragement to utilise them, offering access to all new digital tools, conducting training sessions, and encouraging staff knowledge exchange.

Besides, Figure 7 shows the top 20 terms that occurred most often in the responses, which were analysed to see how digital tools and technology have affected job performance. The interpretation of the result shows that around 68% (102 responses) of the respondents mentioned the direct answer as "yes". The other positive terms such as "sure", "absolutely", "definitely", "certainly", and "of course" also show that the respondents noticed a change after using digital tools and technologies. Moreover, terms like "performance", "improved", "better", "increased", "faster", "positively", "changed" and "clearly" show that digital tools have a positive effect.

The respondents' opinions on improving the DEX's effect on the job and organisational performance in the telecommunications sector were evaluated using a word cloud by determining the importance of significant words in the responses. Figure 8 shows a word cloud of the top 100 terms that represents the significance of respondents' opinions by varying font size and colour. The results indicate that most telecom workers value "educating staff about training programmes", "rewards and perks", "recognition", "bonuses", and "acting on feedback". Few employees also recommend "being up-to-date", "access to digital tools/resources", "investing in the right technology", "providing more opportunities and encouragement", "effective guidance to use digital tools", and "continuous support" to improve the DEX's effect on the job and organisational performance.

5. Discussion

While investigating the DEX and its impact on organisational performance in the telecommunications sector in Oman, it was found that few studies were conducted in the literature (Kurdi & Alshurideh, 2020). These studies revealed that DEX has a stronger influence on organisational success (Martínez-Caro et al., 2020). However, a few researchers studied the relationship between DEX and organisational performance and concluded that the level of experience and the adaptability of digital tools influence organisational performance (Kareem et al., 2019; Syahchari et al., 2021). However, the DEX was evaluated only as a moderating factor. Moreover, the results are reported only based on the smaller number of samples and simple descriptive or qualitative analysis, so the results cannot be generalised (Sudrajat et al., 2021).

Thus, the research has been carried out, and the results revealed that there is a significant relationship between the performance of the organisation and employees' digital experiences using correlation analysis. The results indicate that all the elements of the DEX share the same value of significance with organisational performance, that is, $p < 0.001$, which indicates that the variables are highly significant. The work environment and organisational culture are strongly associated with organisational performance, with a correlation value of 0.778 and 0.735, respectively. In addition, there is a notable association between organisational performance and the availability of training, with a value of 0.702. On the other hand, organisational performance has a moderate relationship with technology accessibility (0.609) and ease of use of digital tools (0.529). However, the relationship between organisational performance and leadership support has a low-moderate association with a correlation value of 0.485.

By using multiple regression analysis, the impact of DEX elements on an organization's performance was determined. The results indicate that the work environment is an element that has the most impact on organisational performance, as it showed high significance with $p < 0.001$. In addition, training availability, leadership support, and organisational culture also impact organisational performance, with p values of 0.019, 0.024, and 0.016, respectively, which indicate that these elements are significant at the 5% level. On the other hand, digital tool usability and technological accessibility have p values of 0.049 and 0.041, respectively, both of which are significant at the 5% level and both have an impact on organisational performance.

The qualitative analysis explored the sentiments of employees in Oman's telecommunications sector towards their DEX and its influence on their job performance. According to sentiment analysis, most workers felt favourable or indifferent. More precisely, 55.4% of respondents felt good about DEX in the workplace, 44.5% were neutral, and 0.1% felt negative. In addition, 65.8% of respondents were indifferent regarding DEX's influence on job performance, 32.5% were positive, and 1.7% were unfavourable. Positive comments with negative terms were more prevalent in the response, resulting in fewer negative sentiments. Thus, the qualitative study demonstrates that DEX improved job performance when digital tools/technologies were introduced.

The survey confirmed the positive impact of digital tools from the employees' perspective. It is also found that most companies offer their employees the tools and training courses they need to enhance their abilities, encourage them to attend seminars, provide them access to digital tools, and help them share information and expertise with their coworkers. However, employees of telecommunication companies stated that educating them with additional training programmes, offering them prizes and advantages depending on the tasks they do use digital tools, and staying up-to-date on the latest technology were the primary aspects that led to a favourable DEX at work. Some also recommend investing in the correct technology, setting clear boundaries for digital device use, and supporting employees produce a great employee experience and higher performance.

5.1. Theoretical and practical implications

The study has some theoretical implications. The research focuses on the telecommunications sector in Oman, and thus the results cannot be generalised to other sectors or other countries. Thus, the future study aims at targeting different countries and different industries where DEX is considered crucial. Moreover, the research study focuses on six elements that were identified from the literature review, such as digital tool usability, technology accessibility, training availability, leadership support, organisational culture, and work environment. However, there are still other factors, such as communication and employee expertise, that also influence the DEX in the enterprise. Thus, future studies can cover all the other variables related to DEX on organisational performance. Also, as self-reported replies from those with rigorous work schedules may be skewed, a direct interview may enhance results.

Some of the practical implications are also generally identified for telecommunications companies. Companies must increase their efforts to engage employees in the use of digital tools and encourage their employees to utilise the different digital tools. They must provide a user-friendly interface to facilitate digital tools. Workers will use digital resources more effectively if they have access. Continuous training sessions are needed to ensure better use of digital tools, and employees benefit from ongoing development programmes to improve their digital skills. Moreover, employees should also understand the purpose of using digital tools. Supervisors should provide guidelines and monitor subordinates' performance to ensure digital resources are not wasted.

Feedback from staff helps understand difficulties in using digital tools, and the suggested solutions need to be swiftly implemented. Companies should monitor workers' digital experiences and accept their suggestions for improvement. Recommendations can be used

to address issues and implement them. Furthermore, companies placed little importance on employee rewards, leading to dissatisfaction. So, they must reward workers for using digital technologies to boost productivity. Companies should focus on investing in the right tools and technologies, which are essential for success. Creating a comfortable work environment for digital devices is also important since it helps them participate in a community to exchange information and ask questions. The summarise, more precise, actionable recommendations for each component of the DEX examined in the study are presented in Table 6.

Table 6. Specific actionable recommendations to improve DEX

DEX Elements	Recommendations
Digital Tool Usability	<ul style="list-style-type: none"> ■ Providing quick and easy digital tool manuals or tutorials that may be referred to when needed. ■ Creating interactive walkthroughs, tooltips, or guided tours to help employees learn new features or refresh their knowledge of digital technologies. ■ Integrating chatbots to handle frequent inquiries reduces response times and improves employee assistance.
Technology Accessibility	<ul style="list-style-type: none"> ■ Conducting regular accessibility audits of the company's digital tools and technologies. ■ Employees can be trained on accessibility and how to use digital tools' accessible features.
Training Availability	<ul style="list-style-type: none"> ■ Implementing a sophisticated e-learning platform with a variety of telecom training modules. ■ Developing microlearning modules help busy employees fit learning into their schedules. ■ Creating short movies, infographics, or interactive quizzes to make training more entertaining and consumable.
Leadership Support	<ul style="list-style-type: none"> ■ Offering training courses for executives that raise their understanding of digital resources and new forms of telecommunications technology. ■ Encouraging leaders to use digital platforms to interact with employees. ■ Establishing feedback mechanisms where employees can directly address leadership.
Organisational Culture	<ul style="list-style-type: none"> ■ Encouraging employees to develop their digital skills and mindset by providing access to digital learning platforms and tools. ■ Showcasing successful digital efforts and the impact of digital tools on employees through internal communication channels. ■ Improving employee bonds through virtual team-building activities. ■ Creating a system to recognise and reward the employees who use utilise digital technologies to enhance productivity and efficiency.
Work Environment	<ul style="list-style-type: none"> ■ Encouraging a good work-life balance by offering flexible work arrangements (work from home/own schedules). ■ Providing employees with the tools and assistance they need to use high-speed internet in the workplace and remotely. ■ Upgrading the digital infrastructure (hardware and network connections) continuously to handle digital tools and technologies.

5.2. Limitations of the study

There are some substantial limitations in this study that need to be filled in the future. To begin, the research only focuses on the field of telecommunications, which may limit the extent to which its findings can be applied to other fields. Second, the research was only conducted on the telecommunications industry in the Sultanate of Oman; therefore, its findings may

not be applicable to other countries due to cultural and economic differences. Because the findings cannot be extrapolated to other sectors or nations with complete certainty, future research can be repeated in a number of different sectors and in a variety of locations to guarantee that the study's conclusions are accurate, reliable, and universally applicable. Third, employees in the telecommunications industry have a busy work schedule, which may limit the number of responses, and self-reported responses from individuals may be biased. This affects the accuracy of the findings of the study. Third, employees in the telecommunications industry have a busy work schedule, which may limit the number of responses, and self-reported responses from individuals may be biased. This affects the accuracy of the findings of the study. Thus, future study can apply mixed-method approach integrating interviews or focus groups to supplement self-reported survey data, thereby mitigating the potential biases from self-reported responses and enhance the validity of the results. Finally, the study's focus on just six crucial DEX components may disregard other factors that could have an impact on DEX findings, limiting the validity and dependability of the findings. Thus, future research may study the impact of various other factors that influence DEX, including employee digital literacy, security, and privacy concerns, or the impact of remote work conditions.

Conclusions

This empirical research study aims to assess the effects of digital employee experience on organisational performance, particularly in the telecommunications sector in the Sultanate of Oman, using both quantitative and qualitative data. It employs a wide range of analytical methodologies, including the analysis of scientific literature, correlation analysis, multiple regression analysis, and sentiment analysis. Based on the extensive analysis, the results of the study indicated a remarkable improvement in job performance with DEX elements such as digital tool usability, technology accessibility, training availability, leadership support, organisational culture, and work environment after implementing digital tools in the workplace. More specifically, the results indicate that work environment, organisational culture, and training availability have a higher correlation with organisational performance. On the other hand, it was also found that work environments with $p < 0.001$ have strong statistical significance, while other elements are significant at the 5% level. The qualitative analysis of the employees' sentiments on DEX also indicates that respondents have more positive or neutral sentiments than negative sentiments. In light of these considerations, it was found that the DEX is very important, as it has the potential to enhance employee performance, improve productivity, and increase job satisfaction. Thus, telecommunications companies are urged by the report to invest more in employee digital literacy training and to actively promote the usage of a wide range of digital technology.

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