Digital workplace and organization performance: Moderating role of digital leadership capability

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ABSTRACT

Since the onset of the COVID-19 pandemic, many organizations have permitted their employees to work from anywhere, giving rise to the phenomenon of the digital workplace, which enables employees to do their work by connecting, communicating, and collaborating with other employees. Organizations' dynamic capabilities play a major role in enabling this transformation of the workplace. As the situation is so recent, there is considerable interest amongst researchers, practitioners, academicians, and policymakers to understand the role of organizations' dynamic capability in digital transformation of the workplace, as well as the role of digital leadership in improving organization performance and enabling the digital transformation process to happen. Therefore, this study investigates the influence of digital workplace on organization performance and the moderating role of digital leadership capability in digitally transforming the workplace. We developed a research model from our review of the literature review and dynamic capability view (DCV) theory, and then we validated it using the PLS-SEM technique on a sample of 335 respondents from different types of organizations that have embarked on the digital transformation journey. The study finds that the dynamic capabilities of organizations have a significant and positive influence on the digital transformation of the workplace, which in turn improves the employees' work-life balance resulting better employee performance and superior organization performance. The study also highlights the significant role that digital leadership plays in the digital transformation of the workplace.

Introduction

In recent years, rapid digital transformation has been taking place, which has brought a paradigm shift in economic and social aspects (vom Brocke, Becker & De Marco, 2016; Wilms et al., 2017). Scholarly research has zoomed out at the macrolevel of digital transformation, with a focus on business models and their direct impacts on society (vom Brocke et al., 2016). Less research attention has been given to the microlevel of digital transformation, especially to the individual's workplace environment (Bridger, 2018; Rana & Dwivedi, 2021; Santos-Arteaga, Tavana & Di Caprio, 2022; Borah et al., 2022).

Digital workplace transformation is conceptualized as "a phenomenon of new technologies causing significant changes to a variety of work-related aspects: changes to how employees carry out tasks and processes, as well as changes to their social relations withing the

organizations, and subsequently to their overall workplace experience" (Meske & Junglas, 2020, p.1120). Digitalization of workplace taps into digital technologies that act as automated support tools in businesses (Chatterjee, 2015; Piccolo et al., 2021; Chan, Hooi & Ngui, 2021; Chen, Sun & Chen, 2022). Workplace digitalization causes changes in the job expectations, job designs, and job resources of the employees, and hence, it is considered to impact employee engagement (Ferraris et al., 2018, 2019; Chatterjee, 2019a; Tamilmani et al., 2021; Cetindamar Kozanoglu & Abedin, 2021; Alieva & Powell, 2022).

The COVID-19 pandemic has intensified the necessity of workplace digitalization, due to the various restrictions on physical interactions that it imposed. It brought about changes in consumer behaviour, compelling organizations to conduct their businesses in a contactless environment (Kraus et al., 2020; Ang, Wei & Arli, 2021; Baabdullah et al., 2021). That situation of the pandemic has opened avenues for several research streams, such as strategy and innovation, information systems, corporate sustainability, as well as knowledge management (Wendt, Adam, Benlian & Kraus, 2021; Rana et al.,

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2021; Bertello, Bogers & De Bernardi, 2021). Studies have investigated how digitalization in the workplace could spark changes in employees' job satisfaction, job resources, and job design that impact how they engage with their organizations (Vrontis et al., 2021; Chaudhuri, 2022 Alieva & Powell, 2022). But not many studies have analysed how employees' innovative and technological abilities, supported by a dynamic organizational policy at the workplace, could impact organization performance as employees' work-life balance and overall performance are improved. Also, we have not seen in other studies how digital leadership capability could moderate these relationships. Hence, there is a gap in the extant literature. Hence, the objectives of this study are to assess the impacts of dynamic capabilities of the organizations on work-life balance, to examine the effects of the employees' work-life balance on the overall performance of the organizations and to examine the impacts of digital leadership capability to moderate the relationship between employee's work-life balance with organizational performance. To fill this research gap, this study attempts to holistically address the following research questions (RQs).

RQ1: How can the dynamic capabilities of organizations, like IT capability, dynamic innovation ability, and digital workplace policy impact employees' work-life balance and performance?

RQ2: Is there any influence of employees' work-life balance and their well-being on organizational performance?

RQ3: Can digital leadership capability impact the relationship between employees' work-life balance and organizational performance?

The research questions (RQs) have been addressed by using the inputs from 355 responses gathered from Indian organizations. The theoretical model has been tested with the factor-based PLS-SEM technique. To theoretically substantiate the empirical findings, the RBV (Barney, 1991) and DCV (Teece et al., 1997) theories have been duly integrated to explain how organizations' dynamic capabilities could impact on organization performance by improving the intermediate contextual factors like employee performance at the digital workplace and the work-life balance, which are influenced by digital leadership ability.

The remaining parts of the study are arranged as follows. Section 2 presents the literature review, followed by the theoretical foundation and hypotheses formulation in section 3. Thereafter, section 4 presents a research approach, followed by estimation and analysis of the results in section 5. Next, section 6 discusses the theoretical and practical implications, along with limitations of the study and directions for possible future work.

Literature review

The arrival of several ground-breaking technologies, like Internet of Things (IoT), artificial intelligence (AI), machine learning (ML), and big-data analytics (BDA), have profoundly impacted organizational culture, labour relations, strategies, work styles, and government structures (Bertello, Bogers & De Bernardi, 2021; Verhoef et al., 2021; Thrassou et al., 2022; Vrontis, & Thrassou, 2022). Such technological development has suggested a shift, where social systems and technological activities need to work in harmony with the mass customization of products or services (Bednar & Welch, 2020; Nguyen, Ghosh, Bhattacharjee & Chaudhuri, 2020; Rafique et al., 2022; Naveed et al., 2022). Thus, studies have demonstrated that work styles of organizations are going to change along with the new globalization trend (Chatterjee, 2019b; Skare & Soriano, 2021; Thrassou et al., 2021). With these modern technologies, organizations are aligned to undertake the process of digital transformation, which has intensified because of the COVID-19 apocalypse (Fletcher & Griffith, 2020; Tajvidi & Tajvidi, 2020; Gheidar & ShamiZanjani, 2020; Brahma et al., 2021; Nguyen, 2021) in which several restrictions compelled

organizations to function in a seamless environment. Piccolo et al. (2021) and Al-Omoush, Orero-Blat and Ribeiro-Soriano (2021) have argued that the indispensible digital transformation of organizations has forced them to strengthen their intra- and inter-organizational technology-related collaborations. Patterson et al. (2018) observed that the various disruptive technological advancements have substantially influenced the power dynamics, work practices, business strategies, and other systems of organizations. Organizations have not only been forced to adopt these advanced technologies, but they also have had to focus on enhancing the skillsets and knowledge of employees to improve their performance and sense of work-life balance (Warner & Wager, 2019; Malhotra, 2021; Tsai et al., 2021; Basile et al., 2021; Khorana et al., 2021).

In order to use the modern technology driving their digital workplace transformation, organizations need to develop their dynamic abilities, including they need to articulate dynamic digital workplace policies, enhance their IT ability, and improve their dynamic innovation capabilities at the digital workplace to address the changing business environment (Hagger, Koch & Chatzisarantis, 2014; Nwankpa & Roumani, 2016; Dery, Sebastian & van der Meulen, 2017; Chatterjee, 2018). When organizations develop their dynamic abilities in order to improve their digital workplace abilities, it is possible for them to improve their valuable and rare resources, like employees' abilities and their well-being (Tscherning & Mathiassen, 2010; Xu, Benbasat & Cenfetelli, 2013; Komodromos, Halkias & Harkiolakis, 2019; Sheshadri, 2020). These studies also highlighted that, due to advent of modern technologies, the organizations need to undertake digital workplace transformation by improving their organizational digital abilities. This is the idea behind dynamic capability view (DCV) theory (Teece, Pisano & Shuen, 1997), which states that dynamic capabilities can improve the quality of the organization's existing valuable resources. An organization's valuable resources are associated with the static characteristics of the organizations, which is based on the concept of resource-based view (RBV) theory (Barney, 1991). Organizations must possess dynamic capabilities to sense, seize, and integrate opportunities from external resources, which is in accordance with DCV (Teece et al., 1997). The organizations should then reconfigure these seized opportunities with the available resources which have valuable, rare, inimitable, and non-substitutable characteristics, in terms of RBV (Barney, 1991). If the organizations could fulfil these characteristics, they would succeed in the digital transformation journey. Again, to successfully implement digital transformation in the workplace, leadership must incentivize their employees with their empowered vision (Kwon & Park, 2017).

Theoretical foundations and hypotheses formulation

Dynamic capability and resource-based view theories

The present study has already attempted to interpret digital workplace transformation. Vom Brocke et al. (2018) elucidated that digital workplace transformation includes tasks supporting technical dimensions along with social dimensions, both of which need to be considered when the future workstyle of organizations is investigated. To ensure a smooth transformation from conventional workplace to digital workplace, organizations need to adopt several modern technologies. The digital transformation of the workplace is essential to address the dynamic market environment, especially after the COVID-19 pandemic.

Organizations need to possess dynamic ability to effectively sense and seize the external opportunities. According to dynamic capability view (DCV) theory (Teece et al., 1997), to avail themselves of these opportunities, organizations should digitally transform the workplace to improve the performance of their employees in the dynamic environments (Teece, 2014). DCV may be explained as a "high-level routine (or collection of routines) that, together with its

implementing input flows, confers upon an organization's management a set of decision options for producing significant outputs of a particular type" (Winter, 2003, p. 991). Organizational dynamic capability is deemed to impact the performance of individual employees and their well-being, which, according to Barney's (1991) resource-based view (RBV) theory, we argue are internal valuable, rare, inimitable, and non-substitutable (VRIN) assets of the firms.

Also, to improve the dynamic ability of an organization, leadership needs to develop their IT capability and innovation ability and they should also possess the ability to articulate effective dynamic policies to ensure the workplace transformation. These discussions highlight that organizations need to develop their capabilities continuously to exploit new resources and, at the same time, to revive their existing capabilities and resources (Agbim & Idris, 2015; Kaur & Mehta, 2016). The resultant ambidexterity helps organizations to be better prepared to respond and react to the rapid changes in the market and technologies, facilitating them to gain competitive advantage (Ogunkoya, Hassan & Shobayo, 2014; Ranjan et al., 2021). Thus, it is evident that resource-based view emphasizes the importance of attaching values to the existing resources, like employee capabilities and their well-being, whereas the DCV focuses on changing the existing capabilities to create new dynamic abilities like IT capability, innovation ability, and dynamic policies that help the organization to address the fast-paced, dynamic market (Jurksiene & Pundziene, 2016).

Finally, these static and dynamic capabilities need to be translated into action, thus impacting the organizational performance provided the digital leadership of the organizations actively supports the implementation of such changes (Kwon & Park, 2017; Sheshadri et al., 2021). Hence, organizational dynamic capability helps to improve employees' performance and their work-life balance. All these measures can be facilitated by the active support of the leadership team of the organizations.

Hypotheses formulation

By studying the literature that underpinned the two theories of DCV and RBV, we identified the exogenous and endogenous variables that impact organizational performance in the context of digital workplace transformation under the active support of digital leadership. These factors will be discussed here, which we perceive help us develop a few hypotheses.

Organizational dynamic capability

Employee performance will be improved if the organizations can improve its dynamic abilities (Thrassou et al., 2022). Towards this goal, there are many measures the organizations need to undertake (Karagouni, 2018; Lyu, Yang, Li & Gu, 2022). Such measures include to effectively manage the organizations' data and to open an impactful communication channel. Making successful dynamic plans is also a crucial measure to enhance the contribution of IT capability, properly align business strategy with IT plans that are flexible to address the dynamic market, thus enhancing the effectiveness of IT capability, and so on (Kwon & Park, 2017; Sow & Adorbie, 2018). All these measures can be ensured when organizations improve their dynamic IT capability, with better employee performance and employee well-being as added benefits (Nwankpa & Roumani, 2016; El Samad et al., 2022). In terms of the above arguments, the following hypotheses are developed.

H1a: IT capability of the digital workplace (ITC) positively impacts employee performance at the digital workplace (EPD).
H1b: IT capability of the digital workplace (ITC) positively impacts employee work-life balance (EWL).

Organizations need to improve their dynamic capabilities, such as innovation ability, to aptly respond to the dynamic market, the concept of which is supplemented by DCV theory (Teece et al., 1997). The overall competence of organizations also needs to be improved. Competence "involves understanding how to attain various external and internal outcomes and being efficacious in performing the requisite actions" (Deci, Vallerand, Pelletier & Ryan, 1991, p.327). The digital innovation dynamic capability bears a strong correlation with the organizational work-related performance, which has been exhibited in detail in metanalysis studies (Stajkovic & Luthans, 1998; Hagger et al., 2014). Therefore, workforce innovative abilities could influence employee performance as well as employee well-being (Deci, Olafsen & Ryan, 2017). It is pertinent to mention here that Przybylski, Ryan and Rigby (2009)) and Przybylski, Deci, Rigby and Ryan (2014) found, while studying competitive behaviour in the context of sports, that the well-being of players could be achieved through the enhancement of facilities and other innovative capabilities. All the above valued discussion lead us to formulate the following hypotheses.

H2a: Dynamic innovation capability at the digital workplace (DIC) positively impacts employee performance at the digital workplace (EPD).
H2b: Dynamic innovation capability at the digital workplace (DIC) positively impacts employee work-life balance (EWL).

The organizations must have a dynamic digital workplace policy to provide employees with a digital infrastructure so they can work freely (Khisro, Lindroth & Magnusson, 2022). An organization must also articulate appropriate policy to establish relatedness amongst employees, which means that employees feel a sense of connectedness with their coworkers, not only to improve social relations (Lee, Lee & Hwang, 2015; Bouncken & Reuschl, 2018) but also to enrich their knowledge wealth (Dery et al., 2017). Moreover, in the digital work environment, social connectedness is shown to impact employees' performance (Kuegler et al., 2015). Employees in a dynamic digital workplace that has a policy involving relatedness tend to exchange more information to update each other, which is perceived to impact the performance of the employees (Karoui, Dudezert & Leidner, 2015). Besides, a policy of relatedness helps to ignite positive emotions amongst the employees, which is known to impact individuals' well-being (Reis, Sheldon, Gable, Roscoe & Ryan, 2000; Satici, Uysal & Deniz, 2016). Thus, the above arguments help to articulate the following hypotheses.

H3a: Dynamic digital workplace policy (DDP) positively impacts employee performance at the digital workplace (EPD).
H3b: Dynamic digital workplace policy (DDP) positively impacts employee work-life balance (EWL).

Employee performance at the digital workplace (EPD)

It is argued that the use of new technologies has a considerable impact on employees' performance, and it is perceived to be one of the most important determinants of employees' attitude to accept new technologies like AI, BDA, IoT, and so on, which helps in the process of digital transformation (Koufaris, 2002; Xu et al., 2013). Besides, employee performance is known to impact several organizational outcomes such as productivity, innovation ability, proactiveness, decision making process, and organizational creativity (Hanaysha, 2016; Haknen et al., 2018).

Employees' performance depends on their capability and skillsets, which are considered assets of the organization, as they have VRIN characteristics that distinguish their performance from other organizations. This concept is supplemented by RBV theory (Barney, 1991). By enhancing dynamic abilities, such as IT capability as well as innovation ability, the organizations can motivate their employees to upgrade their skillsets, creativity, and thinking processes, enabling them to improve their capabilities and performance (Shahzad, Bajwa, Siddiqi, Ahmid & Raza Sultani, 2016). All the above-mentioned

arguments support that what impacts employee performance is perceived to eventually impact overall performance of the organization. Accordingly, the following hypothesis is formulated.

H4: Employee performance at the digital workplace (EPD) positively impacts organization performance (ORP).

Employee work-life balance (EWL) and organization performance (ORP)

The work-life balance is considered an aspect of employee well-being in which employees successfully manage both their personal as well as professional responsibilities, and they have sufficient time for their families (Boiarintseva, Ezzedeen & Wilkin, 2022). It has been observed that the feeling of enjoyment is a critical antecedent for an employee to adopt a new technology (Lowry, Gaskin, & Moody, 2013). Studies have also demonstrated that employee enjoyment plays an important role in the attitude employees have towards their organizations (Davis, Bagozzi & Warshaw, 1992; Tetteh, Dei Mensah, Opata & Mensah, 2022). This implies that employees prefer to work in digitally transformed workplaces using technologies, and they will be more inclined to use new technologies if they experience more pleasure and enjoyment. This helps them to work more efficiently and reduce the overall time needed to complete their work, thus, having sufficient time to enjoy with their families (Boiarintseva et al., 2022).

Moreover, the digital transformation of the workplace enables employees to work from home, where they can be with their families and simultaneously work for their employers. Sometimes it provides them sufficient time for their families and for themselves. This intrinsic hedonic enjoyment helps employees to efficiently use digital technology at the digital workplace. Through digital transformation, organizations offer flexible working, encourage productivity over number of hours worked, review workloads regularly, and so on. These measures can help the employees to balance their work-life effectively, and they are perceived to impact overall productivity and performance of the organizations. All these arguments lead us to state the following hypotheses.

H5a: Employee work-life balance (EWL) positively impacts organization performance (ORP).

H5b: Employee work-life balance (EWL) positively impacts employee performance at the digital workplace (EPD)

Moderating role of digital leadership capability (DLC)

Whenever the relationship between two constructs is not fixed, a third variable impacts on this relationship, by facilitating the relationship or by retarding the relationship or even, in some cases, reversing the direction of the relationship. This third variable in respect of that relationship is interpreted as the moderating variable. Digital leadership ability is associated with steering an organization in the direction of digital transformation to become more adaptive in the rapidly changing social and digital ecosystems (Sreenivasulu, 2019; Nagel, 2020). DLC must help the organizations to facilitate changes, and it should ensure that no employee is left behind the digital transformation journey (Kar, 2018). Leadership should encourage employees to be digitally literate by offering proper training to them, and it should hedonically motivate the employees to be involved in the digital transformation process and to become more accustomed to the digital workplace (Islam et al., 2022). The leaders should prioritize the tasks, so that even when employees have more freedom at work, they do not leave the most important tasks (Wentrup, Naamura & Ström, 2019).

The digital transformation of the workplace should provide employees more time to spend with their friends and families so that their work-life balance is maintained (Boiarintseva et al., 2022). Since the digital transformation of the workplace is a relatively new phenomenon, leaders must have the abilities to make appropriate decisions even with ambiguous information. Thus, the leadership capability of the organizations is perceived to impact the relationship between the performance of the organization with its predictors. Accordingly, the following hypotheses are prepared.

H6a: The digital leadership capability (DLC) moderates the relationship between employee performance at the digital workplace (EPD) and organization performance (ORP).

H6b: The digital leadership capability (DLC) moderates the relationship between employee work-life balance (EWL) and organization performance (ORP).

With all the valuable discussions, a research model is developed and is provided in Fig. 1.

Research approach

Attempts are made to test the hypotheses and to validate the proposed model. To accomplish this, we adopted the PLS-SEM process. There are various reasons to choose this process. One reason is that even though the data is not normally distributed, the PLS-SEM method can be applied (Rigdon, Sarstedt & Ringle, 2017). Also, this approach does not need any minimum number in the sample (Willaby, Costa, Burns, MacCann & Roberts, 2015). Moreover, the process is simple and can easily analyse a complex model (Peng & Lai, 2012; Ferraris et al., 2021; Koay et al., 2022).

However, with the PLS-SEM technique, we must use a survey to collect responses from the respondents. Here, we applied a 5-point Likert scale to quantify the level of agreement or disagreement respondents had with the statements in the survey questionnaire. Marks from 1 (Strongly Disagree (SD)) to 5 (Strongly Agree (SA)) were allotted to the responses. Here, the 5-point Likert scale has been used because it is simple to apply and, in addition, the respondents could take a neutral stance by preferring the "Neither Disagree nor Agree" option.

To prepare a set of questions for the questionnaire, we used inputs from the literature. A pre-test was done on a small sample that we chose through convenient sampling. The results of that test helped us to correct the questions, which were prepared in the form of statements. After the pre-test, to refine the questions further, a pilot test was conducted with a small sample of respondents. Those respondents were not amongst the sample of the main survey. The outcomes of the pilot test helped us to examine the content validity of the items. After the pilot test, we sought the opinions from some experts regarding the difficulties to understand the questions. These people have sufficient expertise in the topic of the present study. Through this approach, we finally prepared 34 items in the form of statements.

For validation of the proposed research model, we collected the data from the respondents working in Indian organizations by using the convenience sampling technique (Garg, 2019), because some of the authors are based out of India. Also, a purposive sampling technique (Apostolopoulos & Liargovas, 2016; Garg, 2019) was used to target the respondents whose organizations are already in the process of digital transformation. In this way, initially, 25 Indian organizations were selected. On verification, we found that 17 of the organizations had proceeded on the digital transformation journey and the remaining eight organizations were contemplating to start digitalization of their workplaces.

The executives of these 25 organizations were requested to allow their managers of different hierarchies to take part in this survey. These executives were apprised that this study was for academic purposes, and they were further assured that the identity of the participants as well as of the concerned organizations would not be disclosed. After some persuasion, eventually, the executives of 14 organizations agreed and provided details of 703 of their managers
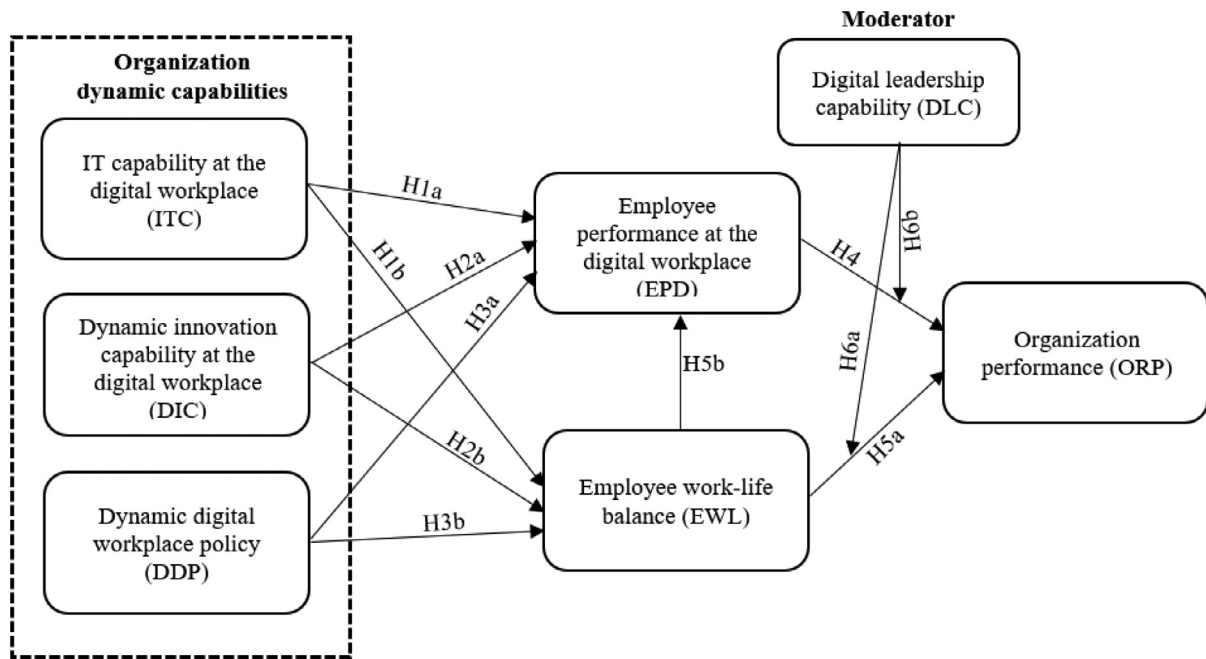
Fig. 1. Proposed conceptual framework.

who hold different ranks and who agreed to participate in the survey. We sent them the response sheets that contained 34 questions in the form of statements. We also gave them instructions to put one tick mark in one out of five options related to each question. All the prospective respondents were given 60 days' time (February to March 2022) to respond. Within the time limit, 344 responses were obtained. The response rate has been 48.9%. Here, a non-response bias test was performed by conducting an independent *t*-test as well as a chi-squared test, in terms of Armstrong's and Overton's (1977) recommendation. The responses of the first and the last 100 respondents were considered, and the results indicated that there was no marked deviation of results in these two cases. This confirms that non-response bias did not pose any threat to this study. On scrutiny of these 344 responses, we found that 9 responses were unusable. The responses of these nine respondents were found defective as they had put tick marks in more than one option against each question. Therefore, analysis was taken up with the inputs of 335 responses against 34 items. The detailed information of 335 respondents is provided in Table 1.

Estimation and analysis of the results

Convergent validity of each item was examined. For this, loading factor of each item needed to be computed. Next, we examined the validity by estimating the AVEs of the constructs. Then to verify reliability, CR of each construct was computed, and to assess the internal

consistency, Cronbach's alpha (α) of the constructs was calculated. The results are provided in Table 2, and we can see that these values are within permissible range, because the lowest allowable values of AVE and CR are 0.50 and 0.80, respectively (Hair et al., 2017), and the lowest allowable value of the loading factor is 0.70 (Chin, 2010).

For testing discriminate validity, we assessed the square roots of AVEs. They were found to be greater than respective correlation coefficients. Results satisfy the conditions laid down in Fornell and Larcker (1981). Hence, discriminant validity is confirmed. The outcomes are depicted in Table 3.

Effects of the moderator, digital leadership capability (DLC), were estimated by the bootstrapping process with the multigroup analysis (MGA) approach. We considered 5000 resamples. We also divided the effects of DLC into two categories: one is Strong DLC, and another is Weak DLC. The impacts of DLC were examined on the two relationships H4 and H5. The p-value difference for the effects of the two categories of DLC on H4 is 0.04 and on H5 is 0.01. Both are less than 0.05, meaning that the impacts of DLC on H4 and H5 are significant (Hair et al., 2016).

For testing the hypotheses, cross-validated redundancy measure was obtained by considering omission separation as 7. The result of Q^2 value was positive (0.072), indicating that the proposed model possesses predictive relevance. For the assessment of model fit, we followed the procedure laid down in Henseler et al. (2014). SRMR (Standardized Root Mean Square Residual) was used as the index to validate the model. The value of PLS was found to be 0.064 and the value of PLSc was found to be 0.033. Here, these values are less than 0.08 (Hu & Bentler, 1999), so we can infer that the model is in order. Following this process, it was possible to compute β-values, p-values, and R^2 values. The outcomes are shown in Table 4.

The model after validation has been provided in Fig. 2.

In the present study, we formulated 11 hypotheses of which two hypotheses emerged from impacts of the moderator on two linkages H4 and H5a. The present work demonstrates that ITC has a significant and positive impact on EPD ($\beta = 0.11$, **$p < 0.01$) and on EWL ($\beta = 0.17$, ***$p < 0.05$). Likewise, DIC impacts EPD and EWL positively and significantly (the respective path coefficients are $\beta = 0.21$, *$p < 0.05$ and $\beta = 0.24$, ***$p < 0.001$). DDP also significantly and positively impacts EPD ($\beta = 0.19$, *$p < 0.05$) and EWL ($\beta = 0.31$, ***$p < 0.001$).

Table 1
Demographic information of respondents (*N* = 335).

Sample entity	Category	Frequency (N)	Percentage (%)
Gender	Male	212	63.3
	Female	123	36.7
Age	20−35 years	133	39.7
	36−50 years	122	36.4
	Above 50 years	80	23.9
Education	Bachelor's degree	237	70.7
	Master's degree	98	29.3
Hierarchy	Senior managers	51	15.2
	Midlevel manager	163	48.6
	Junior manager	121	36.2

Table 2
Estimation of loading, AVE, CR, and α.

Constructs	Items	Loading	AVE	α	t-values	CR
ITC			0.84	0.91		0.89
	ITC1	0.85			22.17	
	ITC2	0.95			29.11	
	ITC3	0.94			27.56	
	ITC4	0.91			34.17	
	ITC5	0.96			31.12	
	ITC6	0.90			28.06	
DIC			0.80	0.90		0.85
	DIC1	0.88			27.17	
	DIC2	0.80			29.18	
	DIC3	0.95			23.05	
	DIC4	0.91			26.16	
	DIC5	0.90			31.12	
	DIC6	0.92			36.71	
DDP			0.84	0.93		0.90
	DDP1	0.87			39.16	
	DDP2	0.81			37.17	
	DDP3	0.95			30.06	
	DDP4	0.94			24.28	
	DDP5	0.96			35.39	
	DDP6	0.95			37.79	
EPD			0.85	0.94		0.89
	EPD1	0.91			24.56	
	EPD2	0.92			22.98	
	EPD3	0.96			29.79	
	EPD4	0.95			25.16	
	EPD5	0.88			22.07	
EWL			0.75	0.84		0.81
	EWL1	0.91			26.77	
	EWL2	0.85			21.92	
	EWL3	0.87			29.97	
	EWL4	0.78			31.22	
	EWL5	0.90			34.74	
ORP			0.87	0.96		0.92
	ORP1	0.97			27.17	
	ORP2	0.95			32.96	
	ORP3	0.89			37.11	
	ORP4	0.95			31.17	
	ORP5	0.90			24.72	
	ORP6	0.94			26.91	

Our model also documents that EPD significantly and positively influences ORP ($\beta = 0.39$, ***$p< 0.001$) and that EWL impacts positively and significantly both ORP ($\beta = 0.41$, ***$p<0.001$) and EPD ($\beta = 0.15$, *$p<0.05$). We also found that the moderator DLC impacts the relationship H4 and H5a significantly as well as positively since the corresponding path coefficients are 0.14, *$p < 0.05$, and 0.18, **$p < 0.01$, respectively. In the context of coefficients of determination (R^2), it appears from the results that ITC, DIC, DDP, and EWL can simultaneously account for 42% of the variance in EPD, because $R^2=0.42$. Again, the results also reveal that three exogenous variables ITC, DIC, and DDP could explain EWL to the tune of 46%, because $R^2=0.46$. Finally, EPD and EWL could simultaneously impact ORP to the extent of 67% ($R^2=0.67$), which is the predictive power of the proposed theoretical model.

Table 3
Discriminant validity.

Construct	ITC	DIC	DDP	EPD	EWL	ORP	AVE
ITC	0.92						0.84
DIC	0.19	0.89					0.80
DDP	0.22	0.39	0.92				0.84
EPD	0.29	0.33	0.19	0.92			0.85
EWL	0.31	0.36	0.38	0.22	0.87		0.75
ORP	0.37	0.41	0.27	0.29	0.34	0.93	0.87

Table 4
Structural equation modelling (SEM).

Relationships	Hypotheses	β-values	p-values	Inference
ITC→EPD	H1a	0.11	[**] $p<0.01$	
ITC→EWL	H1b	0.17	[*] $p<0.05$	All the
DIC→EPD	H2a	0.21	[*] $p<0.05$	hypotheses
DIC→EWL	H2b	0.24	[***] $p<0.001$	are
DDP→EPD	H3a	0.19	[*] $p<0.05$	supported.
DDP→EWL	H3b	0.31	[***] $p<0.001$	
EPD→ORP	H4	0.39	[***] $p<0.001$	
EWL→ORP	H5a	0.41	[***] $p<0.001$	
EWL→EPD	H5b	0.15	[*] $p<0.05$	
(EPD→ORP) × DLC	H6a	0.14	[*] $p<0.05$	
(EWL→ORP)× DLC	H6b	0.18	[**] $p<0.01$	

Discussion on results

The present work has discussed how the emergence of AI, ML, IoT, BDA, and other cutting-edge technologies have been able to shake up the existing strategy of organizations, their structures, culture, style of doing business, and processes. The perpetual technological advancement has caused overwhelming change in organizations' workplaces. Therefore, the present study has discussed how to address such situation.

Organizations have been undergoing digital transformation processes in the workplace, and the study has also discussed that the pace of that paradigm shift has accelerated due to abrupt outbreak of the COVID-19 pandemic, which compelled organizations to continue their business activities in contactless environments. Such disruptive and advanced technology have influenced workplace practices as employees have had to adopt the ability to work from anywhere at any time with the assistance of the available IT infrastructure of their organizations to ensure the continuity of organizational business activities as far as possible.

The present work, in this vein, has developed and validated a theoretical model. Our research has demonstrated that IT capability and dynamic innovation ability at the digital workplace and an organization's dynamic digital workplace policy could positively impact employee performance and the employees' work-life balance even during the COVID-19 pandemic. These results were also supplemented by another study (Fletcher & Griffith, 2020). We also show that, with the influence of leadership to digitally transform the workplace, employee performance as well as the employee work-life balance could improve the organizational performance. This concept has been supported by a study by Skare and Soriano (2021). Thus, the present study has highlighted that if an organization can improve the IT capability at the digital workplace and dynamic innovation capability, supported by a digital workplace policy, it would positively improve the employee work-life balance and organization performance. It helps to address the RQ1. The current study has also suggested that by improving dynamic capabilities, the organization could improve employee performance as well as employee work-life balance, which in turn could improve the organizational performance, provided the support of digital leadership capability can be properly ensured. These findings have been able to address RQ2 and RQ3. We have also observed in the multigroup analysis that the effect of digital leadership capability (DLC) is significant on the relationships covered by H4 and H5a. Now, this will be synthesized with the help of two graphs (Fig. 3 and Fig. 4). Fig. 3 represents the effects of Strong and Weak DLC on H4, and Fig. 4 shows such effects on H5a.

In the graphs, Strong and Weak DLC are presented by continuous and dotted lines, respectively. In studying both graphs, we note that with the increase of EPD (for Fig. 3) and EWL (for Fig. 4), the increase rates of ORP in both the graphs is greater from the impact of Strong
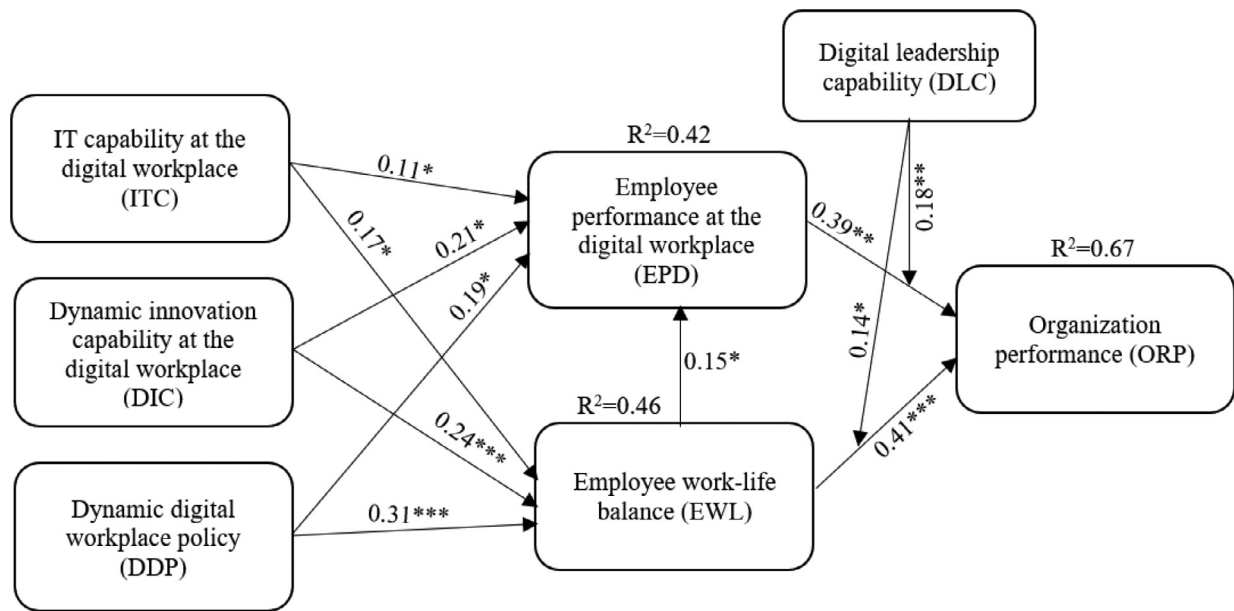
Fig. 2. Model (after validation).

DLC in comparison to the effects of Weak DLC. This is because, for both graphs, the gradients of the dotted lines are less than the gradients of the continuous lines. The gradient of a straight line is the trigonometrical tangent of the angle which the straight line makes with the positive direction of the horizontal axis.

Contributions to the theories

The present study has provided several contributions to the theoretical aspects of the digital transformation of organizations. We have synthesized that IT capability, dynamic innovation ability, as well as dynamic digital workplace policy can eventually impact organizational performance owing to the emergence and use of digital technology. It was also demonstrated that the two mediating contextual factors of employee performance and employee work-life balance facilitated the exogenous factors of the proposed model to ensure better organizational performance under the moderating effect of leadership support. We know of no other studies that have investigated all these salient points simultaneously to project how

digital transformation of the workplace has become acceptable and how it could improve performance of the organizations even in a turbulent situation like the COVID-19 pandemic. The authors claim it to be a special theoretical contribution of this present study. The present study has provided a unique framework with high explanatory power by highlighting how IT and dynamic innovation ability supported by appropriate dynamic digital workplace policy could impact organizational performance under the moderating influence of digital leadership ability by improving some contextual mediating factors like performance at the digital workplace and work-life balance of the employees of the organizations. This has added values to the digital workplace related literature.

The present study has extended the periphery of DCV theory (Teece et al., 1997) by ascribing that IT capability, digital innovation capability, and dynamic digital workplace policy to the dynamic abilities of organizations that possess fundamental characteristics like sensing, seizing, and reconfiguring abilities (Teece, 2014). This will help organizations to address the dynamic market condition by facilitating their employees to work in a digitally transformed workplace
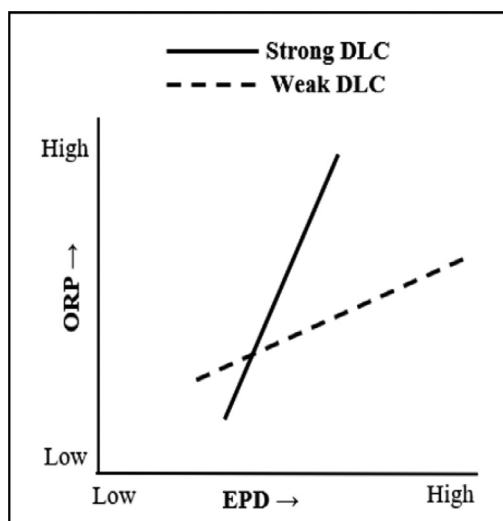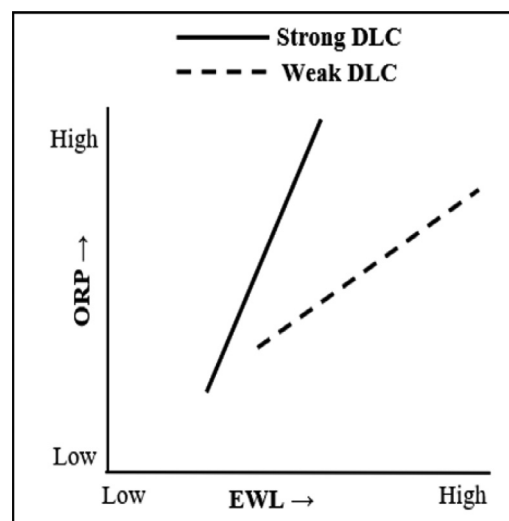

Fig. 3. Effects of DLC on H4.

Fig. 4. Effects of DLC on H5a.

while maintaining their work-life balance to improve the overall performance of the organizations.

Moreover, the present study has also extended the applicability of RBV theory (Barney, 1991) by arguing that employees, as the human capital of their organizations, possess VRIN abilities because human capital possesses valuable, rare, inimitable, and non-substitutable capabilities. Employees help the organizations to perform better, and they are considered as the more active and valuable participants of the organizations' digital transformation journey. A study of Meske and Junglas (2020) investigated how to prompt employees to support the digital workplace transformation process. We extended that idea to investigate how digital transformation could impact the working style in the workplace and can influence the organizational performance under the moderating impact of digital leadership support. We claim this contributes to the existing digital transformation literature.

Implications towards practice

The present study has provided effective guidelines to the leaders and managers of organizations. Before investing in digitalization, leaders and managers must evaluate if the organization can sense the dynamic changes in the internal and external environments, if it can seize the those opportunities, and if it has the capability to properly reconfigure its tangible and intangible assets to achieve better performance (Wamba et al., 2019). The results of the present study have provided several implications to the leaders of organizations who are using digital technologies to transform their workplace. To extract the best potential of the digital transformation, the leaders of the organizations can face some entangled challenges, such as from the employees. While employees work remotely, issues can arise regarding data security of trade secrets, intellectual properties, confidential project activities, and research and development activities. However, we suggest that the leaders should address those challenges properly by taking some effective steps to protect these confidential data and safeguard the organizational interest. System linkages involving local, regional, and international perspectives pose some challenges to the authorities of organizations, and therefore, the leaders and managers should maintain balance while the organizations proceed with their workplace transformation activities. This study has suggested that, in digital workplace, IT ability, innovative abilities, along with articulation of robust policy could improve performance of the employees and their work-life balance. This implies that the managers of the organizations need to arrange for imparting appropriate training and readiness to the employees so that their digital ability can be improved, and they can work more efficiently. The managers also should focus on the issue that the employees simultaneously can perform their professional responsibilities and can have ample time for their families. This will enhance the potentialities of the employees helpful for overall improvement of organizational performance.

Digital technology embedded in a data-driven world requires organizations to be more transparent and allow greater talent mobility in order to ensure resources and talent are used efficiently and most successfully. From this perspective, leaders have to place more trust in their employees who work remotely. As they try to provide an any-time-anywhere work environment, leaders need to use an appropriate governance model to protect intellectual property and trade secrets of their organizations. Leaders should be very strict on this issue. Through training, managers and leaders also need to become more familiar with this digital workplace culture, and they should also focus more on employee flexibility, work-life balance, data-driven culture, innovation, as well as on encouraging collaboration between their employees who are working in the new digital workplace environment (Kiron, Kane, Palmer, Phillips & Buckley, 2016).

The present study has demonstrated that IT capability and innovative abilities of the organizations could help to improve employee performance and their well-being. This implies that managers should be more focused on the work-life balance of the employees and properly train them to enhance their IT capability. This will ensure that they can work efficiently in the new work-environment, and such training will facilitate employees to exchange knowledge with each other to improve their creativity.

Employees should have sufficient personal time to spend with family and friends. Leaders can help in this regard through the digital transformation of the workplace. Through this, employees can be provided with the right kinds of tools to become more productive and accomplish the goals of their organization more efficiently while achieving their career objectives (Rana, Ardichvili & Polesello, 2016). To optimize the benefits of digital culture in organizations and to efficiently use the digital workplace, employees must have digital literacy, which can be achieved through regular coaching sessions that are organized by management.

Limitations and future work directions

The present work has some limitations. First, the findings stand on data collected from respondents to a survey at a single point in time. Hence, the data are cross-sectional data, which results in an error of causality, i.e., a problem with endogeneity, amongst the relationships between the constructs. To eliminate this defect, future studies could analyse data obtained from a longitudinal study.

Second, we based this research work on DCV theory (Teece et al., 1997), but this theory has been criticized for context-insensitivity (Ling-Yee, 2007). That means that DCV is not able to identify the appropriate conditions under which organizational performance will be most valuable and effective (Dubey, Gunasekaran, Childe, Blome & Papadopoulos, 2019). We recommend that future studies could explore the exact conditions through which organizational dynamic abilities ensure the best organizational performance.

Third, the predictive power of the proposed theoretical model is 67%. To enhance the strength of the predictive power of the model, other constructs and boundary conditions may be considered to examine whether the predictive power can be improved. Fourth, the present study did not analyse a rival model, which should be construed to be a limitation of this study. Such analysis could have compared the rival model with the proposed theoretical model to justify the superiority of the proposed theoretical model. This is left for the future researchers to nurture.

Declaration of Competing Interest

None

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