

HOSTED BY



ELSEVIER

Contents lists available at ScienceDirect

Asia Pacific Management Review

journal homepage: www.elsevier.com/locate/apmr

The mediating role of organizational culture: Transformational leadership and change management in virtual teams

Simranjeet Kaur Bagga^{*}, Shikha Gera, Syed Nadimul Haque

Dept. of Management, School of Management & Business Studies, Jamia Hamdard, Delhi, 110062, India

ARTICLE INFO

Article history:

Received 7 April 2021

Received in revised form

23 June 2022

Accepted 12 July 2022

Available online 2 August 2022

Keywords:

Change management

Organization change

Organizational culture

Transformational leadership

Virtual teams

PLS-SEM

ABSTRACT

Today, organizations are deeply concerned with developing leadership that can lead from a distance. Given the pace of change in the work environment and organizational culture, leaders need to be very proactive in their approaches as all the organizations are working in virtual teams connected through Information and Communication Technologies. Organizations nowadays heavily rely on such teams to accomplish their work and goals. These novel teams require a good leadership style to bind virtual team employees' together and imbibe an appropriate culture to meet the demands of the changing environments. Therefore, the current study explored the relationship between transformational leadership, organizational culture, and change management among employees' of virtual teams. Also, the aim extended to examine the mediating role of organizational culture on the relationship between transformational leadership and change management among virtual team employees', for which partial least squares-structural equation modeling was applied. In order to meet the objectives, the study utilized a survey method on employees of IT organizations. The non-probability sampling technique used was purposive and convenience. Data was gathered from 118 respondents who worked in virtual team employees' of the IT sector from the Delhi-NCR. The results revealed that transformational leadership and organizational culture were positively and significantly related to change management. Organizational culture partially mediated the relationship between transformational leadership and change management among virtual team employees'. The current study contributes to the additional literature among employees' of virtual teams, transformational leadership, and organizational culture that continues to grow.

© 2022 The Authors. Published by Elsevier B.V. on behalf of College of Management, National Cheng Kung University. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

1. Background

The global COVID-19 pandemic has been an impactful event that ravaged the world globally in 2020 and 2021, hastening substantially and forcing organizations to drift from the concept of face-to-face into virtual teams (VTs). In a short time, face-to-face moved to virtual collaborations, reported as a metamorphic shift (Kozlowski et al., 2021). Today, VTs are not a new concept, as all employees have worked in such teams for quite some time now. However, not

every organization was in its grip, and COVID-19 has mandated every sector and organization to carry out its operations virtually. There is no denying that these tough times have forced the employees and IT organizations to quickly change their work practices (Herath & Herath, 2020). Therefore, VTs adoption is a matter of organizational continuity and endurance rather than a choice (Richter, 2020). The COVID-19 pandemic entailed a sweeping transformation that affects how individuals interact and work in the workplace (Afrianty et al., 2022; Griffin & Denholm, 2020; Sahadi, 2020). Currently, employees work remotely through several video communication tools such as chat messengers, Zoom Meetings, Microsoft Teams, Google Hangouts, UberConference, TrueConf, Skype, WebEx, GoToMeeting, BlueJeans, and FreeConference (Mangla, 2021).

As we can see, the organizations are working in a very vibrant environment with fast development of technology, requiring organizations to bring change, as becoming a primary concern for firms

Abbreviations: Change management (CM), Organizational culture (OC); Transformational leadership (TFL), Virtual teams (VTs).

^{*} Corresponding author.

E-mail addresses: dua.simran1987@gmail.com (S. Kaur Bagga), shikha.gera86@gmail.com (S. Gera), snhaque@jamiyahamdard.ac.in (S.N. Haque).

Peer review under responsibility of College of Management, National Cheng Kung University.

<https://doi.org/10.1016/j.apmr.2022.07.003>

1029-3132/© 2022 The Authors. Published by Elsevier B.V. on behalf of College of Management, National Cheng Kung University. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

due to uncontrollable external factors (Shafi et al., 2020). Given today's unstable business environment, leading organizational change is essential for individuals, teams, and entire organizations to pace with the nature of the change (Whelan-Berry & Somerville, 2010). To thrive in this boundary-less work environment, the most effective and influential leadership style is transformational (Antonakis & House, 2013; Kim et al., 2013) and that drives much of change in organizational culture (OC) (Deal & Kennedy, 1982; Trice & Beyer, 1993).

To the author's best knowledge, transformational leadership (TFL), OC, and change management (CM) are less investigated factors, specifically targeting the employees' of virtual teams in the Indian IT sector. There is a lack of prior studies that confirm the systematic association among the variables. To bridge this gap, the current study aimed to propose and test a practical conceptual framework to assess the relationship between TFL, OC, and CM among employees' of VTs. Subsequently, the mediating effect of OC on the relationship between TFL, OC, and CM among employees' of VTs is examined. A proposed conceptual model is established through the social bond theory (SBT) to develop the linkage between TFL and CM (Hirschi, 1969) and OC and CM related to Kotter's eight-step model (Kotter, 1998). Moreover, this present study used social learning theory (SLT) to leverage the relationship between TFL and OC (Bandura, 1977) and find the mediating effect of OC between TFL and CM.

This section is followed by the literature review, conceptual framework & hypotheses development. Following these, results, discussions, conclusions, managerial implications, limitations and recommendations were presented.

2. Literature review

2.1. Virtual teams

VTs were conceptualized in 1992 as a group of knowledge workers geographically dispersed towards a common purpose using electronic communication as a primary medium intensively (Shuffler et al., 2010). Gera (2013) stated the VTs myriad benefits such as a) it saves costs b) works in a 24x7 cycle c) gets skills, knowledge, and expertise from all around the globe. A further description of VTs characteristics is defined by Breuer et al. (2016) as the collaborative application of technology for work, cultural diversity, communication, and geographical distribution of members that enables VT members to work from anywhere and with everyone by separating the physical and electronic space.

Feitosa and Salas (2020) explained that the concept of VTs used to be practiced earlier in the form of collocated teams (CLTs). The CLTs are now forced to adjust to new VTs to cope with the current *Information and Communication Technologies* (ICT) advances and pandemic crises, such as monitoring team trust, focus on process gains, and foster inclusion through psychological safety, and assessing teamwork often. In the same year, Caligiuri et al. (2020) also amplified the VTs opportunities that the organizations adopt for global work by encouraging global teams, virtual collaboration, and international assignments. Recently, Garro-Abarca et al. (2021) confirmed that organizations invest a lot in VTs to improve their performance by leadership, trust, and communication as essential factors in virtualization and remote working. Klostermann et al. (2021) found trust, task-technology fit, and communication associated with team members' performance. Klonek et al. (2021) explained that due to advanced ICT, globalization and COVID-19 create virtual environments for these novel work teams to increase the strength of people working in dispersed and diverse areas.

Gilson et al. (2021) and Kozlowski et al. (2021) claimed the new

tools such as collaboration (e.g., telepresence and distributed work teams), coordination (e.g., synchronous sharing of documents and calendar sharing activities), controlling (e.g., digital monitoring), working on the machine simultaneously (e.g., augmented reality), expertise-based recruitment operations (e.g., gig-economy). Whillans et al. (2021) illuminated the core activities such as task interactions (e.g., working on slides together), process interactions (e.g., project planning and module allocation), and relationship interactions (e.g., virtual happy hour) to enact in the performance of VTs successfully.

2.2. Leadership

Kort (2008) defined leadership as a process of social influence whereby a leader seeks to clarify organizational goals through the relation resting on leader-followers action. Schmidt (2014) elucidated the importance of leadership in today's scenario by explaining who is seen as a leader and how efficient and effective a leader is. A further description by Schmidt (2014), also endorsed by Lord and Dinh (2014), explained how the context of VTs makes the leaders of such teams different from other teams. VTs require facilitation enabled by effective leadership, which substantially impacts who leads, why they lead, and how they lead in a team. The study on VTs in leadership has proliferated team members to deal with obstacles and adapt to such challenges to enhance virtual teaming (Baard et al., 2014; Gilson et al., 2015). In the light of the Covid-19 pandemic, Mysirlaki and Paraskeva (2020) described that the crisis has urged attention to the transition from virtual leadership to face time leadership, which creates a big challenge for both the leaders and the organizations. Thambusamy and Bekirogullari (2020) described how the effective virtual leader could resuscitate dying businesses and keep organizations operational, dealing with the challenges of running firms remotely. Recently, Gilson et al. (2021) stated that VTs leaders are ubiquitous as members rely on digital technology to communicate and coordinate. Klonek et al. (2021) also explained that VTs become more effective if the leaders understand how to coordinate, collaborate, and communicate using virtual tools and technologies.

2.2.1. Transformational leadership

Burns (1978) came up with the initial ideas of a transformational leader in the political context. Bass (1985) further explored TFL applied to the organizational context. In a research study on infantry leaders, Bass and Avolio (1994) described TFL in which leaders and subordinates have a chance to swap ideas and mutually reach a top-level bilaterally. Later in 2003, Bass and his colleagues characterised TFL on four dimensions: *idealized influence (II)* refers to leadership trait that becomes admired, respected, and emulated by role models. *Inspirational motivation (IM)* means leaders with a futuristic approach that provides significant and challenging work to followers to inspire themselves (Bass et al., 2003; Mittal & Dhar, 2015). *Intellectual stimulation (IS)* represents the leadership trait that inspires subordinates to forget previous assumptions, values, and traditions to arouse interest in new thoughts). *Individualized consideration (IC)* emphasizes that the leader considers the subordinates' needs and capabilities for further mentoring (Bass et al., 2003; Guay, 2013). Recently, Busari et al. (2020) and Islam et al. (2021) described TFL as a proactive leader who acts as a change driver, raises subordinates awareness by excelling their collective benefits, and supports them to attain exceptional goals.

2.3. Organizational culture

Schein (2010) referred to OC as a sequence of norms, values, basic assumptions, and beliefs constructed by group members to

cope with adaptation and integration issues that influence the behavior of employees within the organization with the more profound value of culture. Supporting Schein's definition, Denison et al. (2012) defined OC as underlying values, protocols, beliefs, and assumptions which are well-rooted in the structure of the organizations held by organizational members that demonstrate and strengthen those basic principles (Denison & Mishra, 1995). Earlier in 1995, Denison and Mishra (1995) categorized OC as four traits: *involvement, consistency, adaptability, and mission*. In addition, Denison's OC traits have been further classified into smaller indexes to make the results appropriate by reflecting the organization's need for strength and flexibility (Denison et al., 2014), as shown in Table 1. The present study adopted the explanation and classification of OC by Denison and his colleagues. As in Denison's model, comparisons of organizations are defined on the strength of culture based on relatively more surface-level values and their manifest practices. Such shared values are more accessible and reliable than the artifacts (Yilmaz & Ergun, 2008). The Denison Organization Culture Survey (DOCS) model differentiates the organizations on the profile of an organization's culture and is considered an underpinning tool with a robust predictive ability for assessing OC (Denison et al., 2014). This model has been widely accepted in IT organizations also. Existing studies have set OC by different models such as Schein (1985), the Competing Values Framework given by Cameron and Quinn (2011), and the Denison model (1995). In 1995, Denison & Mishra introduced the DOCS scale but further improvised by Denison and his colleagues (Denison et al., 2015). However, this study adopted the instrument recommended by (Denison et al., 2015).

The Denison model indicated that the best-performing organizations followed high levels of four cultural traits. *Involvement culture* helps the top achieving companies develop their firms around team members, facilitate harmonized activities, empower and involve their employees. Managers, executives, and employees are committed and feel a strong sense of ownership towards organizational values. This involvement trait forms a cluster that emphasizes the organization's ability to respond to organizational changes and flexibility in the business environment for the future team direction (Fey & Denison, 2003; Wahyuningsih et al., 2019). Denison et al. (2014) posited that the organizations exhibited a *consistent culture* that provided a central source of coordination, communication, integration, and control to develop systems. This

consistency trait is perceived in organizations with highly committed team members, a distinct practice of doing business, enhancing consistent behaviors with core values, and a clear code of conduct with solid roles and guidance. This trait acts as a powerful source of internal integration, a high level of conformity to balance the stability of the workforce with transparent communication. *Adaptability culture* is observed in an organization that creates change to analyze the company environment externally, focuses on customers, and pays attention to them. This trait forms a cluster with an involvement culture that focuses on flexibility and CM (Denison et al., 2014; Fey & Denison, 2003). An organization with a *mission culture* has a robust sense of future directions with clear goals and vision. When the mission changes, different aspects of the OC also show transformations. The organization that scores high for a mission culture will handle its external business environment by achieving stability. (Denison et al., 2014).

2.4. Change management

Castel and Friedberg (2010) described the organizational change as an intricate, dialectical process, where the old and new ways of linkage result in a dynamic world. Shin et al. (2012) referred to organizational change as the transitions of old work routines, processes, and strategies that influence the entire organization. Agote et al. (2016) supported the above authors and explained how organizations transform from their present state to some other desired state to achieve long-term organizational objectives. AlManei et al. (2018) referred to change as a behavioral movement of the business organization as a total, from one level to another.

Smith (2006) stated CM is a systematic sequence of processes broken into several components: planning for change, communicating change effectively, involvement in change, support for change, leading change, managing change, and dealing with resistance to change. Smith (2006) defined *communication of change* as to how the change process can run very smoothly, interpreted, and managed by effective communication, creating a conducive environment for the individuals in the organizations (Johansson & Heide, 2008). *Involvement in change* is referred to how individuals can be ready to change only if every member of the organization is involved in change initiatives (Smith, 2006). In this present study, the *involvement in change* and *communication of*

Table 1
DOCS traits and index characterization.

DOCS Traits	Definition of DOCS Traits	Index Characterization	Definition of Indexes
Involvement	Individuals have the ability, sense of ownership, and responsibility throughout the organization.	Empowerment	Employees who have the power of initiative and the ability to do their work,
		Team Orientation Capability Development	Individuals work commonly towards the goals, Organizations continually do the employee's development.
Consistency	Individuals have the values, beliefs, and norms as part of the culture.	Core Values	Employees of the organization share a set of norms.
		Agreement	Members agree on serious issues.
		Coordination and Integration	Individuals of the organization work together towards common objectives.
Adaptability	The members of the organization move toward the external environment.	Creating Change	The organization is building creative steps to meet changing external needs.
		Customer Focus	Organizations understand the employees' needs and anticipate their future.
Mission	Explain the future long-term direction for the organization.	Strategic Direction	The organization develops a robust strategy to implement and cascade its plan for future objectives.
		Goals and Objectives	Employees of the organization share a set of common objectives and goals.
		Vision	Employees of the organization have a standard view of the future desired state.

change has accounted for CM.

3. Conceptual framework & hypotheses development

3.1. Studies on transformational leadership and change management

TFL directly impacts bringing change and employees' involvement in managing organizational change (Hussain et al., 2021). The theoretical premise of the relationship between TFL and CM has been established by SBT, based on Hirschi (1969). This theory explains that when an employee exhibits a negative mindset and behavior due to the insecurity and challenges associated with organizational change, it diminishes their hostile attitude and enhances the strong bonding between the leader and the subordinates to decrease the ethical rule-breaking behavior of employees (Zhang & Arvey, 2009). Herold et al. (2008) underlined *involvement and communication as the dimensions of SBT i.e. employee attachment, involvement, commitment, communication, and trust, strongly associated with employees' positive attitude in managing change.*

The research on TFL style has been promising. As far as the relationship between TFL and CM was concerned, the consistent findings of previous studies highlight the positive relationship between the two variables. Hamstra et al. (2011) stated that TFL brings effective change management. Nazim et al. (2014) and Li et al. (2016) pointed out that transformational leaders act as change agents that help to bring organizational change and encourage employee change-oriented behaviors. Yaghi (2017) found in the non-western country that managers need to adopt the TFL style to thrive and excel in the changing environments. Alqatawenh (2018) confirmed the significant and positive relationship of TFL with CM in 500 employees of Jordanian insurance companies.

A limited number of research studies assessed the relationship between TFL and CM among employees' of VTs. For instance, D'Mello (2005) described that global software organizations were impacted by globalization and provided the suggestion that the IT professionals working in these organizations have to think global and act local by focusing on soft skill training and development programs with the feelings and values of self-esteem. Curseu, Schalk, and Wessel (2008) identified the framework that could enhance the effectiveness of information processing in virtual team through the social interaction processes (i.e., accumulation, interaction, examination, and accommodation) in which group represent task communication and transform them into specific outputs (task and team related solutions). This virtual communication has an indirect impact on how the virtual team personnel process information and impacts the teams memory system. Levasseur (2012) revealed how leadership traits and CM principles could increase a leader's capability to defeat global VTs challenges. Further, they examined how good leaders will better enhance the dispersed team's performance by establishing CM approaches such as communication and building trust. Mattarelli et al. (2017) explored the multilevel grounded model that examined how the virtual team employees' engaged in a process of building routine capabilities and continuously revising them to fit into external and internal needs, by reducing the accuracy of perceptions of their co-workers and on-site clients. Moreover, the article also highlighted the role played between the brokers and the social identities, while interviewing 49 executives operating in IT consulting firms in 15 global virtual teams in Europe, India, and the US. The above discussion forms the premise that the TFL strengthens CM in the context of employees' of VTs; therefore, the following hypothesis was presented:

H1. Transformational leadership is positively related to change management.

3.2. Studies on transformational leadership and organizational culture

A substantial number of research studies have confirmed a positive and significant relationship between TFL and OC in the existing literature (Jati et al., 2015; Lasrado & Kassem, 2020; Poturak et al., 2020). However, the positive relationship between TFL and OC was conceptualized from the theoretical perspective of SLT, based on Bandura (1977). The theory explained that observational learning (imitation) focuses on individuals who learn by observing others' behaviors and then modeling those behaviors effectively in organisational settings. The observation here implies that the organization's employees tend to imitate the leaders, as leaders strongly influence the creation of an effective OC at work. Further, there is mutual interaction between the leader and the OC, as one parameter can not be understood without the other factor (Lefrancois, 2012). Justifying this, Odeh et al. (2021) affirmed that TFL enhances the OC in the Dubai service sector. Ghasabeh (2021) investigated the direct impact of TFL on OC. The results concluded that transformational leaders foster effective OC. In another study, Ratina, Indradewa, and Syah (2021) explored the significant relationship between TFL and OC in Harapan Mulia hospital. The study results revealed that the better the influence of TFL, the stronger the OC in the organization. Before 2015, Gholamzadeha et al. (2014) confirmed the positive and significant effect of TFL on OC among 93 respondents in Mapsa Company. In a study conducted on 344 employees of the logistics industry of Turkey, Acar (2012) also confirmed the same.

Although a limited number of studies have captured the importance of TFL style and OC in VTs (Mangla, 2021; Sedrine, Bouderbala, & Nasraoui, 2020). Davidaviciene and Al Majzoub (2022) revealed that TFL and OC positively affect VTs processes in Europe and the US. In a review study, Newman and Ford (2021) described how the leader of VTs will sustain the OC by giving visual reminders to team members, such as superimposing a corporate values declaration on the screen, sending value statements and extra symbols on the web screen for display in home locations. Koppman et al. (2016) interviewed the Indian IT offshore outsourcing organizations and analysed how the organizational and individual identity processes work together. Their findings revealed that firms do not resolve the threat by regulating personnel identity directly, instead they provide employees with an organizational toolkit that include political resources (policies and procedures) and cultural resources (frames and stories) both to create positive identities. In another study, Davis and Bryant (2003) examined how cultural distance affects the leadership at different levels for the group effectiveness and the satisfaction of the employees working in virtual mode. Based on the discussions and findings of these empirical studies in establishing the relationship between TFL and OC among employees' of VTs, the following hypothesis was presented:

H2. Transformational leadership is positively related to organizational culture.

3.3. Studies on organizational culture and change management

Several previous empirical studies have confirmed the positive relationship between OC and CM (Al-Ali et al., 2017; Rajala et al., 2012). Kotter (1998) described how successful change occurs whenever there is communication to change the vision and strengthen that change by anchoring new approaches into the OC

in the eight-step model. Further, his last step explained that the changes would become part of the OC when embedded in the core part of the organization, and the values must agree with the new vision to ensure that the employees support the change. In such a way, the current study connected the theoretical basis between the OC and CM based on Kotter's eight steps model. [Yildirim and Birinci \(2013\)](#) explained that OC contributes to organizational change. Based on Sikri's study, [Onyango \(2014\)](#) examined OC significant and positive effect on CM. Their findings concluded that the dimensions of OC (attitude and support) more significantly affect CM, while (beliefs and norms) did not influence CM. [Muscalu \(2014\)](#) stated that any cultural change in the organization requires communication as it is synonymous with the changing behaviors and attitudes of the organisation members. [Too et al. \(2018\)](#) also confirmed that OC significantly affects CM in Kenya.

Although the previous literature has reported minimal research on the concept of OC and CM in VTs, [Jackson \(2001\)](#) focused on the strategic change process for employees to focus on the cultural dynamics for the implementation of VTs. [Dani et al. \(2006\)](#) examined the role of OC in VTs to demonstrate trust in business organizations. [Grober and Baumol \(2017\)](#) studied interactive VTs in culturally affecting the organisation through technological tools. Their findings affirmed that the organizations could build their change initiatives by allowing members to work digitally (flexible time duration of work or work from home). Based on the discussions and findings of these empirical studies, the following hypothesis was formulated.

H3. Organizational culture is positively related to change management.

3.4. Linking transformational leadership and change management through organizational culture as a mediating variable

The consistent findings of many prior studies claimed a significant positive relationship between TFL and OC ([Jati et al., 2015](#); [Ratina et al., 2021](#)) and OC and CM ([Too et al., 2018](#)). Individuals usually learn how to behave by imitating and observing the leader's attitude and behavior through the lens of SLT ([Bandura, 1977](#)). [Abrell-Vogel and Rowold \(2014\)](#) explained that an employee follows the change-oriented values by imitating and learning the transformational leaders' behaviors and accepting cultural initiatives to develop a psychological connection with the CM. In such a way, the SLT theory has provided the theoretical basis for TFL and CM through OC. Moreover, based on the findings of the following referenced studies, the current study acknowledged the significant intervening role of OC between TFL and firm performance ([Zehira et al., 2011](#)), between TFL and ERP Success ([Shao et al., 2012](#)), between leader-member exchange (LMX) and CM ([Arif et al., 2017](#)), between TFL and psychological empowerment ([Pradhan et al., 2017](#)), between TFL and innovative behavior ([Zheng et al., 2019](#)), between TFL and organization learning ([Hosseini et al., 2019](#)), between TFL and organizational excellence ([Lasrado & Kassem, 2020](#)).

At present, the literature does not corroborate the association between TFL and CM through OC as an intervening variable among employees' of VTs in the Indian context. To the best of the author's information, no previous study has yet observed the mediating role of OC on the relationship between TFL and CM, especially on VTs employees' of Top 10 IT companies in India.

Though, the author's has addressed some other gaps, these were subject to limitations, such as establishing relationship of the virtual leadership on performance and decision making process of VTs' ([Baba et al., 2004](#); [Chen et al., 2013](#); [Mattarelli et al., 2017](#)). Refer to [Section 6.2](#). Following the previous theoretical and empirical work, the following hypothesis was presented:

H4. Organizational culture mediates the relationship between transformational leadership and change management.

Based on the above discussion, this present study proposed a conceptual model, as shown in [Fig. 1](#), indicating that TFL is an exogenous variable; TFL has a significant positive relationship with OC and CM, where OC acts as a mediator variable. Also, OC has a significant positive relationship with CM. The theoretical premise for each proposed association in the model was duly explained in the relevant sections of the literature review.

4. Methodology

4.1. Research design

The research design combined the merits of both descriptive and exploratory. The exploratory research aimed at elucidating all the concepts such as TFL, OC, CM, and VTs, in virtual contexts and existing studies were searched the coverage of research gap (s). While in the descriptive research, quantitative data analysis was performed to analyze and confirm the relationship of OC as a mediator between TFL and CM with the help of data gathered through self-administered questionnaires.

4.2. Data sources

The current study was based on empirical research involving primary data. The preliminary data has been collected first-hand through the survey. Secondary data has been utilized only for theory development and discussion from books and published articles in journals.

4.3. Sampling technique and sample characteristics

The sampling frame could not be determined due to the pandemic situation; the Purposive sampling with some elements of the Convenience sampling technique was selected to get responses from the *Top 10 IT companies* in India. The rating evaluation by firms such as *Deloitte, Gartner, McKinsey*, and others rate top IT companies based on their revenue. Correspondingly, IBEF, TECHGIG, Glassdoor, and others provide information on India's Top 5 IT companies on the revenue basis. Since the present study did not want to be restricted to the Top 5 IT companies, thus the *Top 10 IT companies* were selected through reliable web (online) sources based on revenue ([moneycontrol.com, 2021](#)). The IT companies considered for gathering the data include *Tata Consultancy Services* (Revenue, 1524.97 bn), *Infosys* (Revenue, Rs 873.71 bn), *HCL Technologies* (Revenue, 656.43 bn), *Wipro Ltd.* (Revenue, 601.37 bn), *Reddington India Ltd.* (Revenue, 479.96 bn), *Tech Mahindra Ltd.* (Revenue, 351.19 bn), *Larsen & Toubro Infotech Ltd.* (Revenue, Rs 100.14 bn), *Mphasis Ltd.* (Revenue, 79.73 bn), *Mindtree Ltd.* (Revenue, 73.75 bn), and *Hexaware Technologies Ltd.* (Revenue, 53.06 bn).

The data-gathering period was from October 2020 to March

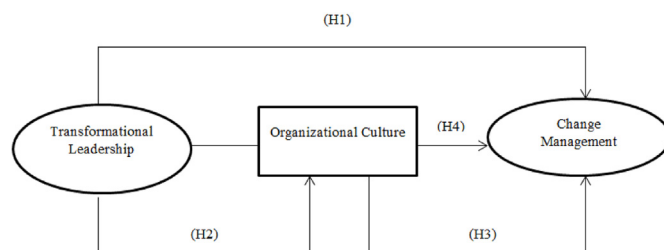


Fig. 1. Proposed conceptual model.

2020. The current study focused on the Delhi-NCR region, where several multinational companies have offices (including the top IT companies). The self-administered questionnaires were circulated through online platforms and personal interactions (telephonic interviews followed by a face-to-face approach). Initially, Google Form has dispersed through several social networking sites (e.g., Facebook, Twitter, WhatsApp, and others). However, due to biases in gender, the face-to-face approach and telephonic methods were adopted to receive responses. This method is considered appropriate for collecting data from a large sample (Malhotra, 2006). The current study utilized the sample respondents who worked in virtual team employees' of the IT sector from the Delhi- NCR. It was pertinent to mention that the study mainly focused towards the members of the virtual teams or virtual team employees' rather than Group/Team analysis as a whole.

The sample was selected based on respondents having a minimum of 5 years of experience and having at least one direct report to ensure the respondent's leadership position (Charoensukmongkol, 2022; Jena et al., 2018). It was also kept in mind that the respondent belonged to VTs of four to five members each (Klonek et al., 2021). About 250 questionnaires were dispersed through Google Forms and a face-to-face method. Out of which 165 responses were received (RR 66%). After removing the undesired/incomplete questionnaires, the sample of 118 employees was selected for the final analysis (Roscoe, 1975). The highest number of arrows coming to the dependent construct multiplied by 10 indicates the minimum sample size required as a rule of thumb (Barclay et al., 1995; Goodhue et al., 2012; Hair et al., 2013). As per the rule, the highest number of arrows pointing to CM was three, making 30 the required sample. Thus, 118 responses were enough for analyzing the results in structural equation modeling. The total percentage of male respondents constituted 55.1%, while the rest belonged to females, 44.9%. The majority of the employees belonged to the age bracket of 30–35 years, i.e., 50.8%, 35.6% belonged to the age category of 25–30 years, and the rest belonged to the age group above 35 years. 51.7% of the respondents had postgraduate and doctoral degrees, while the rest had bachelor's degrees. All the respondents worked in the same organization for five or more years. All the respondents belonged to VTs and had at least one direct report.

4.4. Instruments utilized

The self-administered questionnaire was divided into two parts. Part A of the questionnaire was related to the questions on the demographic profile of the respondents. Part B contained items adapted (rephrased) from the standardized instruments utilized for the study for measuring latent constructs, including TFL, OC, and CM, as displayed in Table 3. There were a few questions regarding the respondent's demographic profile, such as name, designation, department, gender, age, highest qualification, years of experience, time spent with the organization, and number of direct reports. For Part B of the questionnaire, the respondents were asked to respond on a 5-point Likert Scale varying from 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

Twelve TFL items were adapted from Hinkin and Tracey (1999). This instrument was used in previous research (e.g. McCarley et al., 2016). Twelve items represented TFL. An example item was “My leader talks enthusiastically”. The construct of the TFL demonstrated the acceptable reliability of 0.938.

Seventeen OC items were adapted from Denison Organizational Culture Survey (DOCS): Denison et al., 2015). The Denison Survey was also used in previous research (e.g., Gholamzadeha et al., 2014). Out of 17-items, six items represented involvement, five items corresponded to adaptability, three items described consistency, and three items of the mission. An example item from the Denison

survey was “My leader concerns for the individual development of employees”. The construct of OC demonstrated acceptable reliability of 0.953.

Eleven CM items were adapted from Smith Scale: Smith (2006). Smith's survey had also been utilized by Alnuaimi (2013). Out of the 11-items of CM, six items represented communication to change, and five correspond to involvement in change. An example item from the Smith scale was “My leader shares communication usually in the forms of commands and instructions”. The construct of CM demonstrated the reliability of 0.911 in this acceptable study.

4.5. Assessment of common method bias

The data for the conceptual model's latent variables came from the single respondents in a one-time survey data, so common method bias was to be effectively examined. Therefore, procedural and statistical approaches were assessed for minimizing the potential common method bias (CMB) (Podsakoff et al., 2003). Regarding the procedural procedures, the authors ensure the confidentiality and anonymity of the data provided by the employees as this controls the possibility that the respondents would respond artificially or dishonestly (Podsakoff et al., 2003). Also, the proposed model variables were arbitrarily introduced into the survey to reduce respondents' cause and effect association among the latent constructs. As considering the statistical techniques, a full collinearity test based on variance inflation factors (VIFs) was recommended by Kock's (2015) and Kock and Lynn's (2012) procedure in Smart PLS-SEM. This approach explains that when an inner VIFs value was \geq the 3.3 threshold, indicating the collinearity issue, it ultimately suggests the presence of CMB. The inner VIF values for the proposed conceptual model ranged from 2.526 to 3.142, implying that CMB was not a significant issue in this research study.

5. Results & discussions

5.1. Descriptive statistics & Pearson's correlation

Pearson's product-moment correlation (r) was determined to ensure the construct validity and multicollinearity between exogenous variables. If the correlation coefficient (r) was under 0.8, it indicated the validity of the constructs (Nunnally, 1978). Table 2 exhibited the mean(M) values, standard deviations (SD), and product-moment correlation (r) among the latent constructs. All correlation coefficients (r) were under 0.8, inferring that constructs were valid but not highly related.

PLS-SEM was employed to investigate the relationship of the three variables: TFL, OC, and CM. Smart PLS v3.3.3 was administered to validate the study's proposed conceptual model. In applying PLS-SEM, the evaluation of the research model consists of two stages (Hulland, 1999). In the first stage, the outer model (measurement model) with reliability and validity of the latent constructs were examined. The inner model (structural model) was assessed in the second phase and hypothesised path associations between latent variables were estimated (Dimahunahan & Amora, 2016).

Table 2
Descriptive statistics & simple correlations (r) between TFL, OC, and CM.

Construct	Mean	SD	TFL	OC	CM
TFL	3.586	0.827	–	0.739**	0.671**
OC	3.592	0.769		–	0.742**
CM	3.473	0.748			–

Note:**Correlation is significant at 0.01 level(one-tailed). Refer Table 3 for constructs' abbreviations.

Table 3
Measurement model results.

Reference (source of standardized scale)	Selective items (after factor analysis)	Factors loading	CA	CR	AVE	VIF					
Hinkin and Tracey (1999); McCarley et al. (2016)	TFL1, Talks of values.	0.768	0.918	0.932	0.606	1.951					
	TFL4, Celebrates achievement.	0.807									
	TFL6, Talks enthusiastically.	0.722									
	TFL7, Creates a sense of priorities and purpose.	0.710									
	TFL8, Stimulates to rethink the way to do things.	0.744									
	TFL9, Asks questions that prompt to think.	0.814									
	TFL10, Teaches, and coaches.	0.846									
	TFL11, Helps subordinate to develop their strength.	0.836									
	TFL12, Is an active listener.	0.747									
	Denison et al. (2015); Gholamzadeha et al. (2014)	OC1, Concerns for the individual development of employees.					0.828	0.922	0.934	0.588	1.961
		OC2, Sets clear goals for employees.					0.753				
		OC5, Information is widely shared so that everyone can get the information when it is needed.					0.742				
OC6, People work like they are part of a team.		0.773									
OC7, Sincere customer service.		0.750									
OC9, Developing new products and services continuously.		0.750									
OC10, Ready to accept new changes.		0.793									
OC12, Practice what they preach.		0.768									
OC13, Coordinate projects across different parts of the organization.		0.712									
OC16, Clear mission that gives meaning and direction to our work.		0.794									
Smith (2006); Alnuaimi (2013)		CM1, Formal communication is encouraged in the department to give employees information about the change.	0.809	0.890	0.916	0.646	1.822				
		CM2, Transfers ideas and information from top management to appropriate people in the department	0.800								
	CM3, Communication usually takes the form of commands and instructions.	0.788									
	CM4, Information related to change is shared openly in the department.	0.788									
	CM5, Uses various methods such as meetings, telephone calls, and written messages to communicate the change to staff.	0.883									
	CM6, Keeps us informed of changes to the organization in time.	0.749									

Note:All indicators loading significant at 0.001 level ($p < 0.001$); CA, Cronbach's alpha; CR, composite reliability; AVE, average variance extracted; VIF, variation inflation factor; TFL, transformational leadership; OC, organizational culture; CM, change management.

5.2. Evaluation of the measurement model

The latent constructs were employed to investigate the PLS-SEM measurement model. PLS-SEM assessed a reflective model to measure the constructs, and its indicators were determined through convergent and discriminant validity. Firstly, the reliability of the variables was gauged by Cronbach's alpha (CA) and composite reliability (CR) measures. Secondly, the convergent validity assessed the value of the indicators similarly as interpreted by the respondents and scrutinised by the average value extracted (AVE) results (Hair et al., 2011). Lastly, discriminant validity determined that the indicators related to one latent construct should not measure the items of the other latent constructs (Kock, 2017, p.141).

As displayed in Table 3, factor loadings of the latent variables were higher than the required minimum threshold value of 0.60. All the factors' outer loadings were statistically acceptable and were higher than the cut-off value of 0.7 (Hair et al., 2013). A total of forty items of three constructs had to be removed due to outer loadings below 0.7 & multicollinearity ≥ 3.3 , and ultimately, 25 items with factors' loading varying from 0.710 to 0.883 were kept. The study's findings in Table 3 show that TFL, OC, and CM met the reliability scale's criteria. All CA and CR values outweighed the minimum value of 0.70, indicating that reliability is good (Chin, 2010). Next, the AVE for all constructs was greater than 0.5, which was the threshold minimum value recommended for significant convergent validity (Fornell & Larcker, 1981). As shown in Table 3, AVE coefficients exhibited acceptable validity. The results showed that the reliability of constructs was ensured, and they were well-suited to the appropriate model. To evaluate the possibility of collinearity issues between the constructs, the VIF should be ≤ 3.3 (Kock, 2017, p.141), and as can be displayed in Table 3, the VIF values for all constructs were below the cut-off value.

Table 4 displayed the square root of AVE and correlation

Table 4
Discriminant validity and the construct's correlation coefficients.

Construct	CM	OC	TFL
CM	0.804		
OC	0.718	0.767	
TFL	0.706	0.782	0.779

Note: Diagonal elements depict the square root of AVE coefficients; Off Diagonal elements depict the correlation between constructs. Refer to Table 3 for constructs' abbreviations.

coefficients among the constructs to exhibit the discriminant validity of the latent construct proposed by (Fornell & Larcker, 1981). As obligatory, the square roots of each construct's AVE (diagonal values) were higher than the off-diagonal values as recommended by (Hair et al., 2011). Hence, the results revealed that the measures utilized in this study have adequate discriminant validity.

5.3. Evaluation of the structural model and mediation analysis

The present study utilized the bootstrapping procedure to measure the indirect effect of the proposed conceptual mediation model as developed by (Hair et al., 2011). Fig. 2 displays the structural model of the study reflecting all the factors loading of variables and indicators along with the indirect mediating effect.

Table 5 exhibits the parameter estimates of the direct effect of the proposed model. First, the path results revealed a significant positive relationship between TFL and CM ($\beta = 0.371, p = 0.000, H1$ supported). This affirmative association concluded that if transformational leaders of VTs are sound in motivating followers through words and actions, CM could be effectively and efficiently managed to enhance employees' confidence for a new scenario. Previous research also substantiated this finding (Alqatawenh, 2018;

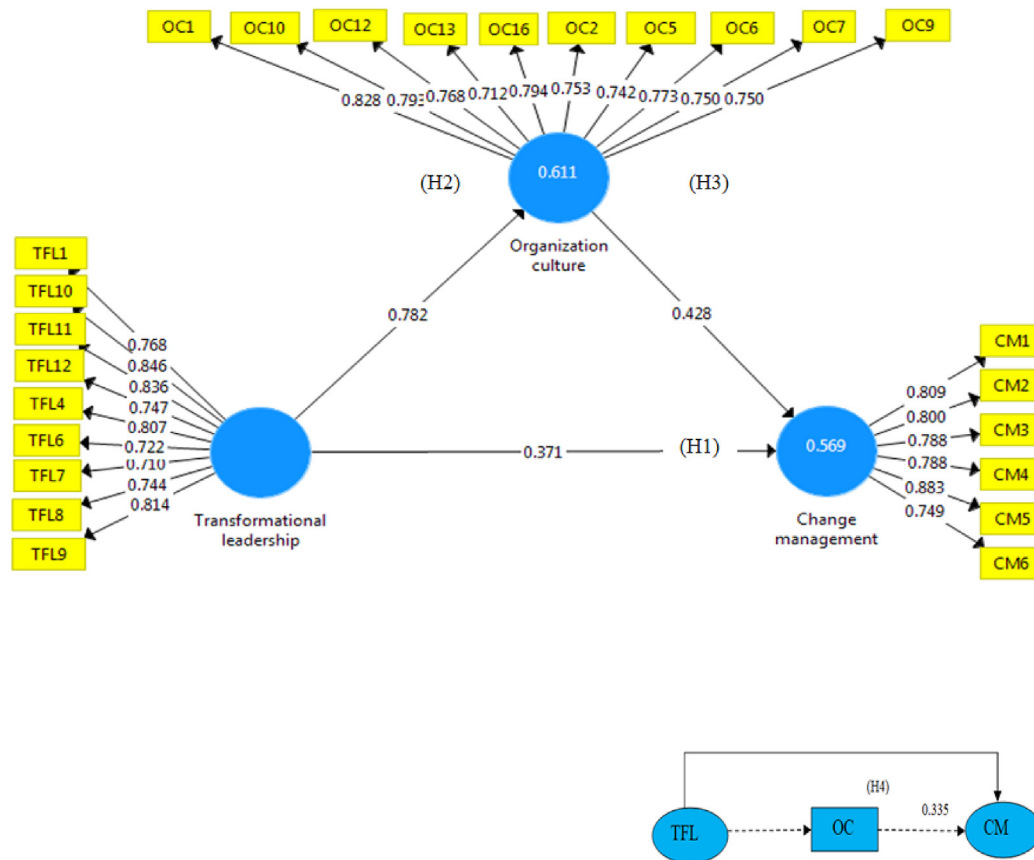


Fig. 2. Structural model depicting direct and indirect effect value with regression coefficients.

Table 5
Parameter estimates of direct effect.

Hypothesis	Path Relationship	DE	SE	T-statistics	p-value	Results	
H1	TFL → CM	0.371	0.124	2.997	0.003	Supported	
H2	TFL → OC	0.782	0.048	16.259	0.000	Supported	
H3	OC → CM	0.428	0.123	3.482	0.001	Supported	
H4	TFL → OC → CM	Mediation (refer Table 6)					

Note: DE, direct effect; SE, standard error; β = standardized path coefficients. Refer to Table 3 for variables' abbreviations.

Hamstra et al., 2011; Li et al., 2016; Nazim et al., 2014; Yaghi, 2017). Also, the existence of transformational leaders plays an essential role in creating a positive environment through the involvement of employees in fostering organizational change. Second, the path analysis showed that TFL was positively and significantly related to OC ($\beta = 0.782, p = 0.000, H2$ supported). This positive association implied that transformational leaders of VTs are insightful in creating high levels of trust in influencing and empowering followers by corporate values (e.g., declaration on the screen, sending value statements, and extra symbols on the web screen) to sustain the OC. The findings were in line with the prior studies (Acar, 2012; Gholamzadeha et al., 2014; Lasrado & Kassem, 2020). Third, the finding analysis showed that OC and CM were significantly positive ($\beta = 0.428, p = 0.001, H3$ supported). This positive relationship indicated that OC is a significant factor in enhancing the successful implementation of CM. These results were corroborated in prior studies linking OC to CM (Onyango, 2014; Too et al., 2018).

5.3.1. Mediating analysis

Table 6 describes the parameter outcomes of the mediation

model. The indirect effect of OC on the relationship between TFL and CM was found statistically significant ($\beta = 0.335, p = 0.001, H4$ supported). VAF (value adjustment factor) was utilized to further measure the indirect effect by dividing the indirect effect value by the total effect value. If VAF <20%, the no mediation effect occurs; if VAF >20 but <80% revealed partial mediation, else VAF >80% results in full mediation effect (Hair et al., 2012). Table 6 shows that the VAF for hypothesis H4 was evaluated about 47.45% (0.4745), with an indirect effect of 0.335. This affirmative association concluded that OC partially mediates between TFL and CM, thus covering the research gap. This observation concludes that transformational leaders in VTs employees' can efficiently and effectively manage the CM when it involves involvement, adaptability, consistency, and mission culture. Also, the leaders' behavior is expected to influence and motivate the employees in involving cultural dimensions to implement the CM successfully.

5.4. Prediction power and model fit of the conceptual model

Both model fit procedures (SRMR and NFI) were carried out in this

Table 6
Parameter estimates of the indirect effect.

Hypothesis	Path relationship	IDE	TE	SE	VAF	p-value	Results
H4	TFL → OC → CM	0.335	0.706	0.103	0.4745	0.001	Supported, PM

Note: IDE, indirect effect; TE, total effect; SE, standard error; VAF, value adjustment factor; TE = DE + IDE; PM = partial mediation.

study, whereas only one model fit was adequate. The predicting power of the proposed model was examined through the structural model with the existence of a mediator (i.e., OC) by assessing the coefficient of determination (R^2) of the endogenous latent constructs. Also, R^2 explained the amount of variance of an observed construct. As displayed in Fig. 2, the coefficient of determination (R^2) for OC and CM were attained at 61.1% and 56.9%, respectively. It explained that the model had a higher prediction power and could describe all the endogenous constructs (Hair et al., 2011; Henseler et al., 2009). The SRMR value obtained was 0.063 (<0.08), implying that model fit was achieved (Hu & Bentler, 1998). The obtained NFI value (i.e., 0.778) was slightly lower to consider as it needs to be 0.90 for a good model fit (Bentler & Bonett, 1980). However, the model fit is regarded as a rising field; unlike in CB-SEM (confirmatory analysis), its utilisation is not mandatory in exploratory and predictive analysis (i.e., PLS-SEM) (Hair et al., 2017).

6. Conclusions

Abundant research studies have explored the relationship between transformational leadership, organizational culture, and change management. Though, some studies have been conducted in the Indian IT sector in the context of virtual teams but this area need to be explored widely. The novelty of the present study is significant as no prior study explored the mediating role of organizational culture on the relationship between transformational leadership and change management, specifically targeting the employees' of virtual teams in the Indian IT sector. Most of the previous studies have assessed the role of employees in influencing variables in virtual teams and neglected the vital role of leaders or vice versa, but this present study examined both aspects equally. The study described the theoretical inference to prior OC research by contributing and validating an empirical, conceptual framework as a significant intervening variable between the independent variables and outcome in the virtual teams in the IT sector.

The study successfully contributes to the important disclosure that transformational leadership and organizational culture significantly affect change management as Cascio (1995) recommends that considering globalization and escalating workforce diversity in organizations, there is a need to develop TFL style, skills, and competencies. Cascio suggested that today's dispersed teams and organizations require a transformational leadership style. The current study contributes to the growing transformational leadership style required in virtual teams. The study has demonstrated that the issue of transformational leadership, organizational culture, and change management in virtual teams is worthy of additional research in the Asia-Pacific region. Additionally, the significant results of the present study show that the rate of change required in organizations and the demands of dynamic, turbulent environments are on the rise. Therefore, it necessitates the organization to have a good culture and employee change readiness. Change is possible only when there is a good leadership style and organizational culture via the technological divide. This study supports that organizational culture partially mediated the relationship between transformational leadership and change management among employees' of virtual teams in the IT sector of Asia-Pacific, especially India. The other significant outcome derived

from this study is that it acts as a trigger for deeper insights into different team contexts. Eventually, such studies will serve as an enabler for developing good working culture and leadership styles to embark on changes in the organizations and teams.

6.1. Implications

6.1.1. Theoretical implications

The research has a fourfold contribution. *First*, the study has contributed theoretical inference to the existing knowledge domain of CM established through SBT to generalize a linkage between TFL and CM. *Second*, this research has helped by validating an empirical model that defines OC as a significant intervener between TFL and CM in the Indian IT sector based on SLT to generalize its mediation effect. *Third*, this study contributes to the previous literature in Western countries on the rising importance of OC as a mediator in the association between TFL and CM and contributes an additional body of knowledge in human resource management and organizational behavior in the Indian context. *Fourth*, these studies have not been studied, and their relevance in virtual contexts in the IT sector is limited. These results can help future researchers in their endeavors a lot. To conclude, we can say that a strong with the support of transformational leaders in VTs must effectively implement the CM success OC fully.

6.1.2. Practical implications

From this practical point of view, this present study contributes insight into the rising importance of OC for academicians and practitioners, which may be more kind and apparent through the intelligent behavior of the senior management. *First*, IT could use the programs to plan for employees' future development and educate leaders on attributes. *Second*, the study provides implications for upper management to design training programs to develop suitable leadership styles and good working culture in the work environment to adopt change. *Third*, this present study will open new opportunities for the upcoming leaders in the virtual contexts to incorporate strategies to enhance leadership and promote good OC to go for change initiatives smoothly in the organizations. Today, technology plays a vital role in VTs, so appropriate technology training programs and workplace professional training can effectively build leadership skills and good OC in virtual contexts (Gera, 2020). *Fourth*, it is also implied that the IT industry might use leadership skills that hold vital attributes to work as 'a coach for other departments. *Fifth*, investing in and developing leadership in corporate and academic sectors could become an example of the new thinking of building potential, influential leaders. *Sixth*, the study also implied that undergraduate and postgraduate programs could design their curriculum to address leadership development. *Seventh*, the present study outcomes suggest that leaders need to be trained in these virtual contexts that result in effective change and provide the leaders training in the cultures so that employees of any company become ready for the change to deal with the latest technologies.

6.2. Limitations and suggestions for the future research

The study is subject to some limitations: *First*, the study's

findings cannot be generalized in collocated and hybrid teams as the current study has utilized the respondents from VTs. Future studies are suggested to conduct a considerable sample size of VTs to obtain more generalizable results. *Second*, the study was not run facet-wise as the researchers were interested in core constructs only. Future research may do facet wise analysis, which will bring exciting findings in the future. *Third*, the current study misses the positive associations and mediating role of variables in hybrid and face-to-face teams. Future research may utilize face-to-face and other teams to have the co-relational and mediation analysis to have a holistic view of different team contexts. *Fourth*, this present study is cross-sectional, so the causality path could not be examined; the findings may differ in longitudinal analysis. *Fifth*, the study region constraint is limited to the top 10 IT companies situated only in the Delhi-NCR region; future studies may conduct in the Asia-Pacific region. *Sixth*, future studies may utilize more sophisticated tools with an increased number of constructs in the same framework as appropriate for their need of study. *Sixth*, the future studies may investigate the relationship of different leadership traits (i.e., virtual team leadership, hybrid leadership, and participative leadership, etc.) on team performance, and decision making process of VTs'. *Finally*, the study's was confined to detect the direct and indirect effect of transformational leadership on change management among the employees' of virtual teams rather Group/Team analysis. Future studies are advised to cover this gap as well.

Author statement, submission declarations, and verification

The authors take responsibility that this paper has not been published before in any other journal, presented in a conference/Seminar/Symposium, or submitted for consideration for any award.

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Competing interest's statement

The authors reported no conflict of interest.

Declaration of interest

None.

Acknowledgment

We want to thank Dr. Saurabh Kumar (Delhi University & Jamia Hamdard) for proofreading, rephrasing, and preparing the manuscript as per the standards. We also thank him for selecting the methodological and statistical approach.

References

- Abrell-Vogel, C., & Rowold, J. (2014). Leaders' commitment to change and their effectiveness in change- a multilevel investigation. *Journal of Organizational Change Management*, 27, 900–921. <https://doi.org/10.1108/JOCM-07-2012-0111/full/html>
- Acar, A. Z. (2012). Organizational culture, leadership styles and organizational commitment in Turkish logistics industry. *Procedia-Social and Behavioral Sciences*, 58, 217–226. <https://doi.org/10.1016/j.sbspro.2012.09.995>
- Afrianty, T. W., Artatanaya, I. G., & Burgess, J. (2022). Working from home effectiveness during Covid-19: Evidence from university staff in Indonesia. *Asia Pacific Management Review*, 27(1), 50–57. <https://doi.org/10.1016/j.apmr.2021.05.002>
- Agote, L., Aramburu, N., & Lines, R. (2016). Authentic leadership perception, trust in the leader, and followers' emotions in organizational change processes. *The Journal of Applied Behavioral Science*, 52(1), 35–63. <https://doi.org/10.1177/0021886315617531>
- Al-Ali, A. A., Singh, S. K., Al-Nahyan, M., & Sohal, A. S. (2017). Change management through leadership: The mediating role of organizational culture. *International Journal of Organizational Analysis*, 25(4), 723–739. <https://doi.org/10.1108/IJOA-01-2017-1117/full/html>
- Almanei, M., Saloniitis, K., & Tsinopoulos, C. (2018). A conceptual lean implementation framework based on change management theory. *Procedia CIRP*, 72, 1160–1165. <https://doi.org/10.1016/j.procir.2018.03.141>
- Alnuaimi, S. (2013). *Effective leadership in implementing change in Arab culture: The case of the abu Dhabi Police (published PhD thesis)*. England: University of Manchester.
- Alqatawenh, A. S. (2018). Transformational leadership style and its relationship with change management. *Verslas: TeorijahrPraktika*, 19(1), 17–24. <https://doi.org/10.3846/btp.2018.03>
- Antonakis, J., & House, R. J. (2013). *The full-range leadership theory: The way forward*. In *Transformational and charismatic leadership: The road ahead 10th anniversary edition* (Vol. 5, pp. 3–33). Emerald Group Publishing Limited.
- Arif, M., Zahid, S., Kashif, U., & Ilyas Sindhu, M. (2017). Role of leader-member exchange relationship in organizational change management: Mediating role of organizational culture. *International Journal of Organizational Leadership*, 6(1), 32–41. <https://doi.org/10.33844/ijol.2017.60339>
- Baard, S. K., Rench, T. A., & Kozlowski, S. W. (2014). Performance adaptation: A theoretical integration and review. *Journal of Management*, 40(1), 48–99. <https://doi.org/10.1177/0149206313488210>
- Baba, M. L., Gluesing, J., Ratner, H., & Wagner, K. H. (2004). The contexts of knowing: Natural history of a globally distributed team. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 25(5), 547–587. <https://doi.org/10.1002/job.259>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–197. <https://doi.org/10.1037/0033-295X.84.2.191>
- Barclay, D., Higgins, C., & Thompson, R. (1995). The partial least squares (PLS) approach to casual modeling: Personal computer adoption and use as an illustration. *Technology Studies*, 2(2), 285–309.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Bass, B. M., & Avolio, B. J. (1994). Improving organizational effectiveness through transformational leadership. *Journal of Leadership & Organizational Studies*, 2(2), 153–155.
- Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership". *Journal of Applied Psychology*, 88(2), 207–218. <https://doi.org/10.1037/0021-9010.88.2.207>
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588–606. <https://doi.org/10.1037/0033-2909.88.3.588>
- Breuer, C., Hüffmeier, J., & Hertel, G. (2016). Does trust matter more in virtual teams? A meta-analysis of trust and team effectiveness considering virtuality and documentation as moderators. *Journal of Applied Psychology*, 101(8), 1151–1177. <https://doi.org/10.1037/apl0000113>
- Burns, J. M. (1978). *Leadership*. New York: Harper & Row.
- Busari, A. H., Khan, S. N., Abdullah, S. M., & Mughal, Y. H. (2020). Transformational leadership style, followership, and factors of employees' reactions towards organizational change. *Journal of Asia Business Studies*, 14(2), 181–209. <https://doi.org/10.1108/JABS-03-2018-0083/full/html>
- Caligiuri, P., De Cieri, H., Minbaeva, D., Verbeke, A., & Zimmermann, A. (2020). International HRM insights for navigating the COVID-19 pandemic: Implications for future research and practice. *Journal of International Business Studies*, 51, 697–713. <https://doi.org/10.1057/s41267-020-00335-9>
- Cameron, K. S., & Quinn, R. E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework*. John Wiley & Sons.
- Cascio, W. F. (1995). Whither industrial and organizational psychology in a changing world of work? *American Psychologist*, 50(11), 928–939. <https://doi.org/10.1037/0003-066X.50.11.928>
- Castel, P., & Friedberg, E. (2010). Institutional change as an interactive process: The case of the modernization of French cancer centers. *Organization Science*, 21(2), 311–330. <https://doi.org/10.1287/orsc.1090.0442>
- Charoensukmongkol, P. (2022). Supervisor-subordinate guanxi and emotional exhaustion: The moderating effect of supervisor job autonomy and workload levels in organizations. *Asia Pacific Management Review*, 27(1), 40–49. <https://doi.org/10.1016/j.apmr.2021.05.001>
- Chen, J., McQueen, R. J., & Sun, P. Y. (2013). Knowledge transfer and knowledge building at offshore technical support centers. *Journal of International Management*, 19(4), 362–376. <https://doi.org/10.1016/j.intman.2013.03.009>
- Chin, W. W. (2010). How to write up and report PLS analyses. In *Handbook of partial least squares* (pp. 655–690). Berlin, Heidelberg: Springer.
- Çurşeu, P. L., Schalk, R., & Wessel, I. (2008). How do virtual teams process information? A literature review and implications for management. *Journal of Managerial Psychology*, 23(6), 628–652. <https://doi.org/10.1108/02683940810894729>
- D' Mello, M. D. (2005). Thinking local, acting global: Issues of identity and related tensions in global software organizations in India. *The Electronic Journal on Information Systems in Developing Countries*, 22(2), 1–20. <https://doi.org/10.1002/j.1681-4835.2005.tb00140.x>
- Dani, S. S., Burns, N. D., Blackhouse, C. J., & Kochhar, A. K. (2006). The implications of organizational culture and trust in the working of virtual teams. *Proceedings - Institution of Mechanical Engineers*, 220(6), 951–960. <https://doi.org/10.1243/09544054JEM415.26.01.21>
- Davidaviciene, V., & Al Majzoub, K. (2022). The effect of cultural intelligence,

- conflict, and transformational leadership on decision-making processes in virtual teams. *Social Sciences*, 11(2), 64. <https://doi.org/10.3390/socsci11020064>
- Davis, D. D., & Bryant, J. L. (2003). Influence at a distance: Leadership in global Virtual teams. *Advances in Global Leadership*, 3, 303–340. [https://doi.org/10.1016/S1535-1203\(02\)03015-0](https://doi.org/10.1016/S1535-1203(02)03015-0)
- Deal, T. E., & Kennedy, A. A. (1982). *Corporate cultures*. Reading, MA: Addison-Wesley.
- Denison, D. R., Haaland, S., & Goelzer, P. (2015). Corporate culture and organizational effectiveness: Is there a similar pattern around the world. *Advances in Global Leadership*, 3, 205–227. [https://doi.org/10.1016/S1535-1203\(02\)03011-3](https://doi.org/10.1016/S1535-1203(02)03011-3)
- Denison, D., Hooijberg, R., Lane, N., & Lief, C. (2012). *Leading culture change in global organizations*. San Francisco, California: Jossey-Bass.
- Denison, D. R., & Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science*, 6(2), 204–223. <https://doi.org/10.1287/orsc.6.2.204>
- Denison, D., Nieminen, L., & Kotrba, L. (2014). Diagnosing organizational cultures: A conceptual and empirical review of culture effectiveness surveys. *European Journal of Work & Organizational Psychology*, 23(1), 145–161. <https://doi.org/10.1080/1359432X.2012.713173>
- Dimanahan, D. V., & Amora, J. T. (2016). An investigation of organizational creativity of micro, small and medium-scale restaurants in the Philippines using structural equation modelling. *GSTF Journal on Business Review*, 4(3), 48–53. https://doi.org/10.5176/2010-4804_4.3.384
- Feitosa, J., & Salas, E. (2020). Today's virtual teams: Adapting lessons learned to the pandemic context. *Organizational Dynamics*, 50(1). <https://doi.org/10.1016/j.orgdyn.2020.100777>
- Fey, C. F., & Denison, D. R. (2003). Organizational culture and effectiveness: Can American theory be applied in Russia? *Organization Science*, 14(6), 686–706. <https://doi.org/10.1287/orsc.14.6.686.24868>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobserved variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Garro-Abarca, V., Palos-Sanchez, P., & Aguayo-Camacho, M. (2021). Virtual teams in times of pandemic: Factors that influence performance. *Frontiers in Psychology*, 12, 232. <https://doi.org/10.3389/fpsyg.2021.624637>
- Gera, S. (2013). Virtual teams versus face to face teams: A review of literature. *IOSR Journal of Business and Management*, 11(2), 1–4.
- Gera, S. (2020). Relationship between psychological capital, leadership styles and leader outcome in virtual and face to face teams. *International Journal of Technology and Globalisation*, 8(4), 174–193. <https://doi.org/10.1504/IJTG.2020.112143>
- Ghasabeh, M. S. (2021). Transformational leadership: Implementing a cultural approach in organizations. *The Journal of Value-Based leadership*, 14(1), 1–16.
- Gholamzadeha, D., Khazaneha, A. T., & Nabib, M. S. (2014). The impact of leadership style on organizational culture in Mapsa company. *Management Science Letters*, 4(9), 2161–2170. <https://scholar.valpo.edu/jvbl/vol14/iss1/9>
- Gilson, L. L., Maynard, M. T., Jones Young, N. C., Vartiainen, M., & Hakonen, M. (2015). Virtual teams research: 10 years, 10 themes, and 10 opportunities. *Journal of Management*, 41(5), 1313–1337. <https://doi.org/10.1177/0149206314559946>
- Gilson, L. L., O'Neill, T. A., & Costa, P. (2021). Introduction to the special issue of virtual teams. *Organizational Dynamics*, 50(1), 1–4. <https://doi.org/10.1016/j.orgdyn.2021.100848>
- Goodhue, D. L., Lewis, W., & Thompson, R. (2012). Does PLS have advantages for small sample size or non-normal data? *MIS Quarterly*, 981–1001.
- Griffin, D., & Denholm, J. (2020, April 17). This isn't the first global pandemic, and it won't be the last. Here's what we've learned from others throughout history. *The Conversation*. Retrieved October 10, 2021, from <https://theconversation.com/this-isnt-the-first-global-pandemic-and-it-wont-be-the-last-heres-what-weve-learned-from-4-others-throughout-history-136231>
- Grober, B., & Baumol, U. (2017). Virtual teamwork in the context of technological and cultural transformation. *International Journal of Information Systems and Project Management*, 5(4), 21–35. <https://aisel.aisnet.org/ijispm/vol5/iss4/3>
- Guay, R. P. (2013). The relationship between leader fit and transformational leadership. *Journal of Managerial Psychology*, 28(1), 55–73. <https://doi.org/10.1108/02683941311298869/full/html>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modelling (PLS-SEM)* (2 nd ED.). Thousand Oaks: Sage.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1–2), 1–12. <https://doi.org/10.1016/j.lrp.2013.01.001>
- Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The use of partial least squares structural equation modeling in strategic management research: A review of past practices and recommendations for future applications. *Long Range Planning*, 45(5), 320–340. <https://doi.org/10.1016/j.lrp.2012.09.008>
- Hamstra, M. R. W., Yperen, N. W. V., Wisse, B., & Sassenberg, K. (2011). Transformational leadership styles and followers regulatory focus. *Journal of Personnel Psychology*, 10(4), 182–186. <https://doi.org/10.1027/1866-5888/a000043>
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing*, 20, 277–320. [https://doi.org/10.1108/S1474-7979\(2009\)000020014/full/html](https://doi.org/10.1108/S1474-7979(2009)000020014/full/html)
- Herath, T., & Herath, H. S. B. (2020). Coping with the new normal imposed by the COVID-19 pandemic: Lessons for technology management and governance. *Information Systems Management*, 37(4), 277–283. <https://doi.org/10.1080/10580530.2020.1818902>
- Herold, D. M., Fedor, D. B., Caldwell, S., & Liu, Y. (2008). The effects of transformational and change leadership on employees' commitment to a change: A multilevel study. *Journal of Applied Psychology*, 93(2), 346. <https://doi.org/10.1037/0021-9010.93.2.346>
- Hinkin, T. R., & Tracey, J. B. (1999). The relevance of charisma for transformational leadership in stable organizations. *Journal of Organizational Change Management*, 12(2), 105–119. <https://doi.org/10.1108/09534819910263659/full/html>
- Hirschi, T. (1969). *Causes of Delinquency*. Berkeley, CA: University of California Press.
- Hosseini, S. H., Hajipour, E., Kaffashpoor, A., & Dariikandeh, A. (2019). The mediating effect of organizational culture in the relationship of leadership style with organizational learning. *Journal of Human Behavior in the Social Environment*, 30(3), 279–288. <https://doi.org/10.1080/10911359.2019.1680473>
- Hu, L. T., & Bentler, P. M. (1998). Fit indices in covariance structural modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3(4), 424–453. <https://psycnet.apa.org/doi/10.1037/1082-989X.3.4.424>
- Hulland, J. (1999). Use of partial least square (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20(2), 195–204. [https://doi.org/10.1002/\(SICI\)1097-0266\(199902\)20:2<3C195::AID-SMJ13%3E3.0.CO;2](https://doi.org/10.1002/(SICI)1097-0266(199902)20:2<3C195::AID-SMJ13%3E3.0.CO;2)
- Hussain, S. T., Lei, S., Haider, M. J., & Akram, T. (2021). Transformational leadership and organizational change examining the mediational approach of knowledge sharing. *International Journal of Asian Business and Information Management*, 12(2), 84–95. <https://doi.org/10.4018/IJABIM.20210401.a05>
- Islam, M. N., Furuoka, F., & Idris, A. (2021). Mapping the relationship between transformational leadership, trust in leadership and employee championing behavior during organizational change. *Asia Pacific Management Review*, 26(2), 95–102. <https://doi.org/10.1016/j.apmr.2020.09.002>
- Jackson, P. J. (2001). Organizational change and virtual teams: Strategic and operational integration. *Information Systems Journal*, 9(4), 313–332. <https://doi.org/10.1046/j.1365-2575.1999.00066.x>
- Jati, M. K. K., Hassan, S., Harman, M. H., Jabar, S. A., & Majid, M. A. A. (2015). Transformational leadership and organizational culture: A case of MAHB. *Procedia Economics and Finance*, 31, 425–435. [https://doi.org/10.1016/S2212-5671\(15\)01217-4](https://doi.org/10.1016/S2212-5671(15)01217-4)
- Jena, L. K., Pradhan, S., & Panigrahy, N. P. (2018). Pursuit of organisational trust: Role of employee engagement, psychological well-being and transformational leadership. *Asia Pacific Management Review*, 23(3), 227–234. <https://doi.org/10.1016/j.apmr.2017.11.001>
- Johansson, C., & Heide, M. (2008). Speaking of change: Three communication approaches in studies of organizational change. *Corporate Communications: An International Journal*, 13(3), 288–305. <https://doi.org/10.1108/13563280810893661>
- Kim, K., Dansereau, F., & Kim, I. S. (2013). Extending the concept of charismatic leadership: An illustration using Bass's (1990) categories. In *Transformational and charismatic leadership: The road ahead 10th anniversary edition* (Vol. 5, pp. 165–194). Emerald Group Publishing Limited.
- Klonek, F. E., Kanse, L., Wee, S., Runneboom, C., & Parker, S. K. (2021). Did the COVID-19 lockdown make us better at working in virtual teams? *Small Group Research*, 1–22. <https://doi.org/10.1177/10464964211008991>
- Klostermann, M., Ontrup, G., Thomaschewski, L., & Kluge, A. (2021). Something old or something new? An empirical study on the instant adjustment to virtual teamwork during COVID-19. *Zeitschrift für Arbeits- und Organisations Psychologie A&O*, 65(4), 215–230. <https://doi.org/10.1026/0932-4089/a000368>
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1–10. <https://doi.org/10.4018/ijec.2015100101>
- Kock, N. (2017). *WarpPLS user manual*: ScriptWarp Systems: Laredo, TX, US. P.141. Available at: Version 6.0. https://www.scriptwarp.com/warppls/UserManual_v_7_0.pdf
- Kock, N., & Lynn, G. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. *Journal of the Association for Information Systems*, 13(7), 1–35. file:///C:/Users/dell/Downloads/SSRN-id2152644.pdf.
- Koppman, S., Mattarelli, E., & Gupta, A. (2016). Third-world “sloggers” or elite global professionals? Using organizational toolkits to redefine work identity in information technology offshore outsourcing. *Organization Science*, 27(4), 825–845. <https://doi.org/10.1287/orsc.2016.1068>
- Kort, E. D. (2008). What, after all, is leadership? Leadership and plural action. *The Leadership Quarterly*, 19(4), 409–425. <https://doi.org/10.1016/j.leaqua.2008.05.003>
- Kotter, J. P. (1998). Winning at change. *Leader to Leader*, 10(Fall), 27–33.
- Kozlowski, S. W., Chao, G. T., & Van Fossen, J. (2021). Leading virtual teams. *Organizational Dynamics*, 50(1), 1–11.
- Lasrado, F., & Kassem, R. (2020). Let's get everyone involved! the effects of transformational leadership and organizational culture on organizational excellence. *International Journal of Quality & Reliability Management*. <https://doi.org/10.1108/IJQRM-11-2019-0349>
- Lefrançois, G. R. (2012). *Theories of human learning: What the professor said*. Cengage Learning.

- Levasseur, R. E. (2012). People skills: Leading virtual teams- A change management perspective. *Interfaces*, 42(2), 213–216. <https://doi.org/10.1287/inte.1120.0634>
- Li, M., Liu, W., Han, Y., & Zhang, P. (2016). Linking empowering leadership and change-oriented organizational citizenship behavior: The role of thriving at work and autonomy orientation. *Journal of Organizational Change Management*, 29(5), 732–750.
- Lord, R. G., & Dinh, J. E. (2014). What have we learned that is critical in understanding leadership perceptions and leader-performance relations? *Industrial and Organizational Psychology*, 7(2), 158–177. <https://doi.org/10.1111/iops.12127>
- Malhotra, N. K. (2006). *Marketing research: An applied orientation*. New Delhi: Pearson Education Australia.
- Mangla, N. (2021). Working in pandemic and post-pandemic period—Cultural intelligence is the key. *International Journal of Cross Cultural Management*, 21(1), 53–69. <https://doi.org/10.1177/14705958211002877>
- Mattarelli, E., Tagliaventi, M. R., Carli, G., & Gupta, A. (2017). The role of brokers and social identities in the development of capabilities in global virtual teams. *Journal of International Management*, 23(4), 382–398. <https://doi.org/10.1016/j.intman.2017.01.003>
- McCarley, T. A., Peters, M. L., & Decman, J. M. (2016). Transformational leadership related to school climate: A multilevel analysis. *Educational Management Administration & Leadership*, 44(2), 322–342. <https://doi.org/10.1177/1741143214549966>
- Mittal, S., & Dhar, R. L. (2015). Transformational leadership and employee creativity: The mediating role of knowledge sharing. *Management Decision*, 53(5), 894–910. <https://doi.org/10.1108/MD-07-2014-0464/full/html>
- Moneycontrol.com. (2021). Market capitalisation/IT-services & consulting. As accessed: MARCH08,2021. <https://www.moneycontrol.com/stocks/marketinfo/marketcap/bse/it-services-consulting.html>
- Muscalu, E. (2014). Organizational culture change in the organization. *Land Forces Academy Review*, 19(4), 392–396. https://www.armyacademy.ro/reviste/rev4_2014/MUSCALU.pdf
- Mysirlaki, S., & Paraskeva, F. (2020). Emotional intelligence and transformational leadership in virtual teams: Lessons from MMOGs. *The Leadership & Organization Development Journal*, 41(4), 551–566. <https://doi.org/10.1108/LODJ-01-2019-0035>
- Nazim, A., Shahid, A., Anjum, A., Wali, R., & Shahid, J. (2014). Effects of leadership styles on job satisfaction, organizational citizenship behavior, commitment and turnover intention (the empirical study of private sector schools' teachers). *Journal of Life Sciences*, 11(3), 175–183.
- Newman, S. A., & Ford, R. C. (2021). Five steps to leading your team in the virtual COVID-19 Workplace. *Organizational Dynamics*, 50(1), 1–11. <https://doi.org/10.1016/j.orgdyn.2020.100802>
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Odeh, R. B. M., Obeidat, B. Y., Jaradat, M. O., & Alshurideh, M. T. (2021). The transformational leadership role in achieving organizational resilience through adaptive cultures: The case of Dubai service sector. *International Journal of Productivity and Performance Management*. <https://doi.org/10.1108/IJPPM-02-2021-0093>
- Onyango, W. P. (2014). Effects of organizational culture on change management: A case of the vocational training centre for the blind and deaf Sikri. *European Journal of Business and Management*, 6(34), 1–12. [10.11684.6108&rep=rep1&type=pdf](https://doi.org/10.11684.6108&rep=rep1&type=pdf)
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–910. <https://doi.org/10.1037/0021-9010.88.5.879>
- Poturak, M., Mekic, E., Hadziahmetovic, N., & Budur, T. (2020). Effectiveness of transformational leadership among different cultures. *International Journal of Social Sciences & Educational Studies*, 7(3), 119–129. <https://doi.org/10.23918/ijsses.v7i3p119>
- Pradhan, R. K., Panda, M., & Jena, L. K. (2017). Transformational leadership and psychological empowerment: The mediating effect of organizational culture in Indian retail industry. *Journal of Enterprise Information Management*, 30(1), 82–95. <https://doi.org/10.1108/JEIM-01-2016-0026>
- Rajala, I., Ruokonen, I., & Ruismaki, H. (2012). Organizational culture and organizational change at Arts universities. *Procedia-Social and Behavioral Sciences*, 45, 540–547. <https://doi.org/10.1016/j.sbspro.2012.06.591>
- Ratina, N. A., Indradewa, R., & Syah, T. Y. R. (2021). The effect of transformational leadership on affective commitments with job satisfaction and organizational culture as an intervening variable. *Journal of Multidisciplinary Academic*, 4(6), 447–452. [file:///C:/Users/dell/Downloads/523-1576-1-PB.pdf](https://doi.org/10.1016/j.jmb.2021.04.009)
- Richter, A. (2020). Locked-down digital work. *International Journal of Information Management*, 55, Article 102157. <https://doi.org/10.1016/j.ijinfomgt.2020.102157>
- Roscoe, J. T., & Roscoe, J. T. (1975). *Fundamental research statistics for the behavioral sciences* (2nd ed.). New York: Holt Rinehart & Winston.
- Sahadi, J. (2020, August 27). What your new work life might look like. CNN Business' Matt Egan. <https://edition.cnn.com/2020/08/27/success/work-transformed-flexible-work-policies/index.html>. (Accessed 11 November 2021).
- Schein, E. H. (1985). Defining organizational culture. *Classics of Organization Theory*, 3(1), 490–502.
- Schein, E. H. (2010). *Organizational culture and leadership*. San Francisco, CA: John Wiley & Sons.
- Schmidt, G. B. (2014). Virtual leadership: An important leadership context. *Industrial and Organizational Psychology*, 7(2), 182–187. <https://doi.org/10.1111/iops.12129>
- Sedrine, S. B., Bouderbala, A., & Nasraoui, H. (2020). Leadership style effect on virtual team efficiency: Trust, operational cohesion and media richness roles. *The Journal of Management Development*, 40(5), 365–388. <https://doi.org/10.1108/JMD-10-2018-0289>
- Shafi, M., Lei, Z., Song, X., & Sarker, M. N. I. (2020). The effects of transformational leadership on employee creativity: Moderating role of intrinsic motivation. *Asia Pacific Management Review*, 25(3), 166–176. <https://doi.org/10.1016/j.apmr.2019.12.002>
- Shao, Z., Feng, Y., & Liu, L. (2012). The mediating effect of organizational culture and knowledge sharing on transformational leadership and Enterprise Resource Planning systems success: An empirical study in China. *Computers in Human Behavior*, 28(6), 2400–2413. <https://doi.org/10.1016/j.chb.2012.07.011>
- Shin, J., Taylor, M. S., & Seo, M. G. (2012). Resources for change: The relationships of organizational inducements and psychological resilience to employees' attitudes and behaviors toward organizational change. *Academy of Management Journal*, 55(3), 727–748. <https://doi.org/10.5465/amj.2010.0325>
- Shuffler, M. L., Wiese, C. W., Salas, E., & Burke, C. S. (2010). Leading one another across time and space: Exploring shared leadership functions in virtual teams. *Revista de Psicología Del Trabajo Y De Las Organizaciones*, 26(1), 3–17. <https://doi.org/10.5093/tr2010v26n1a1>
- Smith, I. (2006). Continuing professional development and workplace learning -15 achieving successful organizational change-do's and don'ts of change management. *Library Management*, 27(4/5), 300–306. <https://doi.org/10.1108/01435120610668232/full/html>
- Thambusamy, R. X., & Bekirogullari, Z. (2020). Virtual leadership in small businesses during the COVID-19 pandemic: Challenges and possibilities. *European Journal of Social & Behavioural Sciences*, 25(3), 179–190. <https://doi.org/10.15405/ejbs.281>
- Too, A., Chepkilot, R., & Ragama, P. (2018). Effect of organizational culture on change management in country governments in Kenya A case study of country government of Nakuru. *International Journal of Business Management and Economic Review*, 1(6), 64–77.
- Trice, H. M., & Beyer, J. M. (1993). *The culture of work organizations*. Englewood Cliffs: Prentice-Hall.
- Wahyuningsih, S. H., Sudiro, A., Troena, E. A., & Irawanto, D. (2019). Analysis of organizational culture with Denison's model approach for international business competitiveness. *Problems and Perspectives in Management*, 17(1), 142–151.
- Whelan-Berry, K. S., & Somerville, K. A. (2010). Linking change drivers and the organizational change process: A review and synthesis. *Journal of Change Management*, 10(2), 175–193. <https://doi.org/10.1080/14697011003795651>
- Whillans, A., Perlow, L., & Turek, A. (2021). Experimenting during the shift to virtual team work: Learnings from how teams adapted their activities during the COVID-19 pandemic. *Information and Organization*, 31(1), 1–12. <https://doi.org/10.1016/j.infoandorg.2021.100343>
- Yaghi, A. (2017). Adaptive organizational leadership style: Contextualizing transformational leadership in a non-western country. *International Journal of Public Leadership*, 13(4), 243–259. <https://doi.org/10.1108/IJPL-01-2017-0001/full/html>
- Yildirim, N., & Birinci, S. (2013). Impacts of organizational culture and leadership on business performance: A case study on acquisition. *Procedia-Social and Behavioral Science*, 75, 71–82. <https://doi.org/10.1016/j.sbspro.2013.04.009>
- Yilmaz, C., & Ergun, E. (2008). Organizational culture and firm effectiveness: An examination of relative effects of culture traits and the balanced culture hypothesis in an emerging economy. *Journal of World Business*, 43, 290–306. <https://doi.org/10.1016/j.jwb.2008.03.019>
- Zehira, C., Ertosunb, O. G., Zehirc, S., & Muceldilid, B. (2011). The effects of leadership styles and organizational culture over firm performance: Multinational companies in Istanbul. *Procedia Social and Behavioral Sciences*, 24, 1460–1474. <https://doi.org/10.1016/j.sbspro.2011.09.032>
- Zhang, Z., & Arvey, R. D. (2009). Rule breaking in adolescence and entrepreneurial status: An empirical investigation. *Journal of Business Venturing*, 24(5), 436–447. <https://doi.org/10.1016/j.jbusvent.2008.04.009>
- Zheng, J., Wu, G., Xie, H., & Li, H. (2019). Leadership, organizational culture, and innovative behavior in construction projects: The perspective of behavior-value congruence. *International Journal of Managing Projects in Business*, 12(4), 888–918. <https://doi.org/10.1108/IJMPB-04-2018-0068>