

From Cockpit to Crew: The Role of Transformational Leadership and Culture in Aviation Employee Engagement

Reetika Dagar¹, Dr. Swati Sisodia²

¹Assistant Professor, GD Goenka University, Gurugram, Haryana, India, Email: chaudharyreetika@gmail.com

²Assistant Professor, GD Goenka University, Gurugram, Haryana, India, Email: swati.sisodia@gdgu.org

Received: 18 Dec 2024
Revised: 31 Dec 2024
Accepted: 15 Jan 2025
Published: 07 Feb 2025

*Corresponding author.
Reetika Dagar

Abstract

In today's world, the aviation business is sculpturing tremendous expansion, which has resulted in an increased need for better human resources management within the airline industry. In order to fulfil the growing demands of the aviation industry, there is a growing concern for capable leadership. Studies have shown that transformational leadership is the most suitable approach in this situation. In tandem with the growing interest in transformational leadership, there has been a growth in the number of queries about the means by which airlines may maintain their high standards of quality and safety. Under these circumstances, it is of the utmost importance to conduct an analysis of the factors that have the potential to influence the levels of employee engagement and to take the appropriate safeguards, therefore the concepts of transformational leadership, employee engagement, and organisational culture are evaluated and investigated as variables in the research. Within the realm of aviation literature, there exists a minuscule quantity of research that provides explanations about staff engagement and leadership. Furthermore, with regard to the Indian Aviation Industry, there is no research that has been discovered on transformational leadership and employee engagement. To put this into perspective, the study that we conducted looked at the ways in which transformational leadership styles influence employee engagement, both positively and adversely. In present day organisations, the culture of the organisation is widely recognised as a significant factor in determining the level of employee engagement. In this context, it has come to light that studies have been conducted that have shown that the culture of the organisation is a significant determinant in the process of increasing the degree of involvement both inside the organisation and among its members. In terms of the methodological component of this research, the universe consisted of 512 people working for aviation organisations, and a survey was carried out and examined. Taking into consideration the influence of transformational leadership, the current research investigated the impact of culture as a mediating factor on employee engagement. It has been determined that the analysis of the effect of Transformational leadership on Employee Engagement must take into account the cultural variable, since behaviour is impacted by both individual and environmental influences.

Keywords: Transformational Leadership, Employee Engagement, Culture, Aviation Industry, Indian Aviation, Leadership Styles, Human Resources, Culture Dynamics



© 2025 by the authors; licensee Advances in Consumer Research. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY NC. ND) license (<http://creativecommons.org/licenses/by/4.0/>).

INTRODUCTION

Aviation industry is one of the most critical global sectors that consist of a number of categories like commercial airlines, cargo transport and aerospace manufacturing. It is integral for international trade, tourism and cultural exchange. The aerospace sector for instance supports 65.5 million jobs worldwide and contributes to around \$2.7 trillion of global GDP (IATA, 2021). It has a fiercely competitive environment, with serious regulatory requirements and complex safety standards. All of these attributes require a competent, motivated workforce to address the sector-specific

issues.

The nature of the aviation industry, being safety-sensitive in its very essence means that errors can lead to catastrophic risks so non-conformance would affect safe operations. This is due to the complexity of operations - from flight planning and air traffic control, through ground services to maintenance demands a high level coordination throughout, operating this system in a reliable way (Civil Aviation Authority, 2020). This need for precision is an example of why having a qualified and invested workforce matters so much. In addition, the

ever-changing landscape of technological improvements and market trends demands constant evolution and innovation in this sector. Engaged employees support change, problem-solving and enhanced organizational performance (Parker, 2020).

Employee engagement is a measure of how emotionally attached an employee feels to their job, the company in general and what they do. High engagement is important for this as well because of the clear relationship shown in aviation between safety outcomes and employee performance. Considering it is a field that places safety as an utmost priority, engaged employees - who are more attentive, vigilant and proactive in nature - make for the perfect control environment. Engaged employees are likely to have reduced errors (Harter et al., 2002) and increased safety compliance. This is especially crucial in aviation-related domains such as pilots, air traffic controllers and maintenance crew as loss of concentration or judgment can have catastrophic outcomes.

In addition, employee engagement has a huge impact on the level of service provided to customers. It has been argued that it is becoming increasingly important in competitive industries such as aviation, where customer experience can distinguish market leaders from the others (Saks, 2006) since engaged employees are more likely to deliver exceptional level of service which results in higher levels of customer satisfaction and loyalty. This has never been truer than in a time when instant social media and review sharing can make or break the public perception of reputation, leading to profitability for that company.

Recent years have also been a time of crisis for the aviation industry, such as global economic downturns and COVID-19 pandemic with its travel restrictions and sharp drop in passenger numbers (ICAO, 2021). Such pressures have only exacerbated the demand for versatile and agile workforces. This can help in supporting the organization to recovery and sustainability through employees who genuinely care about it (Macey & Schneider, 2008). As the industry looks to recover and adapt, fostering employee engagement will be more important than ever - not just for operational rigor but also because of its impact on long-term business powering.

After all, given the unique nature of the aviation industry and its life-and-death consequences employee engagement here is more a strategic necessity than just an option. The engagement of the team leads to demonstrable safety performance, customer service levels and organizational flexibility in delivering a return on capital across all businesses - this represents one essential cornerstone for sustainability within our industry. A combination of these variables ensures that a detailed understanding of the individual drivers of employee engagement, namely transformational

leadership in conjunction with organizational culture as core concepts are explored at length by this study.

Purpose of the Study

The main rationale for pursuing this study is to scrutinize transformational leadership at organisational level and how it relates with broader cultural forms as well as employee engagement within aviation set-up. Transformational Leadership is about leaders who inspire and motivate employees to transcend their own self-interests for the sake of the organization, thereby creating a culture where innovation and change is encouraged (Bass & Riggio, 2006). This form of leadership is highly applicable in aviation; given the challenges that can arise and which require a dynamic personality to control both man and machine in fast moving environments at times under intense pressure (Chaudhary & Sisodia, 2023).

Transformational leaders also are more likely to engender a positive organizational culture and superior employee behaviours and engagement. Positive organizational culture unifies values, norms and practices that support the work of an organization (Schein et al., 2015). A culture that values these things can be incredibly powerful in driving employee engagement, particularly when it comes to safety focused industries like aviation. According to Kahn (2010), engaged employees are also more likely than disengaged employee to go beyond the call of their job descriptions and contribute positively toward fulfilling organizational goals.

This research will focus on understanding the impact of transformational leadership for creating a culture stemming high employee engagement. More precisely, it aims to uncover which core cultural aspects transformational leaders stimulate and how these are in turn related to employee engagement. This is especially important in the aviation industry, as engaged employees are a key reason behind safety standards levels being maintained within airlines while able to stave off threats related to customer service excellence and evolving areas of disruptors (Breevaart et al., 2020).

The study will also explore variation in these relationships across different types of businesses within the aviation industry, such as commercial airlines vs. cargo services or airport operations. These insights are crucial in order to better design leadership development programs and alter cultural initiatives that might need tailoring for the different aviation sectors. The results offer valuable implications for position/benchmarking practice as well as industry leaders, HR professionals and policymakers focused on enhancing employee engagement-and in turn organizational output. The objective of this study is to contribute to the literature on transformational leadership, organizational culture and employee engagement through a wider perspective in an aviation business unit. The aim of this research is to

further uncover these relationships, and in turn provide specific suggestions that can be taken up by aviation organizations as part of their quest for an engaged workforce leading to the overall success and sustainability.

Research Questions

This research work is an exploratory study and aims to investigate the complex nexus of transformational leadership, organizational culture and employee engagement in aviation sector. In particular, this study seeks to explore the manner in which transformational leadership affects employee engagement and whether organizational culture plays a mediating role in that relationship (Bass & Avolio 2001; Schein 2010). The research questions account for this in all steps of the investigation:

How does effectiveness of transformational leadership influence employee engagement in aviation sector? This question is crucial, as it examines factors underlining the extent to which leaders who possess transformational leadership characteristics — such as those providing a clear vision of direction; intellectual stimulation and individual consideration can impact employee engagement. The stakes are as high as they go in the aviation business, which is why transformational leadership plays a significant role. Such leaders motivate staff to rise above their own personal interests in the interest of the organization, creating a feeling of identity and loyalty that is essential for achieving exceptional performance as well as high safety levels (Bass & Riggio, 2006).

Not only transformational leadership motivates employees; it also fosters innovation and represents a continuous improvement attitude, something that is paramount in an industry with increasing technological input and very strict regulations. For example, the influence transformational leader have on employee is thought to be related with having intellectual stimulation which has been reported that such leaders motivate employees to think critically and creatively towards innovative solutions for better operation outcome as well improving customer satisfaction (Breevaart et al., 2014). In addition, leaders provide people in their organizations individualized consideration to be more responsive to the specific needs and aspirations of employees which leads to higher job satisfaction and increased overall commitment (Judge & Piccolo, 2004).

Second research question is: How do organizational culture and sub-culture mediate the relationship between leadership behavior, structure, rewards and work organization on engagement? Organizational culture is defined as the set of beliefs, values and norms that underpin how things are done in an organization (Schein, 2010). It acts like a filter used by employees to decode the actions of leaders. A healthy organisational culture can increase the impact of transformational leadership,

as it strengthens behaviours such as innovation, safety behaviour & customer centricity that are vital to the aviation industry. For instance, a mutually reinforcing culture of open communications and continuous learning can magnify the impact of transformational leaders in intellectually stimulating followers to allow them try out new ideas (Yukl, 2012).

If the culture is not aligned then it can make difficult for even a great leader to be effective. Transformational leadership is going to have a hard time engaging teams completely if the culture in place resists change or there isn't already an emphasis on caring for employees. As knowing the mediating influence of organizational culture is critical to discover in what conditions transformational leadership works best when increasing employee engagement. Within the aviation industry, in particular, a strong safety culture is not only competitive but also mandated for regulatory compliance (Kuenzi & Schminke, 2009).

Overall, the study has endeavoured to explain this intricate intertwine of transformational leadership and organisational culture on employee engagement within Aviation Sector. This research will provide practical guidance for industry leaders and HR professionals who want to create an engaged workforce that results from a positive organizational culture supported by effective leadership.

LITERATURE REVIEW

Transformational Leadership

Transformational leadership is a style where the leader leads from such capability to inspire and motivates their followers or changes team into high performance states, then pushes through those most viable organizational shifts. Transformational leadership is unique in that it focuses on the development and building of employees' transformation involving not only goal attainment but change/adaptability (Bass & Riggio, 2006). Transformational leadership comprises of four facets: idealized influence, inspirational motivation, intellectual stimulation and individualized consideration.

Transformational Leadership Components:

Idealized Influence- Leader transforms those around him through charisma, inspiration and creating emotional connections with others. Idealized influence followers wish to be like their leader, admire and respect him. This combines a leader's ethical conduct, his ability to mobilize the self-efficacy/courage and an inspirational appeal which speaks of common vision that encompasses values or beliefs in manager (Avolio, 1999).

Inspirational Motivation- Leaders mobilize teams by challenging them to get more than they originally intended and creates a fevered pitch for the organization's vision. Transformational leadership invokes followers by using excitement, hopefulness and vision to stimulate supply a significance dimension which provides

meaning and challenge into labour that may be usually perceived as aimlessness (Bass, 1985).

Intellectual Stimulation- Leader offers the intellectual encouragement and provokes inventive ideas from subordinates. Leaders manifesting intellectual stimulation motivate individuals to think again and carry out tasks in an innovative manner. They challenge tradition, debate new ideas, and create a context for innovation (Bass & Avolio, 1994).

Individualized Consideration: Leaders give personal attention to individual follower's need for growth and achievement. They pay attention to followers, understand their unique needs and goals, provide useful guidance under which the follower has an opportunity for growth (Bass & Riggio, 2006).

Previous studies on the practical side have mainly focused so far on the impact and results of transformational leadership in an aviation context claiming its importance for increasing employee engagement, job satisfaction - thus improving organizational performance. At a more micro level transformational leadership has been shown to improve the job-satisfaction and organizational commitment of cabin crew members (Wang et al., 2014), underpinning how critically important it can be for frontline employee wellbeing/performance within aviation sector - and beyond. In addition, the aviation industry is a high-stakes environment and it needs to have transformational leaders given its complex safety-critical operations (Shapira-Lishchinsky & Rosenblatt, 2010).

Moreover, Aryee et al. (2012) suggests that high levels of operational efficiency and increased customer loyalty are maintained within the aviation industry by keeping employees much engaged with transformational leadership style. Employees are likely to engage in higher-order citizenship behaviors; i.e. above and beyond behavior, that boost service quality of performance when they perceive their managers as transformational (Wee et al., 2020). This is particularly applicable to the aviation industry, which partly relies on passenger service and smooth operations.

In summary, the evident confirmation on Transformational Leadership in aviation portrays this leadership style as a significant enabler of organizational culture change towards positive and supports employee engagement together with good safety performance among organizations. The preceding findings assist in understanding transformational aviation leadership as not only a short-term approach to accomplish employee behaviors linked with organizational outcomes, but also advance towards long-term investment through organization development and inevitable sustainability.

Organizational Culture

Organizational Culture has been defined as the shared values, beliefs and norms found in an organization that have a massive influence on behaviour. It is the social glue that enables them to stick together and see each other as one community. Culture is combination of:

- Values are core guidelines that assist the organization in expressing its behaviours and making decisions.
- Beliefs are the organization's shared ideas of what is true and important, usually rooted in its history and founders' beliefs.
- Norms are the informal rules and expectations that guide appropriate behavior in particular situations.
- Rituals, on the other hand are specific patterns of events that occur regularly to support and reinforce an organization's values and culture, like annual meetings or hip new employee retreat day (Schein, 2010).

Organizational culture is a significant determinant of behavior and attitudes among employees. It influences what is acceptable and desirable in the workplace, acting as a guide to behaviors performed by the employees. In the example of a company with an innovation-oriented culture, employees might be more likely to think out-of-the-box or take risks as this is understood and at times encouraged through what messages are sent from central body. For instance, a company with an innovation-oriented culture may signal to employees that it is okay for them to take risks and be creative since those behaviors are consistent with the values of this organization. On the other hand, employees in a culture of stability and risk aversion might be more careful to rigidly adhere to protocols (Deal & Kennedy, 1983).

Further, organizational culture has a critical influence on employee attitudes towards higher job satisfaction and commitment as well as motivation. Employees, who identify with the values of their organization, are more likely to have a sense of purpose and belonging that has been associated in eliciting higher levels job satisfaction and organizational commitment. Having an alignment like this, motivates employees to be more willing to contribute and engage in behaviors that are good for the company, such as contributing full cooperation with their best efforts when asked (work), being excellent co-workers through teamwork (relationships) and behaving effectively from both a moral/ethical standpoint in regard of how business is conducted within the organization or outside it. This provides value alignment and create a healthy work environment that in which employees are motivated to contribute their best efforts and exhibit behaviors beneficial the organization (Cameron et al., 2022). However, a mismatch between an individual's values and the organization's culture can result in unhappiness, disengagement and ultimately turnover.

In summary, culture is a big time game changer and it has the potential to influence how work happens within

an organization. It reflects the essence of what an organization is but also shapes how employees view their job—anything from being part of a family to kicking butt in some kind of sport or defending democracy. A positive organizational culture can be beneficial as it helps in employee satisfaction, increasing the work efficiency and overall effectiveness of an organization.

Leaders are the guardians and creators of an organizational culture. They are viewed as the leaders and expected to model their behavior that is followed by others in the company. Leaders transmit the basic beliefs and values of their organization by what they do, how they communicate, and what decisions are made. Example: If the leaders practice ethical behavior, transparency and care for their employees almost daily basis then there is a high probability that these values are going to position into organization (Schein, 2010).

What's more, leaders are within their rights to set policies, rewards and practices that support the culture. This might be a leader valuing innovation and setting up an award system for employees who come up with various creative ideas or bring new projects to life. This in-turn communicates to employees that innovation is important, and creates a continuous improvement culture.

So in conclusion, we can say that the organizational culture is a compound concept and it genuinely has an effect on every single plane of work life. Culture impacts everything from communication and decision-making to change management and leadership. It shapes the way an organization functions, or in many cases doesn't. Leadership should certainly understand an organization's culture and commit to managing it in order for the environment as a whole to be positive, goal-aligned, healthy resulting in enhanced performance.

Employee Engagement

Employee engagement refers to the emotional and psychological attachment employees feel towards their place of work, job role, and position within the company, colleagues and culture. It demonstrates how much an employee cares about their work and the extent to which they are willing to go above and beyond what is written in a job description. Engaged employees are more energetic, enthused and dedicated when they perform a task which results in better performance of the job and organizational outcomes (Schaufeli et al., 2002).

In fact, employee engagement is commonly conceptualized as a 3-dimensional construct and include the dimensions of vigor, dedication, and absorption. These dimensions describe how dedicated and involved an employee is in his work, show the intensity and depth of his connection to what he does.

Vigor

Vigor represents quality with which employees work for meaningful purposes, maintain high levels of energy and mental resilience while working. It includes desirable attributes such as a strong work ethic, persevering through challenges and displaying energy/slant on the job. Workers blessed with a high level of vigor are go-getters who accomplish more than what is expected from them. These employees also consistently demonstrate stamina to keep going and extraordinary effort when performing their work-related activities. Vigor factor is related to positive feelings about work (i.e. enthusiasm, pride and challenge), which in turn can have a beneficial influence on overall job performance and satisfaction with your employment situation. This dimension captures the vigour and dedication of employees to their tasks, and is a core element of engagement (Schaufeli et al., 2002).

Dedication

Dedication mirrors the amount of passion or effort an employee places into what they do. It includes a feeling of importance, passion, motivation and pride in work and feels it should be challenging. Employees who are engaged treat their work as purposeful and feel that they contribute to it, which is why the job defines them. They are passionate about their work and prepared to put most aspects of personal life behind for the job. It is commitment that goes beyond ticking the box, an emotional buy-in and authentic interest in what we are doing. This dimension describes whether employees can perceive their work as meaningful and are willing to put themselves into it (Schaufeli et al., 2006).

Absorption

Absorption indicates complete focus, feeling immersed in their work. It is when you lose the sense of time and enjoy getting lost into things what catches your attention. High absorption rate is when employees may be so engrossed in their work that it becomes hard for them to stop thinking about working. Next is the dimension of flow which essentially means that employees become so engrossed in their work that they achieve a state of high performance. Absorption involves a feeling of satisfaction and enjoyment which is an outcome of the work done, resulting in higher levels of productivity and job satisfaction. This is considered as an essential indicator of engagement (Csikszentmihalyi, 2015; Schaufeli et al., 2002), which codifies the depth that employees devote to their tasks.

The three facets of employee engagement, vigor, dedication and absorption together provide inkling towards how connected the employee feels to their job. Vigor relates to the energy and enthusiasm employees bring to their roles, dedication refers to the strong involvement in one's work and a sense of significance with that action whereas; absorption reflects intensity. Combined, these dimensions offer a complete view of how engaged employees are in their work and the impact on both individual and organizational results.

Employee engagement is paramount and elusive in high-stress environments like aviation. Safety and operational efficiency are talking points in the aviation industry, but often this is not enough to improve on-flight performance, largely due to a pressured professional work environment. A positive work environment which includes employee well-being is a key to ensuring increased engagement. This will also involve creating safe and ergonomically-decent conditions of work, providing appropriate resources for the task at hand and instilling a supportive organizational ethos. Due to the extreme stress that comes with working in this field, it is imperative that work-life balance and mental health support are prioritised. These support systems are beneficial in reducing stress and creating a more engaged and productive workforce (Bakker & Demerouti, 2011).

Leadership is crucial in this regard, especially when stress levels are high and employee engagement begins to drag. Leaders who show empathy, transparency and competence can help make employees feel both safe and secure in their working environment. In aviation, where there is no room for errors to take place - having an effective leadership that fosters clear communication, encourage professional training and acknowledges employees participation- is a must have. Leadership behaviours like these not only strengthen trust but also inspire their people, making them more loyal and engaged. Research has shown that approaches, in which leaders are accessible and supportive, encourage employees to feel valued and their need understood increases engagement (Macey & Schneider, 2008).

The demand and type of job as well the resources plays an important role in employee engagement within aviation. Typically, aviation requires shift work and or odd hours of operation, is heavily regulated/ needs to follow standards and methodologies closely as well. They can become stressful and lead to decreasing the engagement if not managed efficiently. Organizations must ensure that employees have access to the tools needed as comprehensive skills, cutting-edge technology and strong support. There is need to think as what resources can Organisations Provide to Reduce Job Demands. Finally, providing career advancement opportunities may also act as a potent motivator and thus increase employee engagement (Demerouti et al., 2010).

And last but not the least, a strong support system coupled with organizational assessment is critical in industries of high stress such as aviation. These support systems could be EAP (Employee Assistance Program), counseling, peers services. In most well supported organizations, holding debriefing sessions with employees following critical incidents, the culture of care and resilience building is advanced. This care makes employees feel loved which in turns increase their emotional bonding towards the organization. Improving the well-being of the employees helps organizations to

foster a highly engaged and dedicated workforce (Saks, 2006) by controlling burnout & stress.

To sum up, the concepts of employee engagement in such high-stress environment as aviation industry are being determined by work environment, leadership practices, job demands and resources & support system. Workplaces that are enabling through strong leadership, job demands and resources management practices while providing comprehensive support systems can help drive employee engagement. So, these endeavours not just relieve the stress and prevent over-exertion but also play a part in overall performance of an organization by fabricating well-motivated work environment.

All these are the grounds on which employee engagement, in high stress environment like aviation, depends upon; they play a role based on emotional-cognitive and behavior factors. Supportive work, strong leadership, good management of job demands and resources in tandem with comprehensive support systems help improve engagement at the workplace for organizations. By doing so, they not only work towards curbing employee stress and burnout but also drive the performance of their organization by facilitating a highly engaged and committed workforce.

Theoretical Framework

Two important theories underpinning the investigation of employee Engagement are Social Exchange Theory and the Job Demands-Resources (JD-R) Model. These theories serve as the basis for understanding how different factors (like leadership, organizational culture) can affect employee engagement.

According to Blau (1964), Social Exchange Theory asserts that social behavior between two individuals is the result of an exchange process where one individual lays a cost over another, and during this interaction they seek maximum benefit paying as little payment possible. This theory translates well into workplace management, where it posits that employees enter into a two-way relationship with their employer. Through the lens of a psychological contract, when employees believe their organization values what they do for it and reciprocates that value by giving them infrastructure support (people to work with), process support (training), emotional investment in those groups of people) treated decently etc., then you get good attitudes and behaviors such as higher engagement. This can be expressed through more effort, loyalty and commitment to the organization. Organizational support and fair exchange are some of the important facets that build up employee engagement as such employees feel morally obliged to return in high dedication levels, engaging themselves extensively at work (Cropanzano & Mitchell, 2005).

Created in 2007, the Job Demands-Resources (JD-R) Model is a comprehensive framework to understand what determines well-being and engagement of

employees at work. Based on this model, job demands are physical, psychological, social or organizational aspects of the work that require a sustained effort and therefore associate with physiological and/or psychological costs. Part of these demands could be with respect to work (workload, time pressure) or emotion based. In contrast, job resources are the aspects of a job that help to achieve work goals reduce job demands and other associated physiological or psychological costs (i.e. operates as a contextual variable), such on the job behaviors stimulate personal growth and development. These may be material, social or organisational resources - support from students and colleagues flexibility opportunities for development feedback.

According to the JD-R Model, job resources play a significant role in promoting employee engagement because they help employees recover from job demands and achieve their work ambitions. Adequate resources can lessen the negative effect on engagement of high job demands. On the other hand, not enough resources can lead to disengagement or burnout. Therefore, the maintenance of high levels in this dimension is only possible if job demands and resources are balanced (Demerouti et al., 2001).

Proposed Relationships Amongst Transformational Leadership, Culture and Engagement

Study proposes that transformational leadership and organizational culture will significantly influence employee engagement. Transformational leadership includes inspiring, motivating and encouraging employees to achieve above average performance while developing their skills. These leaders often influence a vision, ignites imagination for future and creates trust; using such an environment provides personal support to each of the followers encouraging both innovative creativity (Bass & Riggio, 2006). Transformational style of leadership is thought to enhance employee engagement by creating an environment where people feel comfortable, encouraged and challenged. Leaders who display transformational behaviors are likely to create a context of trust, respect and recognition that will motivate more engaged and committed employees.

Furthermore, Organizational culture drives employee engagement and act as the larger system in which the group's norms operate. A positive organizational culture that is compatible with employees' personal values, offers a supportive environment can boost engagement. As an example, a culture that values innovation and accountability with open communication as well as professional growth can foster strong feelings of belongingness or purpose - keys to engagement. It would be plausible to argue that the supportive nature of a work culture, which is conducive to transformational leadership-where innovation and employee development over their welfare are valued (Schein, 2010)-intensify engagement outputs.

It is also anticipated that there will be a significant effect of the interaction between transformational leadership and organizational culture on employee engagement. Transformational leaders influence culture by exhibiting organizational values and behaviors, thus affecting engagement. They can role model the desired behaviors, set norms and standards of behavior as well as create a joint vision that all this is in line with organizational culture. Reciprocally, transformational leadership can be re-emphasized by a positive organizational culture that creates an encouraging environment for the workforce to feel inspired and appreciated. This marriage of transformational leadership and organizational culture thus results in a highly engaged environment, as employees become motivated to take action for the greater good, supported by fellow employees who share similar values (Avolio & Yammarino, 2013).

Overall, as supported by the theoretical framework of Social Exchange Theory and JD-R Model, transformational leadership and organizational culture are suggested to directly impact employee engagement. The proposed relationships imply that transformational leadership and supportive organizational culture can increase engagement through the provision of a motivating and resourceful work environment. This can help organizations craft interventions and create policies that could increase employee engagement, ultimately benefiting both organization health and wellbeing of the employees.

In view of theoretical framework, following conceptual research model is proposed where;

II stands for Idealized influence
IM stands for Inspirational Motivation
IC stands for Individualized consideration
IS stands for Intellectual Stimulation
DE for Dedication
AB for Absorption
VI for Vigor

And,

H1: Transformational Leadership positively influences Employee Engagement

H2: Culture mediates the relationship between Transformational Leadership and Employee Engagement.

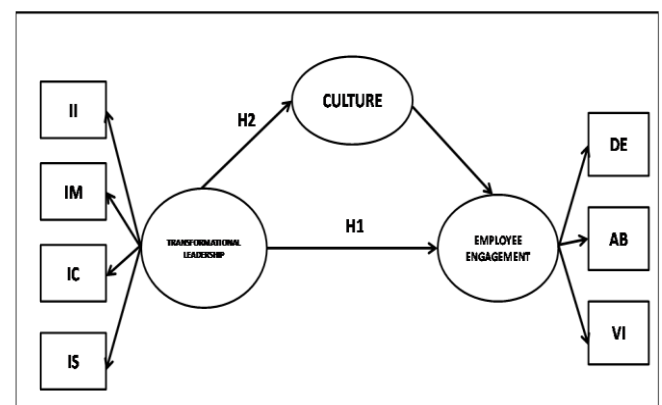


Figure 1 Conceptual research model

RESEARCH METHODOLOGY

The researchers used a quantitative research design and survey method to analyze the relations between transformational leadership, organizational culture as well as employee engagement in case of aviation industry. The quantitative approach is selected since it can systematically evaluate the levels of variables so that hypotheses can be tested to draw generalizable conclusions. The survey is a convenient method of data collection due to the ability to reach a relatively large number of respondents. This method helps to maintain the consistency in responses of participants by standardizing questions and providing excellent options for organizing them with data analysis using statistical methodologies. (Creswell, 2016).

Data Collection

Survey Instrument was developed, validated and then administered. Items were drawn from different scales and modified as per the requirement of industry. In order to ascertain the reliability and validity of this instrument, a pilot test was performed using a small convenience sample. Item clarity and comprehensibility were addressed in the pilot test to refine the survey based on feedback provided (DeVellis & Thorpe, 2021). The target population for the sampling frame was middle and lower level staff within aviation industry which has a total work force of 63,153 employees as per DGCA handbook FY2021-22. The sample size of 512 (as shown in table 1 below) was estimated based on the formula by Krejcie and Morgan (1970) necessary to adequately represent population. The snowball sampling technique

was used because the method is best to access isolated professional networks within industry.

Airline Name	Middle Level	Lower level	Total
Indigo	127	67	194
Air India	53	34	87
Spice jet	97	41	138
Go Air	28	13	41
Vistara	29	23	52
Total	334	178	512

Table 1- Sample of employees collected from each airline.

Data Analysis

At first, descriptive statistics were used to describe demographic characteristics of the respondents and main variables that enabled us to test our hypothesis. Correlation Analysis was used to explore the relationships between transformational leadership, organizational culture and employee engagement. Furthermore, to evaluate the fit of data and underlined model Structural Equation Modeling (SEM) is used using Partial Least Squares (PLS) with hypothesized relationships among constructs (Ringle et al., 2015). SEM-PLS also provides considerable advantage in this study, modeling complex models with very low number of samples and providing not only a view on the direct effects between variables but indirect effect as well. SPSS was used for descriptive statistics, validity and reliability, correlation analysis and SEMPLS4 for hypothesis testing (Hair et al., 2017).

RESULTS

At the onset of analysis, it was important to check that these constructs significantly contribute in explaining outcome variables as good predictive capabilities not only help confirm validity but are also essential for model validation. This step laid the groundwork for how results will be interpreted and relates to reliability and validity of findings.

Construct	Sample Mean
Absorption	0.726
Culture	0.257
Dedication	0.697
Employee Engagement	0.652
Idealised Influence	0.273
Individualised Consideration	0.637
Inspirational Motivation	0.396
Intellectual Stimulation	0.576

Table 2 showing R² values for predictive capability of constructs.

Analysis of R² values (Table 2): The range in the predictive capabilities for constructs is acceptable, strengthening the robustness of our results. The R² value for employee engagement (0.652) suggests that the predictors specifically capture a large proportion of variance in constructs already identified by literature as driving higher levels such as transformational leadership and organizational culture (Hair et al., 2014). The high R² values for the absorption (0.726) and dedication (0.697) confirm, above previous findings that suggested both developed as main indicators of overall engagement (Schaufeli & Bakker, 2004). The culture R² (0.257) is indicative of moderate but reasonable influence the model deploys, thus we can say that supportive organizational culture only moderately predict engagement levels. Together, these support the content and criterion validity of the constructs and imply that the model adequately represents those critical factors determining employee engagement within aviation.

Name	Mean	Standard deviation	Excess kurtosis	Skewness
II1	4.768	1.832	-0.971	-0.434
II2	4.643	1.63	-0.559	-0.491
II3	4.857	1.552	-0.382	-0.521
II4	4.589	1.73	-0.997	-0.144
IM1	4.929	1.462	0.773	-0.965
IM2	4.875	1.593	-0.52	-0.443
IM3	4.643	1.608	-0.634	-0.372
IM4	4.482	1.389	-0.178	-0.517
IC1	4.661	1.618	-0.643	-0.441
IC2	4.893	1.532	-0.963	-0.213
IC3	4.536	1.309	-0.3	-0.399
IC4	4.679	1.56	-0.597	-0.401
IS1	4.875	1.489	-0.586	-0.18
IS2	4.982	1.42	-0.961	-0.083
IS3	4.679	1.691	-0.808	-0.499
IS4	4.732	1.47	-0.772	-0.281
CUL1	5.00	1.658	0.114	-0.893
CUL2	4.946	1.493	-0.055	-0.7
CUL3	5.089	1.562	0.651	-0.962
CUL4	4.821	1.638	-0.657	-0.506
CUL5	4.804	1.444	0.207	-0.559
CUL6	5.196	1.736	-0.129	-0.901
CUL7	4.786	1.839	-0.696	-0.577
DE1	5.054	1.641	0.063	-0.835
DE2	5.25	1.538	0.303	-1.01
DE3	4.964	1.782	-0.637	-0.742
DE4	5.018	1.642	-0.015	-0.825
AB1	4.964	1.721	-0.33	-0.742
AB2	4.857	1.807	-0.602	-0.77
AB3	4.839	1.791	-0.427	-0.691
AB4	4.875	1.722	-0.872	-0.469
VI1	4.893	1.77	-0.971	-0.35
VI2	4.732	1.727	-0.636	-0.448
VI3	4.732	1.758	-0.928	-0.429
VI4	4.75	1.682	-0.919	-0.402

Table 3 Descriptive statistics

Table 3 presents the descriptive statistics and checks normality and skewness indicating that we have data in acceptable range for idealized influence, Inspirational motivation, individual consideration (IC), intellectual stimulation (IS) organizational culture. Most excess kurtosis and skewness values are around zero, indicating an approximately normal distribution; a pre-requisite for the subsequent parametric analyses (West et al., 1995). For example, statistics such as III (Mean = 4.768; Kurtosis = -0.971; Skewness = -0.434) and DE2 (Mean=5.25;Kurtosis=0.303;Skewness=-1.01) show acceptable levels of kurtosis and skewness (Hair et al.,2019). Taken together, the latter suggest that data are fit for further analysis and collectively affirm overall trustworthiness in the findings of study.

Then as next step reliability test was conducted using Cronbach's Alpha.

Constructs	Cronbach's alpha
Absorption	0.848
Culture	0.91
Dedication	0.838
Employee Engagement	0.917
Idealised Influence	0.845
Individualised Consideration	0.88
Inspirational Motivation	0.841
Intellectual Stimulation	0.855
Organisational Citizenship Behaviour	0.895
Transformational Leadership	0.861

Vigour	0.878
--------	-------

Table 4: Good Internal Consistency ($0.70 \leq \alpha < 0.80$): Alpha values in this range are generally considered acceptable for most research purposes as per (Nunnally & Bernstein ,1994).

Reliability test as presented in Table 4 confirms constructs having good internal consistency and hence collectable data are reliable (Cronbach's alpha values in table). As revealed in Table 4, all the constructs demonstrated alpha values much higher than traditional threshold of 0.70 (Nunnally and Bernstein, 1994).

Then researcher checked the validity of the questionnaire using Kaiser-Meier- Olken (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.943
Bartlett's Test of Sphericity	Approx. Chi-Square	12774.778
	df	903
	Sig.	.000

Table 5: The figures of KMO statistics for all items in the present study are presented to indicate sampling adequacy per item, which suggests that all were higher than the acceptable standard of 0.5 (Field, 2020).

The KMO was 0.943, which is above the minimum of acceptability (Field A, 2020). So, this indicates that data is good for Factor Analysis. Moreover, Bartlett's Test of Sphericity provides a significant chi-square value 12774.778 (df = 903; $p < .001$), demonstrating enough correlation between items for factor analysis.

Constructs	Composite reliability (CR)	Average variance extracted (AVE)
AB	0.866	0.62
CUL	0.899	0.566
DE	0.867	0.62
IC	0.908	0.713
II	0.892	0.674
IM	0.852	0.599
IS	0.892	0.674
VI	0.88	0.65

Table 6- Internal Consistency Reliability and Convergent Validity- As per (Sarstedt et al. 2014) the cut-off point is 0.5 for the average variance extracted and CR values are more than 0.7, an accepted level of internal consistency reliability have been recorded (Hair et al., 2012).

As step next, Composite Reliability (CR) and Average Variance Extracted (AVE) were calculated for the analysis of internal consistency reliability and convergent validity of constructs in this research. The CR values of all constructs ranged from 0.852 to 0.908, higher than the competitive value threshold at 0.7, affirming acceptable internal consistency reliability (Hair et al., 2012:). Moreover, AVE values were 0.566 to 0.713 all above the cut-off point of .5 indicating satisfactory convergent validity (Sarstedt et al.,2014). The data demonstrate that the constructs are reliable and that the items effectively capture what they were supposed to measure in terms of a latent variable.

		TL	EE	CUL
TL	Pearson Correlation	1	.643**	.485**
	Sig. (2-tailed)		.000	.000
	N	512	512	512
EE	Pearson Correlation	.643**	1	.623**
	Sig. (2-tailed)	.000		.000
	N	512	512	512
CUL	Pearson Correlation	.485**	.623**	1
	Sig. (2-tailed)	.000	.000	

	N	512	512	512
--	---	-----	-----	-----

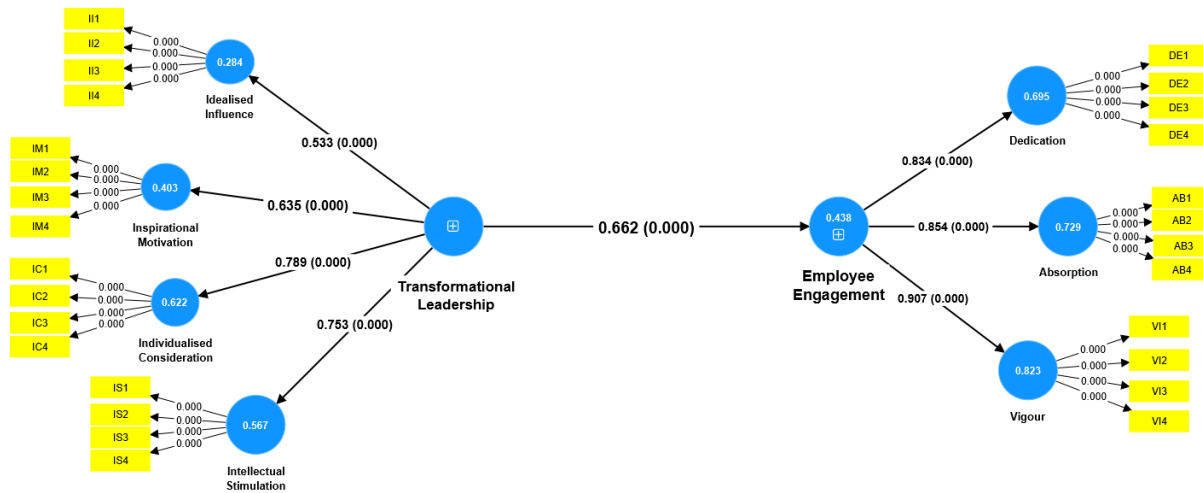
Table 7 Correlation values

Thereafter, researcher conducted correlation analysis and results of which show that there are significant positive relationships between Transformational Leadership (TL), Employee Engagement (EE) and Organizational Culture (CUL). More precisely, TL displayed a robust positive correlation with EE ($r = .643, p < .001$) and a moderate positive correlation with CUL ($r = .485, p < .001$). On the other hand, EE was highly correlated ($r = .95$) with CUL. $623, p < .001$). The important p-values ($p < .001$) for all correlations indicating the relationships are statistically robust (Field A, 2013).

Constructs	VIF
AB1	2.011
AB2	2.803
AB3	1.895
AB4	2.731
CUL1	1.846
CUL2	1.678
CUL3	2.747
CUL4	2.631
CUL5	2.204
CUL6	2.46
CUL7	3.133
DE1	3.424
DE2	2.259
DE3	4.098
DE4	2.095
IC1	3.179
IC2	2.856
IC3	3.261
IC4	2.52
II1	2.401
II2	2.854
II3	2.06
II4	2.559
IM1	2.462
IM2	2.13
IM3	2.114
IM4	1.617
IS1	3.04
IS2	3.094
IS3	2.156
IS4	2.107
VI1	2.39
VI2	2.207
VI3	2.205
VI4	2.135

Table 8: VIF values for Multi collinearity. As per Hair et al, 2009, VIF = 1: No multi collinearity ; $1 < \text{VIF} < 5$: range is considered acceptable; $\text{VIF} \geq 5$: Indicate high multi collinearity

Then researcher checked the data for multicollinearity. According to Hair et al. (2012) less than 1 suggest no multicollinearity, between 1 and 5: low collinearity (acceptable), more than $\text{VIF} > 5$ suggest multicollinearity. Since VIF values to all constructs are between 1.617 – 4.098 for which multicollinearity is not a problem because these ranges fall within acceptable range (i.e., < 5). This implies that the predictor variables in the model show zero to very weak linear relationships with one another leading a bias free coefficients which is an essential cog wheel of the regression.



Hypothesis	Exogenous Construct	Endogenous Construct	Path Coefficient	Standard Error	T Stats	P values	R Square
H1: TL \rightarrow EE	Transformational Leadership	Employee Engagement	0.659	0.03	21.854	0	43.60%
Higher order construct as measurement model							
Employee Engagement as a higher order construct	Employee Engagement	Absorption	0.853	0.016	51.768	0	
		Dedication	0.834	0.018	47.385	0	
		Vigour	0.908	0.01	90.865	0	
Transformational Leadership as a higher order construct	Transformational Leadership	Idealised Influence	0.529	0.048	11.071	0	
		Individualised Consideration	0.792	0.017	45.458	0	
		Inspirational Motivation	0.633	0.039	16.324	0	
		Intellectual Stimulation	0.756	0.027	28.393	0	

To check the hypothesis, PLS SEM was used. The structural equation modeling analysis investigates the relationships between Transformational Leadership and Employee Engagement. The path coefficient from TL to EE is equal to 0.659, with T-statistic equal to 21.854 and p-value equal to 0.000. It means that the impact of TL on EE is positively significant, explaining 43.60% of the variance in EE. Moreover, EE, as the higher-order construct, is measured by three dimensions : Absorption , with the path coefficient = 0.853, T = 51.768, p = 0.000; Dedication , with the path coefficient = 0.834, T = 47.385, p = 0.000; Vigour , with the path coefficient = 0.908, T = 90.865, p = 0.000. Also, TL is the higher-order construct that is measured by Idealised Influence , with the path coefficient = 0.529, T = 11.071, p = 0.000; Individualized Consideration , with the path coefficient = 0.792, T = 45.458, p = 0.000; Inspirational Motivation , with the path coefficient = 0.633, T = 16.324, p = 0.000; Intellectual Stimulation , with the path coefficient = 0.756, T = 28.393, p = 0.000, and results demonstrate a significant and strong relationship between latent variables, which proves the measurement model's reliability and validity (Hair et al., 2012).

These results confirm hypothesis (H1: Transformational Leadership positively influences Employee Engagement) with a direct effect coefficient of 0.659, which is significantly positive at the level p = 0.000. Put differently, this suggests that transformational leadership also had positive effects on EE, and as the levels of TL increase, there is likely increase in the level of employee engagement. This model explains 43.60% of the variance in employee engagement ($R^2 = 0.436$), indicating that transformational leadership has a significant impact on employees being engaged (Hair et al., 2012).

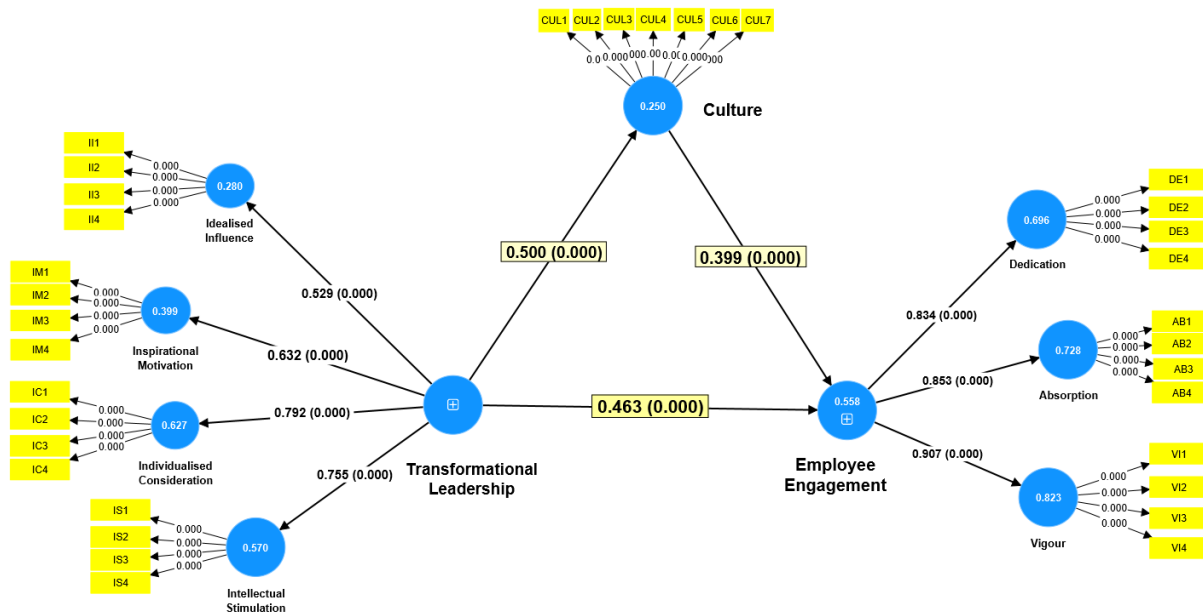


Figure 1: Structural Model

Type of effect	Relationship Between	Path Coefficient	T stats	P value	Remark
Total effect	TL -> EE	0.66	21.951	0	Significant Total effect of TL on EE found
Indirect Effect	TL -> Cul -> EE	0.204	8.559	0	Significant Indirect effect of Culture between TL and EE found
Direct Effect	TL -> EE	0.457	14.568	0	Significant direct effect of TL on EE found
Variance Accounted For	Indirect Effect/ Total effect = 0.204/0.660 = 30.9%				
Conclusion	Moderate partial significant mediation effect of culture is concluded between TL and EE				

Table 9 Summary of Hypothesis Testing Result (Bootstrapping Report)

The results of the analysis of the mediating role of culture in the relationship between Transformational Leadership and Employee Engagement prove H2: culture mediates the relationship between TL and EE. The total effect of TL on EE turned out to be significant, having a path coefficient of value 0.66, $t = 21.951$, $p = 0.000$. It means strong overall influence of TL on EE subscale. However, the direct effect of TL on EE (controlling for culture) was reduced in magnitude yet remained significant with a path coefficient $\beta = 0.457$ ($t = 14.568$, $p = 0.000$). The indirect effect of TL on EE by culture was still significant, and it amounted to 0.204 ($t = 8.559$, $p < 0.001$). The calculation of VAF showed that culture mediates an approximately 30.9% total effect of TL on EE subscale $VAF = 0.204 / 0.660$. Therefore, these results mean a moderate partial mediation effect of culture between transformational leadership and employee engagement. Accordingly, culture only partially explains how transformational leadership impacts employee engagement, but still, its role in ensuring this relationship is vital.

Hypothesis	Result
H1: Transformational Leadership positively influences Employee Engagement	Accepted
H2: Culture mediates the relationship between Transformational Leadership and Employee Engagement	Accepted

Table 10 Summary of results

DISCUSSION

Based on the results of this study, transformational leadership has an important role in improving employee engagement among employees within aviation industry. Transformational leaders - those who can clearly articulate a challenging vision, provide inspirational motivation and individual consideration - create the motivational environment for levels of engagement. This leadership style creates a sense of purpose and direction among employees, which are encouraged to align their personal goals with the objectives set out by the organization (Bass & Riggio, 2006). More importantly, the inspirational factor of transformational leadership encourages employees to apply themselves (their drive and energy) more effectively and persistently through difficulties; that translates into a much greater emotional connection with their work. Also, by providing employees with more personalized leader attention as transformational leaders do gives them further cause to feel supported and valued which increasingly entice optimal engagement in their work (Avolio & Yammarino, 2013).

Furthermore, the study found that Organizational culture moderates transformational leadership impact on employee engagement. This leads to positive changes in employees by building an environment that adds to the value of transformational leadership where they continue thinking about their safety and innovation levels at workplace with a culture based satisfaction. One such example would be a culture supporting transformational leaders in which they can harness this type of leadership, and encourage their workforces to have the enthusiasm and inspiration needed (Denison 1996). The results of the study indicate that in organizations where there is a particularly positive culture, business leaders are much more likely to have been practicing transformational leadership and for employees whose cultural fit was higher, we should find increased levels of engagement. In contrast, a transformational leadership style may lack the desired impact on employees who already work in an environment with rigid or hierarchical culture that prevents them from feeling valued as competent professionals subservient to their superiors (Cameron & Quinn 2006). So it is essential to manage organizational culture along with leadership practices for being successful in transformational leadership practice.

The results of this research also substantiate past literature which had revealed that transformational leadership is related with employee engagement, in a positive direction. Existing research has shown that transformational leadership tend to relate positively with employee motivation, satisfaction and overall job performance (Bass, 1985; Kahn, 1990). This seems to support previous evidence but underlines that it's transformational leaderships' inspirational and supportive slants which explain engagement. Yet, the study contributes to extant literature by focusing on one such moderating mechanism -organizational culture-

which has received less attention in prior research. Despite these previous studies that suggest the significance of culture in influencing employee behaviours, this research study provides a concrete proof about how exactly it moderates specially when derived from transformational leadership to engagement (Schein, 2010).

The results are in contrast with those of some studies suggesting the effectiveness of transformational leadership may be less pronounced in regulated or high-stress industries. For instance, some scholars argue that in this kind of environment, the rigid structure and regulatory constraints might hinder the emergence of transformational leadership behaviour (Waldman et al., 2001). This study reveals transformational leadership is related with employee engagement even in the context of highly-regulated and safety-critical aviation industry provided that organizational culture encourages it.

Implications

Aviation leaders need to focus more on the development of transformational leadership abilities within their organizations, according to results of the study. Targeted leadership development programs that improve leaders' capacity to engage, energize and enable their teams will deliver on this. Also management should inspire leaders to be visionaries, communicate a powerful motivational organizational mission and provide personal support for employees. Beyond logic, organizations should also prioritize creating a vibrant culture that promotes clear communication and teamwork with relevance. This culture will not only make transformational leaders more effective, but also cultivate a workforce that is better engaged and committed.

Organizations seeking to cultivate transformational leadership traits may find value in offering training that covers competencies - like emotional intelligence, communication skills or strategic planning - often associated with this approach. Mentorship and coaching programs are good tools to teach emerging leaders under the guidance of more experienced transformational leadership within an organization. Organizations should also look into implementing behavioural change mechanisms like 360-degree feedback to provide leaders with an impression of how their team recognizes them and recognize areas for development.

Supportive Organizational Culture and the imperative of managerial attention to creating an environment that facilitates dialogue and inclusivity, must be included in regular town hall meetings, employee feedback sessions and recognition programs that highlight successes and contributions. Ensuring employees have paths in professional growth and development such as training, career advancement programs fosters the culture of continuous improvement & engagement from within. Aligning leadership development with cultural initiatives

can improve employee engagement and by extension organization success in the aviation sector.

CONCLUSION

Although the current study makes an important contribution to knowledge, but like every effort, there are some limitations that we discovered while evaluating our findings. The first main such constraint is the nature of our sample. While the study has wide spread diversity sampling of 512 participants, this cannot cater to bring out all range of experiences and viewpoint pertinent which might be present in large travel aviation arena. Furthermore, the purposeful sampling of middle and lower-tier staff overlooks senior management who themselves may have unique perspectives on this dynamic (Krejcie & Morgan, 1970). That is, we cannot exclude selection bias due to using a snowball sampling method for recruitment (the participants might have referred colleagues with similar characteristics or attitudes), which would limit the generalisability of our findings.

The study is also geographically limited. As the research was done in a particular national setting, it may not be applicable across varying regions due to cultural differences between leadership styles or organizational cultures and employee engagement practices. Additionally, the specific nature of regulation and operation present in aviation industry across various regions could also limit generalizability beyond these exploratory industries (Schein, 2010).

Another potential limitation is that the study also relied upon self-reported data. What the respondents expressed might be more socially desirable, than a true description of how they felt or behaved. In organizational contexts, focus can oftentimes be directed towards leaders where employees may not feel free to discuss concerns regarding leadership and culture for fear of negative repercussions (Podsakoff et al., 2003). Moreover, the cross-sectional design of this research allows data collection at a single point in time and hence no causality relationship could be inferred among transformational leadership, organizational culture within employee engagement.

As part of future research, a number of strategies could be used to address these limitations and build on the findings from this study. The generalizability of the study results would be improved by increasing the size and diversity among participants, to include senior management as well as frontline staff if possible in various aviation companies and regions. A larger and more representative sample might also enable a richer analysis of the complex ways in which transformational leadership and organizational culture connect at different levels within organizations or across geographical contexts.

Future work can also consider incorporating longitudinal designs. The infusion of data across time enables researchers to more accurately measure shifts in leadership behaviors, organizational contexts and employee perceptions - all which support stronger causal claims. For example, it might be especially useful to study longitudinal differences in the relationship between transformational leadership and employee engagement over time or how changes in organizational culture can serve as a moderator of these relationships (Ployhart & Vandenberg, 2010).

In addition, including qualitative data collection instruments such as in-depth interviews, focus groups and case studies could provide more nuanced context-dependent understanding of the issue. These are the types of methods that would open up opportunities for researchers to dive deep into employee and leader lived experiences, revealing rich textures around how leadership styles and culture norms subtly shape engagement. Better qualitative data might well have provided a deeper explanation of the mechanics powering employee engagement globally and in aviation specifically.

Further research can also investigate whether these relationships hold true for different cultural dimensions. For example, further research on how cultural factors such as power distance, individualism versus collectivism and uncertainty avoidance affect leadership effectiveness or organizational culture might offer multiple affordances to MNCs in the aviation sector dealing with varying national cultures (Hofstede, 2011). Taken together, this study contributes greatly to the transformational leadership, organizational culture and employee engagement in the aviation industry; however future research must eliminate these limitations to better perform phenomenological approach for comprehensive understanding of aspect at a global level.

REFERENCES

1. Aryee, S., Walumbwa, F. O., Zhou, Q., & Hartnell, C. A. (2012). Transformational leadership, innovative behavior, and task performance: Test of mediation and moderation processes. *Human performance*, 25(1), 1-25.
2. Avolio, B. J., & Yammarino, F. J. (2013). Reflections, closing thoughts, and future directions. In *Transformational and Charismatic Leadership: The Road Ahead 10th Anniversary Edition* (Vol. 5, pp. 449-470). Emerald Group Publishing Limited.
3. Avolio, B. J., & Bass, B. M. (2001). Developing potential across a full range of Leadership Tm: Cases on transactional and transformational leadership. Psychology Press.
4. Bass, B. M., & Riggio, R. E. (2006). Transformational leadership. Psychology press.
5. Bass, B. M., & Riggio, R. E. (2006). Transformational leadership. Psychology press.

6. Blau, P. M. (1964). Justice in social exchange. *Sociological inquiry*, 34(2).
7. Breevaart, K., Bakker, A., Hetland, J., Demerouti, E., Olsen, O. K., & Espevik, R. (2014). Daily transactional and transformational leadership and daily employee engagement. *Journal of occupational and organizational psychology*, 87(1), 138-157.
8. Breevaart, K., Bakker, A. B., Derks, D., & van Vuuren, T. C. (2020). Engagement during demanding workdays: A diary study on energy gained from off-job activities. *International Journal of Stress Management*, 27(1), 45.
9. Cameron, K., Quinn, R., DeGraff, J., & Thakor, A. (2022). Enhancing leadership competencies and organizational culture. In *Competing Values Leadership* (pp. 119-141). Edward Elgar Publishing.
10. Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
11. Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of management*, 31(6), 874-900.
12. Csikszentmihalyi, M. (2015). *The systems model of creativity: The collected works of Mihaly Csikszentmihalyi*. Springer.
13. Csikszentmihalyi, M. (1990). Literacy and intrinsic motivation. *Daedalus*, 115-140.
14. DAGAR, R., & SISODIA, S. WINGS OF ENGAGEMENT: A PILOT STUDY ON THE IMPACT OF TRANSFORMATIONAL LEADERSHIP IN THE AVIATION INDUSTRY.
15. Dagar, R. E. E. T. I. K. A., & Sisodia, S. (2023). NAVIGATING CRISES: LEADERSHIP'S ROLE IN FOSTERING EMPLOYEE WELL-BEING AND RESILIENCE. *SeyBold report*, 18(6), 721-738.
16. Deal, T. E., & Kennedy, A. A. (1983). Culture: A new look through old lenses. *The journal of applied behavioral science*, 19(4), 498-505.
17. Demerouti, E., & Bakker, A. B. (2011). The job demands-resources model: Challenges for future research. *SA Journal of Industrial Psychology*, 37(2), 01-09.
18. Demerouti, E., Mostert, K., & Bakker, A. B. (2010). Burnout and work engagement: a thorough investigation of the independency of both constructs. *Journal of occupational health psychology*, 15(3), 209.
19. DeVellis, R. F., & Thorpe, C. T. (2021). *Scale development: Theory and applications*. Sage publications.
20. Field, A. (2013). *Discovering statistics using IBM SPSS statistics*.
21. Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the academy of marketing science*, 40, 414-433.
22. Hair, J. F., Gabriel, M., & Patel, V. (2014). AMOS covariance-based structural equation modeling (CB-SEM): Guidelines on its application as a marketing research tool. *Brazilian Journal of Marketing*, 13(2).
23. Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123.
24. Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: a meta-analysis. *Journal of applied psychology*, 87(2), 268.
25. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review*, 31(1), 2-24.
26. Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online readings in psychology and culture*, 2(1), 8.
27. Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: a meta-analytic test of their relative validity. *Journal of applied psychology*, 89(5), 755.
28. Krejcie, R. V., & Morgan, D. W. (1970). Sample size determination table. *Educational and psychological Measurement*, 30, 607-610.
29. Kuenzi, M., & Schminke, M. (2009). Assembling fragments into a lens: A review, critique, and proposed research agenda for the organizational work climate literature. *Journal of management*, 35(3), 634-717.
30. Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and organizational Psychology*, 1(1), 3-30.
31. Nunnally JC (1978) *Psychometric theory*. McGraw Hill Company, New York
32. Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
33. Parker, M. (Ed.). (2020). *Life after COVID-19: The other side of crisis*. Policy Press.
34. Ployhart, R. E., & Vandenberg, R. J. (2010). Longitudinal research: The theory, design, and analysis of change. *Journal of management*, 36(1), 94-120.
35. 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.
36. Ringle, C., Da Silva, D., & Bido, D. (2015). Structural equation modeling with the SmartPLS. Bido, D., da Silva, D., & Ringle,

- C.(2014). Structural Equation Modeling with the Smartpls. *Brazilian Journal Of Marketing*, 13(2).
37. Riggio, R. E., Bass, B. M., & Orr, S. S. (2004). Transformational leadership in nonprofit organizations. *Improving leadership in nonprofit organizations*, 49, 62.
38. Sarstedt, M., Ringle, C. M., Smith, D., Reams, R., & Hair Jr, J. F. (2014). Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers. *Journal of family business strategy*, 5(1), 105-115.
39. Schein, E. H., Costas, J., Kunda, G., Schultz, M., Connolly, T. H., Wright, S., ... & Wah, D. W. H. (2015). Opinions: All about culture. *Journal of Business Anthropology*, 4(1), 106-150.
40. <https://www.icao.int/safety/Documents/ICAO%20Safety%20Report%202021%20Edition.pdf>
41. <https://www.iata.org/contentassets/c81222d96c9a4e0bb4ff6ced0126f0bb/iata-annual-review-2021.pdf>
<https://www.civilaviation.gov.in/sites/default/files/migration/AR-Eng-2020-21.pdf>
42. Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of managerial psychology*, 21(7), 600-619.
43. Schein, E. H., Costas, J., Kunda, G., Schultz, M., Connolly, T. H., Wright, S., ... & Wah, D. W. H. (2015). Opinions: All about culture. *Journal of Business Anthropology*, 4(1), 106-150.
44. Shapira-Lishchinsky, O., & Rosenblatt, Z. (2010). School ethical climate and teachers' voluntary absence. *Journal of Educational Administration*, 48(2), 164-181.
45. Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness studies*, 3, 71-92.
46. Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 25(3), 293-315.
47. Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and psychological measurement*, 66(4), 701-716.
48. Waldman, D. A., Ramirez, G. G., House, R. J., & Puranam, P. (2001). Does leadership matter? CEO leadership attributes and profitability under conditions of perceived environmental uncertainty. *Academy of management journal*, 44(1), 134-143.
49. Wee, K. H., Bang, W. S., & Park, J. Y. (2020). A Study on Effect Relationships of Coaching Leadership Job Satisfaction, Organizational Commitment, Turnover Intention. *International Journal of Social Welfare Promotion and Management*, 7(1), 1-8.
50. West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with nonnormal variables: Problems and remedies.
51. Yukl, G. (2012). Effective leadership behavior: What we know and what questions need more attention. *Academy of Management perspectives*, 26(4), 66-85.