



## Fostering Knowledge Flow in Organizations: Ethical Leadership on Knowledge Sharing: Mediating Role of OCB and Moderation of Entrepreneur Orientation

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### Abstract

The primary objective of this study was to examine how ethical leadership enhances knowledge sharing practices (KS). This study investigates the relationship between ethical leadership (EL) and knowledge sharing (KS). Organizational citizenship behavior (OCB) as a mediator was explored in this study. 325 participants (supervisors and employees) from manufacturing industries were selected for the data collection. The study's findings revealed that EL has positive and significant effect on KS. OCB partially mediates the stated relationship. The study's findings align with the suggested mediation and moderation framework. The developing country like Pakistan, ethical leadership in manufacturing industries is a novel concept, and more study is required to identify issues related to share information, skills, and experience in employees and evaluate the dynamic effects of leadership styles in manufacturing sectors.

**Keywords:** Ethical leadership, knowledge sharing, organizational behavior, entrepreneur orientation

### 1. Introduction

Managing knowledge to gain competitive advantages has captured the attention of scholars, which recognize knowledge as a potentially important advantageous resource for businesses (Zhang et al., 2023; Manzoor et al., 2023). Especially through exchange of data can knowledge-embodied knowledge be incorporated, generated, and used, which is essential for knowledge-intensive organization's to sustain a knowledge-based edge over their competitors (Truong et al., 2024; Pinto et al., 2023; Shah et al., 2024). Individuals are unwilling to provide knowledge, notwithstanding the benefits provided by the company. The reason for this is because when individuals share their knowledge, others may benefit from it, which may strengthen their own position in the organization (Khan et al., 2023; Hassan et al., 2023; Ahmad et al., 2022). Better judgments, greater innovation, and better company performance may result from individuals sharing what they know, according to previous research (Adnani et al., 2023). Finding ways to encourage individuals to share their expertise is a major obstacle in knowledge management.

Inspiring workers and facilitating sharing of knowledge inside organizations are two areas that leadership has a key role in, based on researchers. A number of studies have shown associations between different types of leadership and actions taken to share knowledge, such as spiritual leadership, servant leaders, and inclusive leaders (Yaseen et al., 2023; Usmanova et al., 2023; Ghani et al., 2022; Khan & Wali, 2020). The main focus of this research was on team knowledge sharing dynamics, which was shown to be a significant mediator between leadership behaviour and performance, especially when that pertains to creativity (Ma et al., 2023; Ansong et al., 2023; Ishaque & Audi, 2024). Therefore, as observed by Hassan et al. (2023), it is important for researchers to keep investigating the ways in which leaders impact sharing of knowledge at the individual level. This study responds to the existing knowledge gap by investigating the dynamic effect of ethical leadership on knowledge sharing. Ethical leadership provides crucial significance in eastern cultures, such as Pakistan, despite the majority of studies on this subject has mostly developed from a Western perspective. Both Western and Eastern cultures recognize ethical leadership. Pakistan has constrained cultural perceptions on ethical leadership. The need of comprehending culturally diverse ethical leadership and behavioural ethics is important since ethical challenges have both theoretical and practical significance.

The present study supported manufacturing industries in understanding principles via committed ethical leadership along with successful knowledge sharing. The present research expands upon earlier work by Alam et al. (2022) and Kucharska et al. (2022) by showing that sharing knowledge is an optional process that enables individuals control over whether and how much knowledge comes released. They seek to make a relationship among ethical leadership and employee knowledge sharing by addressing the importance of employees' organisational citizenship behavior (OCB). By investigating organisational citizenship behaviour as a moderator and normative commitment as a mediator, this study addresses the suggestion from Tylka et al. (2023) to explore other mediating and moderating factors. Whenever leaders' actions as well as interactions reflect their principles and standards, researchers argue that they are leading ethically (DeMatthews & Serafini, 2021; Senturk, 2023; Hassan et al. (2023).

Knowledge sharing is a crucial issue related to business ethics since not sharing information that could negatively impact an organization is unethical. Recent studies have demonstrated that ethical leadership is one of the best ways to motivate individuals to disclose knowledge due to its moral importance. Ethical behaviour is the backbone of effective leadership and job performance (Keränen et al., 2023; Alam et al., 2022). It is also a vital component of many different leadership styles, such as authentic leadership (which places an emphasis on principled decision-making), servant leadership (which places an emphasis on ethical behaviour and concern for others), transformational leadership (which places an emphasis on ethical role modeling), and spiritual leadership (which places an emphasis on leader integrity and ethical behaviour towards others (Manzoor et al., 2024; Helmi & Sari, 2021). Several studies have found that ethical leadership has positive impacts, particularly in the areas of employee well-being, innovative thinking, and work engagement (Koroglu & Ozmen, 2022; Saddique et al., 2023). These findings have been identified by a number of scholars.

It use the idea of social learning theory (SLT) to assist comprehend the link between ethical leadership and knowledge sharing. In keeping with social learning theory, employees could want to follow exactly what their management or other leaders do at work. Ethical leaders indicate their staff how to act ethically by being open and honest about what they know to be wrong and unethical behaviour at workplace. Sun et al. (2021) suggest that when supporters observe ethical leaders as role models, individuals are more motivated to engage in creative behaviours, such as sharing knowledge, due to the idea of normative propriety. Participating

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in sharing knowledge is more problematic and intricate, since each person's expertise may be seen as a competitive asset. Leaders need to demonstrate appropriate behaviour if they want their workers to disseminate their knowledge (Asghar et al., 2022; Alam et al., 2022). In this context, employees who gain helpful insights from their ethical leader could consider them as excellent role models and might attempt to follow in their knowledge-sharing behaviour, which is consistent with social learning theory. Based on social learning theory, this research aims to investigate how employees learn from leaders' knowledge-sharing behaviours and imitate them.

According to Kim et al. (2021), fostering morality via well-executed rules and processes (such as an impartial rewards system, open interaction, and ethical norms) might encourage workers to openly provide knowledge. Organisational citizenship behaviour (OCB) improves workers' productivity, professional growth, and the efficiency of organizations by affecting their work and personal behaviour (Asghar et al., 2022; Afram et al., 2022). Employee motivation and good relationships describe OCB. Thus, social exchange theory (SET), present study investigates that how OCB as a intervening factor influences the association among ethical leadership and knowledge-sharing. The Social Exchange Theory shows how ethical leadership increases organisational citizenship, in particular knowledge sharing. According to social exchange theory, leaders' interacts with individuals alter their behaviour and attitude (Wang et al., 2023). Employees follow leadership. Entrepreneurs acknowledge supporters for their good relationships. Wang et al. (2021) found that ethical leaders consider their organization and care for followers.

Recent studies show that ethical leaders foster responsible behaviour among workers in cross-level leader-member relationships. Employee assessments of supervisory ethical leadership significantly influenced the association between ethical leadership and employee OCB, as stated by Al Halbusi et al., (2021). Ethical leaders value all employees and achieve high-quality emotional exchanges that encourage OCB. Effective OCB workers recompense ethical leaders for their professional behaviour (Su & Hahn, 2021). The way in which individuals with entrepreneur orientations respond to opportunities and challenges is influenced by the fact that they focus on creative thinking, undertaking risks, and being proactive. Recent findings highlight the crucial role of organisational citizenship behaviour (OCB) in promoting knowledge sharing among workers (Abdulmuhsin et al., 2021; Ansong et al., 2023). OCB fosters teamwork and promotes a sense of feeling included. On the other hand, entrepreneurial orientation might operate as a moderator in the complex relationship between ethical leadership and knowledge sharing.

The extent to which organisational citizenship behaviour influences knowledge sharing within organization's could be affected by the proactive, risk-taking, and innovative characteristics of entrepreneurial orientation (Naqshbandi et al., 2024; Kim et al., 2021). This study seeks to better understand the relationship between ethical leadership and knowledge sharing, proposing that entrepreneurial orientation serves as a moderating factor via organisational citizenship behaviour. Our objective in exploring this subject is to gain a deeper understanding of how ethical leadership can facilitate knowledge sharing in entrepreneurial environments. Incorporating EO into leadership studies is important, as it may enhance the positive impacts of ethical leadership (Van et al., 2023; Abdulmuhsin et al., 2021). The present research contributes enormously to the existing body of information. First, we employed a mediation strategy to support up the idea that ethical leadership influences sharing knowledge among employees. This strategy involves organisational citizenship behaviour. By accomplishing this, present research can enhance the understanding of the impacts of ethical leadership and reveal its significance for knowledge sharing. Second, this study also exploring the mediating role of organisational citizenship behaviour (OCB) in the association between EL and KS. Last but not least, the current research examines the role of the entrepreneurial orientation as a crucial moderator that moderates the link between EL and KS via the use of OCB. Last but not least, our research makes use of three waves of data, which results in more significant findings.

## **2. Literature and Hypothesis Development**

### **2.1. Ethical leadership**

Organisational knowledge management approaches depend significantly on the active participation of leaders. Leadership empowers employees to share innovative concepts that enhance the organization's resources and knowledge capital by establishing an ideal environment (Al-Husseini, 2024; Duan et al., 2023). Researchers have studied how leadership styles affect the sharing of knowledge According to Khan et al. (2022), public service motivated by ethical, authentic, and empathetic servant leaders negatively impacts knowledge sharing. Azghar et al. (2022) found that authentic leaders with high consciousness influence on staff members knowledge sharing. Le and Nguyen, (2023) found that a leadership style of transformational leadership that emphasizes ethical exemplars enhances individual and group employee knowledge sharing.

Ethical leaders establish moral convictions grounded on ethical a trait such as which sets them apart. The ethics of leadership influence the transmission of knowledge. The sharing knowledge among employees is based upon moral value frameworks (Fait et al., 2023; Thomas & Gupta, 2022). Therefore, ethical leadership effectively fosters sharing of knowledge. Ethical leaders, as examples, represent transparency, compassion, and integrity, which may impact employees by their behaviour that is moral. Ethical leaders express concern for the subordinates and their entire organization (Bahadori et al., 2021; Le & Nguyen, 2023). Ethics inspires individuals by honoring their dignity and fulfilling their developmental needs, prompting them to share knowledge with colleagues and the company.

### **2.2. Knowledge sharing**

Pradhan et al. (2022) emphasize that knowledge management contributes an essential function in the contemporary information-driven economic growth, greatly enhancing the efficiency and performance of institutions. When a company's employees, information technology, and organisational framework are successfully aligned, they have the potential to innovate and generate value. The term for this idea has been referred to as knowledge management. According to Alerasoul et al. (2022) achieved through the encouragement of knowledge creation, exchange, and implementation, together with the preservation of significant knowledge learnt and optimal procedures within the organization in order to foster continuous organisational learning. The sharing of existing information is an essential facet of effective knowledge management. According to Rubel et al. (2021), and Sa'adah, & Rijanti, (2022), the effectiveness of knowledge management is significantly influenced by the quality of exchange of knowledge

within the organization. To attain desirable results such as innovation and enduring competitive advantage, the sharing of knowledge stands as an essential organisational investment.

Effective knowledge sharing boosts planning for success within institutions. According to Yin & Yu, (2022), knowledge becomes not successful if it is not utilized or transmitted. As individuals engage in knowledge exchange, they are passing on their knowledge and experience to each other. The intended objectives of this kind of process are to improve teamwork, solve obstacles, come up with fresh ideas, and put plans into action. Knowledge sharing improves the organization's information management, helping staff achieve objectives. Knowledge sharing is not clearly stated by an organization or in employee's job descriptions, therefore it may be considered a practice that goes beyond formal expectations. Knowledge sharing is optional (Derren et al., 2022; Jiang et al., 2022). Social capital promotes employee knowledge sharing, as accepted in knowledge management. Goodwill, or social capital, supports social relationships and may be utilized to make decisions, and knowledge exchange necessitates this (Appiah & Obey, 2023; Zhang & Liu, 2022). The interpersonal element of social capital reveals that employees that feel respect and sense of safety share knowledge inside the organization (Derren et al., 2022).

### **2.3. Organizational citizenship behavior**

Organisational citizenship behaviour is defined in the literature as behaviours that enhance organisational performance while exceeding established standards (Ma et al., 2023; Khaola & Rambe, 2021). An organisational citizenship behaviour (OCB) study has expanded to include HRM, organisational behaviour, and communications (Giancaspro et al., 2022). The literature evaluation shows a rise in (OCB) study in the twenty- first century. The outcomes indicate that OCB strategies could influence the opinions of subordinates to be continually responsible for their jobs while enhancing individual and organisational performance. OCB enhances employee and leader productivity, decreases maintenance costs, optimizes utilization of resources and use, and attracts highly skilled employees. Organizations, especially those in the manufacturing industries, which must utilize innovation to stay ahead, are always looking for creative, active staff members (Aboobaker & Ka, 2021). Challenge-oriented OCB is individuals' proactive and positive behaviour, defined by their readiness to take on new challenges, produce new ideas, and think creatively at work.

This statement means that workers are more likely to start changes, take responsibility, speak out, and challenge powerful individuals to enhance creativity, performance, and the workplace atmosphere (Tan et al., 2023; Faulks et al., 2021). COCB is a new concept in organisational behaviour research (Chen et al., 2020) that describes employees who are motivated to take on difficult tasks that are necessary for business growth. Volunteering for tough work, giving colleagues positive feedback, and looking for new chances are COCB actions (Dempsey-Brench & Shantz, 2022). Employees' work style, rule, and process transformations are called "organisational change." This behaviour challenges an organization's current state and strives to improve performance by introducing new methods, enhancing processes, and improving efficiency (AlTaweel & Al-Hawary, 2021; Kutieshat & Farmanesh, 2022). Challenge-oriented behaviour can increase adaptability, creativity, and innovation in both individuals and organizations (Mehmood et al., 2024). Focusing on difficulties helps individuals and organizations develop new stress-management skills, strategies, and methodologies (Kapoor & Chhabra, 2023). By sharing good ideas, questions, and workplace difficulties, COCB helps companies adapt to changing business environments and innovate (Mai et al., 2022). The environment and leadership support limit employees' creative ideas. Leadership alters organisational processes and employee behaviour (Webber et al., 2022; Mai et al., 2022).

### **2.4. Entrepreneur orientation**

Over the last several years, the idea of entrepreneurial orientation (EO) has been growing in prominence as a theoretical framework for the purpose of researching how businesses enter novel markets and maintain a competitive advantage. Organizations understand that EO is crucial to their success, particularly in domains that are characterized by a high degree of uncertainty and need an enormous amount of imagination as well as flexibility (Heitor et al., 2024). In the course of this literature review, our objective is to acquire a greater understanding of EO by examining its theoretical foundations, dimensions, relate to the performance of the company, as and contextual elements that have an influence on its efficiency. There are three components of EO that were first identified by Kusa et al. (2021). These aspects include creativity, risk-taking, and proactive behaviour. According to Miller, high EO organizations differentiate themselves from other organizations by virtue of the entrepreneurial spirit that they exhibit. Based on this basic paradigm, other researchers enhanced upon it by including elements like as autonomy and intense competition (Al-Awlaqi et al., 2021; Li et al., 2023). A more multifaceted view of the ways in that companies show entrepreneurial attributes could be provided by this enlarged model, which may assist establish such a vision.

Deku et al. (2021) found a positive relationship between EO and numerous performance metrics. These measures include market share, financial performance, and competitiveness. These results suggest that companies with strong EO can seize opportunities and overcome obstacles, improving performance. However, other mitigating factors mislead the relationship. Company innovativeness its ability to produce new products, services, and processes is a key component of EO. Mizrak, (2023) encourages enterprises to explore creatively. Innovation-focused companies support proactive problem-solving and continuous growth. Innovation boosts consumer satisfaction and market position. Risk-taking includes substantial financial investments in new ventures or technologies with unpredictable outcomes. According to Li et al. (2023), risk-taking companies are more likely to explore new markets and use inventive methods. Since this activity may have positive and bad effects, firms must develop effective risk management strategies.

Reactiveness emphasizes market trend prediction and capitalizing on fresh opportunities before competitors (Jun et al., 2024; Vu et al., 2021). Active businesses react to shifts in situations and develop their sector. Companies may develop sustainably and remain relevant with this forward-thinking strategy. Workers are encouraged to develop entrepreneurial ventures with autonomy. Joo et al. (2023) revealed that team autonomy empowers workers, boosting motivation and creativity. This empowerment may inspire new initiatives and improve the organization's agility. This is how much a company tries to beat its rivals. Competition may manifest as aggressive pricing, marketing, and improvement. Companies that compete aggressively usually have a larger market share and stronger position.

## 2.5. Hypotheses development

### 2.5.1. Ethical leadership and knowledge sharing

Sharing knowledge inside of an organization does not happen by itself. A suitable framework and the essential support are necessary. According to Berraies et al. (2021), leaders can greatly impact the exchange of knowledge. When it comes to building a culture that encourages and supports information sharing in a company, having the backing of leaders is essential. Alblooshi et al. (2021) are two of the prior research that investigated the relationship between leadership style and information sharing. This study aims to shed light on the causes of information sharing at the personal level by using moral lenses to the research. Proving the ethical importance of information sharing is a step in the right direction for knowledge management studies. What follows is an analysis of how ethical leaders could use social learning theory to influence staff knowledge sharing.

Leadership, as per the social learning theory of ethics, is mainly a matter of establishing an example for an individual's supporters. According to Bandura (1986), the investigation of personal experience and good behaviour may provide us with valuable insights. The actions of ethical leaders have an impact on both laborers and leaders; the former instruct the latter by setting a positive example. Ethical leaders motivate their followers to engage in constructive activities, such as information sharing, because their credible and legitimate actions are perceived as normatively appropriate (Su et al., 2021; Hosseini & Ferreira, 2023). This theory's fundamental premise is that workers may gain insight into the outcomes of their decisions by engaging with real-world scenarios. Consequently, it is probable that ethical executives will incentivize employees to be proactive in their behaviour, such as sharing information. As a consequence, employees begin to perceive information sharing as the standard operating procedure and begin to engage in it more frequently (Burnett & Lisk, 2021; Su et al., 2021).

According to Al-halbusi et al. (2021), ethical leadership includes the ability to be normatively appropriate. Organisational and collective interests were employed to evaluate normative appropriateness. Therefore, we contemplate the potential benefits to both the organization and the community as a whole of sharing information. Ethical executives will regard it as a demonstration of appropriate behaviour and advocate for its implementation throughout the organization. A moral leader will reiterate the importance of information sharing and demonstrate its role in problem-solving (Ullah et al., 2022). By conducting themselves in this manner, ethical leaders exhibit their readiness and capacity to impart their expertise. Ethical leaders should establish trusting relationships with their colleagues, eliminate barriers to knowledge sharing in the workplace, and serve as a positive example for their employees by equitably exchanging and sharing resources (Lee and Neguan, 2021; Hosseini & Ferreira, 2023).

Operating with the same ethics may influence the environment around them. Employees need empathetic leaders for routine activities. By developing true relationships with employees, ethical leaders encourage people to share their knowledge. Strong relationships with ethical bosses encourage employees to share their knowledge (Ma et al., 2023). Following social learning theory, an ethical leader shares their knowledge and uses incentives to influence followers to behave ethically (Ullah et al., 2022; Lee and Neguan, 2021). Because they feel it will benefit their employees, ethical leaders support information exchange. We propose the following hypothesis:

**H1:** there is positive relationship between EL-KS.

### 2.5.2. The mediating effect of organizational citizenship behavior

Organizations which enable employees to share their knowledge are more likely to have effective knowledge management processes, which help them achieve their goals faster (Olan et al., 2022; Islam et al., 2021). Knowledge sharing is not explicitly included in corporate policy or employee job descriptions, raising worries that it may become an extra-role activity. Berries et al.'s 2020 study reveals that information sharing is a deliberate activity, making it unique. This study will utilize social exchange theory to determine how OCB mediates ethical leadership and information sharing. Latham, (2021) defines OCB as an employee's not compensated self-directed work. This helps the company flourish and workers grow up. If leaders want to establish an ethical workplace where people can display corporate citizenship, they must keep current and take the initiative to drive development for their employees and the firm. Islam et al. (2021) found that workers are more willing to share knowledge if they think their supervisors are ethical.

Social exchange theory argues that supporters take cues from their leaders' demeanor. A person with excellent social relations feels obligated to give back to those who have helped them succeed. Becker posits that implicit cooperation grows until there is a perceived equality in exchange (1964). When workers share knowledge, they run a chance of giving up a competitive edge. Therefore, before taking part in a social transaction, workers should consider both its advantages and drawbacks. Their willingness to provide knowledge is diminished by this focus on trade. Ethical leadership is essential for equitable distribution of benefits and information (Bhatti et al., 2021; Al-halbusi et al., 2021). By showing genuine interest in their staff, fostering an atmosphere free from psychological threats, and treating them with dignity and respect, ethical leaders inspire their teams to be active members of the company and to share what they've learnt (Zaim et al., 2021; Fan et al., 2021). When it comes to encouraging corporate citizenship, ethical leaders give fair incentives, equal development possibilities, and high moral and ethical standards. Employees would reciprocate leaders' fair and ethical behaviour with knowledge sharing, if social exchange theory were to be acknowledged (Su et al., 2021; Zaim et al., 2021).

OCB influences workers to share knowledge when they regard ethical leaders as exemplars and believe they are ethically engaging in the benefit exchange they could anticipate. When CEOs act ethically, employees are more inclined to assist their organization flourish (Christensen et al., 2023). Ethical leaders create an open, trustworthy workplace that boosts workers' psychological ownership of their jobs, organisational citizenship behaviour (OCB), and information sharing (Saeed et al., 2022). According to social exchange theory, ethical leaders inspire OCB by "walking their talk" and treating their employees properly. Based on the explanation, the following hypothesis is proposed:

**H2:** OCB significantly mediates the association EL-KS.

### 2.5.3. Moderated-mediation (EO)

Corrêa et al. (2022) defined entrepreneurial orientation (EO) as a way of approaching a company's strategy that encourages creative thinking, independent thinking, and risk-taking. EO has been referred to as a "entrepreneurial mindset." The concept of

entrepreneurial orientation (EO) has gained in prominence within the entrepreneurship literature in the last several years. It explains how businesses become more flexible and swift to react to changes in the market by embracing entrepreneurial practices. The terms used to refer to these actions are responsiveness and flexibility. These qualities foster an environment where workers are motivated to think outside the box, solve problems creatively, and share what they know with one another (Chen et al., 2022; Khassawneh et al., 2022). Workers are encouraged to explore a new idea, which contributes to this culture. Businesses with a high employee engagement ratio (EO), which stands for employee involvement, are more likely to have this kind of culture. Organisational citizenship behaviour (OCB) mediates the relationship between leadership and knowledge-sharing practices, and it also makes it easier to launch projects that include information exchange. The reasons for this is due to organizations with a high EO value both individual initiative and teamwork very highly.

Yazdanpanah et al. (2023) indicates that high EO businesses, in order to improve the quality of their processes, products, and services, foster a culture of continual learning and collaboration among their employees. OCB emerges as an essential go-between for leadership style and information exchange via the execution of this strategic plan, which not only establishes the foundation for efforts to share knowledge but also is a strategic approach. This strategy is designed to facilitate the sharing of knowledge. Organisational citizenship behaviour (OCB) is reinforced when workers are given the freedom to go above and beyond the call of duty and bring their own unique expertise to the company (Lui et al., 2024; Dekarapel et al., 2023). This increases the likelihood that employees will become more committed to the organization. This is because the employee is able to bring their own special skills to the organization, which ultimately results in this outcome. According to Han et al. (2023), sceneries with a high emotional intelligence (EO) result in an improvement in the positive effects of ethical leadership, which puts a focus on honesty, openness, and fairness. The establishment of a cooperative atmosphere that encourages workers to actively engage in information-sharing behaviours is the means by which this objective may be attained.

**H3:** Entrepreneur orientation moderates the mediating effect of OCB between EL-KS.

## 2.6. Conceptual Framework

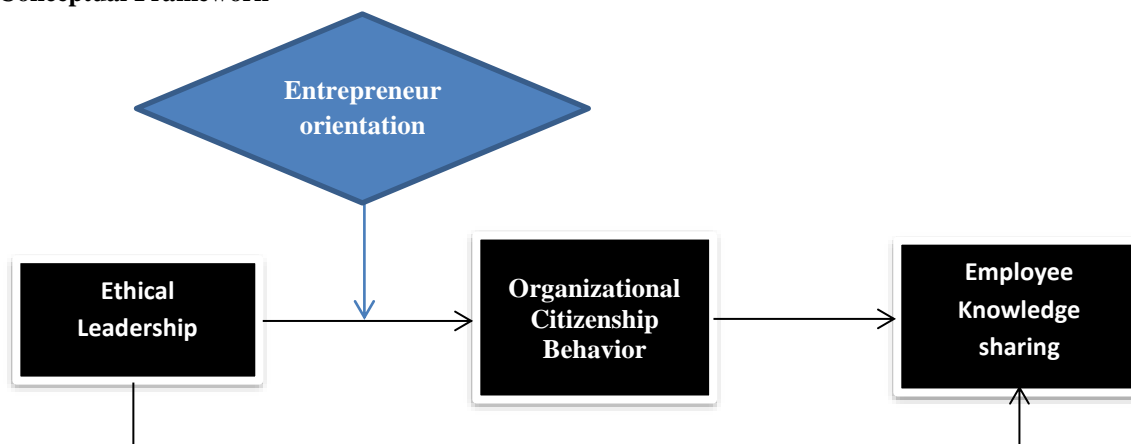


Figure 1: Conceptual Model

## 3. Material and Methods

### 3.1. Study sample and procedure

Employees and supervisors from manufacturing industries (MI) in Khyber Pakhtunkhwa participated in this present research. Using the manufacturing sectors as a sample size offers valuable insights into larger developments in the economy, given their outsized effect on GDP and employment. Due to the complexity of activities and the amount of data, in-depth evaluations of production procedures and their efficiency are now feasible. Since manufacturing studies provide important data on sustainable practices, innovation, and supply chain dynamics, the results are also useful to various sectors.

Table 1: Sample character

Sample variable	Employees	Supervisors
<i>Gender</i>		
Male	224 (68.9%)	46 (14.2%)
Female	34 (10.5%)	21 (6.5%)
<i>Age</i>		
22-30	89 (27.4%)	14 (4.3%)
31-38	161 (49.5%)	23 (7.1%)
39 Above	29 (8.9%)	09 (2.8%)
<i>Job tenure</i>		
Less 10 years	65 (20%)	15 (3.4%)
11-20	183 (56.3%)	57 (6.8%)
21 Above	23 (9.5%)	28 (4%)
Total n	325	

This research minimized common method bias by collecting data at three distinct time intervals (Podsakoff et al., 2003). In the first phase (T1), data was collected from employees regarding ethical leadership (EL), and demographic information. EL is

independent variable. In the second phase (T2), data was gathered from the selected employees for OCB and entrepreneur orientation (ET). OCB is mediating variable and entrepreneur is the moderating variable. In the last phase (T3), responses were gathered from respondents of dependent variable knowledge sharing (KS).

The sample consisted of 325 male (68.9%) and 43 female (10.5%). Regarding age distribution, 89 respondents (27.4%) were aged between 25 and 30 years, 161 (49.5%) were between 38 and 35, and 29 (8.9%) were aged 39 and above. The complete demographic profile of the respondents is detailed in the above Table 1.

### 3.2. Survey measure

This study used a five-point Likert scale that ranges from 1 (strongly disagree) to 5 (strongly agree), the respondents recorded their opinions on various topics, including ethical leadership (EL), knowledge sharing (KS), organisational citizenship behaviour (OCB), and entrepreneur orientation (EO).

#### 3.2.1. Independent variable (Ethical leadership)

Brown et al. (2005) developed a scale of ten items that was used to evaluate EL. Examples of such element include: “my supervisor makes fair and balanced decisions,” “when making decisions, asks ‘what is the right thing to do?’”. The reliability was determined to be suitable with a value of  $\alpha = 0.97$ .

#### 3.2.2. Dependent variable (Knowledge sharing)

To examine the outcome variable KS, this study used a scale consisting of 4 items. The survey scale was developed by Lin, (2007). A single component from this survey scale indicates, “In my opinion, sharing knowledge is important for achieving the goals set by the organization.” The alpha value of the scale is 0.89, indicating a reliable scale.

#### 3.2.3. Mediator (Organizational citizenship behavior)

The present study utilized a 19-item scale to investigate OCB. This scale was adapted from Moorman & Blakely (1995). An example item from the scale is, “I help colleagues in the workplace when they need assistance.” The scale demonstrates a strong alpha value of 0.86, indicating that, it is reliable for examining the factor.

#### 3.2.4. Moderator (Entrepreneur orientation)

The study examined EO used a questionnaire that included 8-item created by Covin and Slevin (1989) and Miller and Friesen (1982). The questionnaire included statements such as "Our organization places a strong emphasis on technological leadership and innovations". The survey demonstrated strong reliability regarding internal consistency, evidenced by a Cronbach's  $\alpha$  score of 0.81. This suggests that the scale provides a reliable measure of EO, establishing accurate assessment.

## 4. Results

**Table 2: Reliability**

	EL	KS	OCB	EO
Variables	Independent	Dependent	Mediator	Moderator
items	10	04	19	08
Alpha	0.791	0.873	0.911	0.867
Developed by	(Brown et al. (2005)	(Lin, 2007)	(Moorman & Blakely 1995)	(Covin & Slevin, 1989)
Findings	Reliable	Reliable	Reliable	Reliable

The reliability findings provide sufficient evidence that the instrument is reliable, as shown in the tables 2. All of the variables (EL, KS, OCB, and EO) have alpha values are more than 0.7, which confirmed the reliability of the scale. However, EL, KS, OCB, and EO were all assessed via a scale consisting of EL-10, KS-04, OCB-19, and EO-08 items, with Alpha values of EL-0.791, KS-0.873, OCB-0.911, and EO-0.867 respectively. Hence, the entire instrument values are higher than 0.7, which is evidence that scale was used in the present study is reliable. (Table 2)

**Table 3: KMO & BTS analysis**

	EL	KS	OCB	EO
Variables	Independent	Dependent	Mediator	Moderator
KMO test	0.820	0.829	0.774	0.833
BTS test	661.165	964.330	766.640	1524.941
	(P < .05)	(P < .05)	(P < .05)	(P < .05)

KMO values of all the study variables are greater than 0.50; the sample is used in this study is appropriate. In a comparable way, the BTS values for all of the constructs (EL, KS, OCB, and EO) are significant, which indicates that the alternative hypothesis is accepted. (Table 3)

#### 4.1. Hypothesis testing

According to regression analysis, the factors that are independent (EL) show a significant and positive relationship with the dependent variable (KS), which is knowledge sharing. EL with high beta value (66%) brings variation in knowledge sharing more effective. Thus, overall F and significant p value, suggest that model is fit. The present study's hypothesis (H1) has been accepted. (Table 4)

#### 4.2. Mediation Analysis

Table 5 shows the mediating effect of (OCB) on the relationship between the IV (EL) and the outcome variable (KS). The direct effect of all the relationships is substantial. Similarly, the values of z (2.95) and p for the indicated relationship are statistically

significant, suggesting that the mediator, OCB, partially mediates the link between EL and KS. Therefore, hypothesis H2 is supported.

**Table 4: Coefficient**

Values	EL (Independent variable)
T	14.50
P	.000
Beta	0.66
F	210.005 (0.000)
Outcome variable	KS (Dependent variable)
Supported	Yes (H1)

**Table 5: Summary**

EFFECT	Values
EL -> OCB	.7369 (p=.000)
OCB -> KS	.2575 (p=.000)
Direct effect	.6343
Indirect effect	.1898
Total effect	.8240
Sobel test	2.95

**Table 6: Moderated-Mediation analysis**

Index	.0609
BootSE	0.216
LLCI - ULCI	.0195 - .1045

Based on findings, EO significantly strengthens the relationship between ethical leadership and knowledge sharing via organizational citizenship Behavior as the above values suggested (index= .0609, LLCI= .0195, ULCI= .1045). Hence, we identified support for H3.

**Table 7: Hypotheses testing summary**

Hypotheses	Statement	Decision
H1	Ethical leadership significantly and positively influences knowledge sharing.	Supported
H2	Organizational citizenship behavior significantly mediates the relationship between ethical leadership and knowledge sharing.	Supported
H3	Entrepreneur orientation moderates the mediating effect organizational citizenship behavior between ethical leadership and knowledge sharing.	Supported

### 4.3. Discussion

The findings of this research contribute to our knowledge of social learning theory via investigating the effect of ethical leadership on employee knowledge sharing in manufacturing industries' practices in Khyber Pakhtunkhwa, Pakistan. Particularly focusing on private organizations, this study first developed a conceptual framework based on prior research on EL, OCB, EO, and KS. Present study finding are consist with prior research. Previous study (Le & Nguyen, 2023) shows that ethical leadership encourages knowledge sharing via the moderating effects of distributive justice. The data that we collected demonstrate that this hypothesis is supported by our findings. This study contributes to the existing body of research on servant leadership and its impact on knowledge sharing by showing how ethical leaders promote an ethical environment. The study reached the conclusion that organisational citizenship behaviour (OCB) acts as a mediator between the mentioned relationships. The positive effect of ethical leadership on high-level sharing of knowledge is strengthened by a self-efficacy (Sun et al., 2024). When an ethical leader prioritizes trust building with their team members, they are more likely to provide an atmosphere that encourages the knowledge sharing.

## 5. Implications

### 5.1. Theoretical implications

For a deeper comprehension of how to lead in results-oriented, collaborative, high-performance environments, examine whether ethical leadership has improved business knowledge sharing. Ethics-focused industrial leaders encourage workers to communicate safety concerns, process improvements, and quality control information. This knowledge is essential for increasing productivity and avoiding hazards (Saniuk et al., 2023; Khaksar et al., 2023). The study suggests that ethical leadership may enhance knowledge sharing via organisational citizenship behaviour (OCB) given that manufacturing is directly involved. Workers are more likely to engage in organisational citizenship behaviour (OCB) when their leaders exhibit ethics and promote open



communication and cooperation (Alobidyeen, 2024). This study examines these dynamics to show ethical leadership theory's indirect but significant impact in boosting exchange of knowledge, which is essential to manufacturing operational effectiveness.

## 5.2. Practical implications

The findings of this study have important consequences for organization that bring together their knowledge and skills. Organizations' should encourage the exchange of knowledge by fostering ethical leadership qualities such as self-awareness, humility, and compassion. It is important to encourage employees to volunteer, help others, and take part in company-wide events. In order to establish trust, leaders should encourage open communication, keep their word, and set a good example. Knowledge sharing could be enhanced by giving individuals more agencies over their job and fostering an environment that rewards teamwork. Workers may be helped to understand the significance of information sharing by regular coaching and feedback, and those who share may be incentivized to continue the behaviour through rewards. Companies may increase their creativity and competitiveness by using these strategies, which promote collaborative behaviour, confidence, and knowledge sharing.

## 5.3. Limitations and future research

A Pakistani higher private organization made it possible to execute this research in the province of Khyber Pakhtunkhwa. There are various kinds of organization, each tailored to a certain the nation or sector. It is recommended that data be gathered from a variety of businesses in order to validate the findings of this study in future research. This includes healthcare centers, insurance firms, service providers, and so on. Research in the future could investigate into cultural differences to learn more about how these components work in various environments. The study identified organisational citizenship behaviour as the mediating variable. Consequently, there is a vast range of possible shapes that organisational citizenship behaviour might take, including but not limited to innovation, quality, efficiency, and overall performance. Future studies might examine at these components independently to learn more about how EL and other factors impact different parts of knowledge sharing behaviour.

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