Understanding the Influence of Trust as Knowledge Management Enabler on Organizational Effectiveness Through Organizational Culture: A Mediation Analysis

Maryam Barkat¹, Dr.Ghazala Noureen²

Abstract
The current study examines the influence of trust as knowledge management enabler on organizational effectiveness via organizational culture. The study collected quantitative data from the 487 teaching and non-teaching faculty working in public sector universities in Punjab, Pakistan. Analysing the data using structural equation modeling in Mpus (8.10), the study found that all the proposed hypotheses were supported. The study extends literature on different streams such as knowledge management enablers, organizational culture and organizational effectiveness and offers valuable practical insights for policy makers and university management to effectively create, disseminate and manage knowledge.

**Keywords:** Knowledge Management Enablers, Organizational Culture, Organizational Effectiveness, Higher Education Institutions.

1. Introduction
In the present era of cut-throat competition, knowledge is considered an important strategic asset and power to deliver competitive benefits to organizations and employees (Shamim, Cang, & Yu, 2017), and knowledge management has gained immense importance in today’s organizations. Universities are currently experiencing a significant transition in their global roles due to increasing expectations to actively contribute to national innovation and economic success (Blackman & Kennedy, 2009). To address these dynamic requirements, universities are entrusted with a key responsibility: to cultivate graduates who possess advanced skills and extensive knowledge and generate novel perspectives and expertise essential for stimulating innovation and fostering globally competitive economies (Quarchioni et al., 2020). This transformation necessitates universities to make substantial contributions towards developing skilled workforces while simultaneously evolving into innovative knowledge-creation centres that are crucial for a nation’s competitiveness in the global arena (Mahdi, Nassar & Almsafir, 2019).

The paradigm change necessitated that higher education institutions develop innovative and appropriate technologies and conducive strategies and policies to effectively manage their most important resource: ‘knowledge’ (Sharma & Sharma, 2021). This invaluable knowledge is generated through research, disseminated through teaching and learning, and transmitted through communication channels, fostering academic progress and employment opportunities through spin-off ventures (Hijazi & Kelly, 2003). Within the domain of higher education, institutions play a crucial role as central hubs for generating and disseminating knowledge. Throughout history, education has served as the predominant means of knowledge generation and instruction, playing a crucial role in facilitating the dissemination of information (Abubakar, Elrehail, Alatailat & Elçi, 2019; Rehman & Iqbal, 2020).

Past research highlights higher educational institutions’ imperative role in knowledge sharing and knowledge management: to support economic growth and bring about positive change in society (Fauzi, Nya-Ling, Thursamy & Ojo, 2019). Furthermore, the prior literature reveals that knowledge management enablers are the critical factors facilitating knowledge management processes (Ho, Hsieh & Hung, 2014). Recent research studies indicate that knowledge management facilitators positively influence the knowledge management process both directly and indirectly (Iqbal, 2021; Yadav, Pant & Seth, 2020).

Given the importance of exploring the knowledge management enablers on the knowledge management process, there is a dearth of research investigating the influences of knowledge management enablers on employees and organizations. With this reasoning in mind, the current research study proposes and empirically tests the influence of trust as an important knowledge management enabler on organizational culture. Furthermore, the study attempts to investigate the influence of organizational culture on organizational effectiveness. Organizational effectiveness refers to the capacity of a corporation to successfully attain its objectives by optimizing resources and producing outcomes of superior quality (Cameron & Whetten, 1981; Cameron, 1986). It also goes beyond the mere productivity focus toward the successful execution of the strategies aimed at enhancing overall effectiveness of the organization (Yukl, 2008). Finally, the study proposes and empirically examines the indirect influence of trust as a knowledge management enabler on organizational effectiveness via organizational culture.

In sum, the study make several notable contributions to the existing literature on trust as knowledge management enabler, organizational culture and organizational effectiveness. By positing a significant positive association between

¹ Department of Secondary Education, Lahore College for Women University, maryamsaith518@gmail.com
² Associate Professor, Department of Secondary Education, Lahore College for Women University
trust as knowledge management enabler and organizational culture, the study contributes to the existing literature on knowledge enabler (Al-Husseini et al., 2021; Iqbal, 2021; Sahibzada et al., 2022) and organizational culture (Adeinat & Abdulfatah, 2019; Azeem et al., 2021; Hussain et al., 2022). Furthermore, by empirically showing that organizational culture is positively and significantly related to organizational effectiveness, the study the study extends the literature on organizational culture (Azeem et al., 2021; Hussain et al., 2022) and organizational effectiveness (Ayatollahi & Zeraatkar, 2020; Karamat et al., 2019; Sahibzada et al., 2020). Establishing organizational culture as an important mediating mechanism in the relationship between trust as a knowledge management enabler and organizational effectiveness the study contributes to the literature on knowledge management enablers (Al-Husseini et al., 2021; Iqbal, 2021) and organizational effectiveness (Karamat et al., 2019; Sahibzada et al., 2020). Finally, the study contributes to the literature highlighting the role of knowledge management enablers in the context of higher education institutions in Pakistan (Al-Husseini et al., 2021; Iqbal, 2021).

2. Hypotheses Development

2.1.1. Relationship between Trust as a knowledge management enabler and Organizational Culture

Trust is the cornerstone of a robust and positive organizational culture, influencing its fabric profoundly. When trust permeates an organization, it creates an environment where individuals feel safe to express themselves, take risks, and collaborate openly (Tierney, 2008). Trust fosters psychological safety, allowing employees to share their ideas, opinions, and concerns without fear of reprisal (Al Hawari, 2012). This openness increases communication, transparency, and a sense of belonging within the organization. As trust grows, so does camaraderie among team members, cultivating a culture where mutual respect and support become ingrained values (Tierney, 2008). Moreover, trust within an organization paves the way for effective leadership and decision-making. When employees trust their leaders, they're more likely to align with the organization's vision and values (Tan & Md. Noor, 2013). Transparent communication from leadership builds trust and credibility, fostering a culture of accountability and empowerment. Trustworthy leaders inspire confidence, creating a ripple effect throughout the organization (Haque et al., 2015). Trust also enhances employee engagement and commitment, as individuals feel valued and respected, leading to a positive work culture where collaboration and innovation thrive (O'Dwyer et al., 2023). Trust acts as a catalyst that shapes the essence of an organization's culture, influencing its dynamics, relationships, and overall effectiveness. Against this backdrop, the study proposes the following hypothesis:

HI: Trust is positively related to organizational culture

2.1.2. Relationship between Organizational Culture and Organizational Effectiveness

Organizational culture profoundly influences organizational effectiveness by shaping the behaviors, attitudes, and practices within an entity. A strong positive culture plays crucial role in developing individuals’ quest to align their actions and decisions towards common set of values (Hatch, 1993; Schmiedel et al., 2019). A culture coupled with openness and positive collaborative environment creates an environment that allow employees to effective utilize resources and invest their best efforts. Furthermore it nurturing sense of belonging and commitment that positively contributes towards productivity and performance (Azeem et al., 2021; Schmiedel et al., 2019). Furthermore, the strong positive culture encourage adaptive behaviors and promotes continuous learning that equips and prepare employees to respond effectively to accomplish their tasks. This can ultimately leads to the organizational effectiveness (Chatman & O’Reilly, 2016).

By valuing effectiveness and efficiency, organizational culture can have positive influence on task accomplish and the pursuance of the organizational goals. Furthermore, it help organizations to design and execute work processes effective and positively contribute to the overall effectiveness of the organization (Kim et al., 2018). It also drives employees to prioritize customer satisfaction and excellence in their work, leading to improved service delivery and product quality. Additionally, culture plays a crucial role in fostering teamwork and collaboration (Xiong et al., 2021). Finally, the strong positive culture promotes the mutual respect and cooperation among employees and encourages a culture of helping and sharing valuable task related information that can enhance the effectiveness of employees and organizations (Njagi et al., 2020). Furthermore this collaborative culture positively uplift the information flow, facilitates decision-making that are significant predictors organizational effectiveness in achieving its strategic objectives (Schmiedel et al., 2019).

H2: Organizational culture is positively related to organizational effectiveness

2.1.3. Organizational Culture as a Mediator in the Relationship between Trust and Organizational Effectiveness

Organizational culture functions as a vital mediator between trust as a knowledge management enabler and organizational effectiveness. A culture steeped in trust cultivates an environment where open communication, collaboration, and shared values thrive. When ingrained within the cultural fabric, trust creates a sense of psychological safety among employees (Buchanan & Huczynski, 2019). This shapes an environment that support,
knowledge sharing and encourage employees to proactively resolve their conflict issues for the larger interest of the organization and plays an imperative role in enhancing organizational effectiveness. Employees working in such environment feel valued and their opinions and suggestions are carefully listened and respected that allow to come up with innovative ideas to work cohesively to strive for the accomplishment of common goals (Dębski et al., 2020).

Trust shapes the culture because it influence the process of decision-making and strengthen the structure of the organization, which can influence the overall effectiveness of the organization. Furthermore, trust shapes and develops a culture of decentralization, which help removing the hierarchical barriers within the organizations and ensure agile decision-making and quick responses to tackle the challenges and grab new opportunities. Moreover, it enhance the adaptive capacity of the organization (Buchanan & Huczynski, 2019; Xiong et al., 2020). When trust is pervasive, individuals are more likely to take ownership of their roles, leading to higher productivity and performance, thus contributing to organizational effectiveness (Dębski et al., 2020).

Organizational culture transform and promotes theses trust-based policies and help organization communicating these policies to the employees that enable organizations reinforce the these values throughout the organization (Alvesson & Sveningsson, 2015). Through the lens of organizational culture, it is possible to transmit these sustained values across all the levels of organization. In sum, the trust as knowledge management enabler promotes and strengthen the norms and values of the organization and encourage developing and fostering trust-based relationships that in turn play an effective role boosting the effectiveness of the organization (Marker, 2009; Buchanan & Huczynski, 2019). Against this backdrop, the study proposes the following hypothesis:

**H3**: Organizational culture mediates the relationship between trust as a knowledge management enabler and organizational effectiveness.

### 3. Research Methodology

#### 3.1. Data Collection Procedures

The study randomly selected 1000 employees working as teaching and administrative staff in public sector universities in Punjab, Pakistan to collect data. The access was managed using personal and professional references. Initially, these 1000 employees were contacted using personal and professional references to obtain study participation consent. The respondents were furnished with the study's objectives and a promise of confidentiality and anonymity of their responses. Out of 1000 random respondents, the study successfully obtained consent from 748 respondents willing to participate. After receiving participation consent, the study contacted the 748 respondents to fill out the surveys containing questions about the understudy variables, including trust as a knowledge management enabler, organizational culture, and organizational effectiveness. The study received 581 filled responses from the respondents. The dataset was scrutinized for any instances of missing values, and it was discovered that 49 responses had missing data. Consequently, these responses were eliminated from the dataset. The Mahalanobis distance test was employed to identify outliers in the data set. As a result, 45 responses were deemed outliers and were subsequently excluded from the analysis due to their inappropriate handling by the respondents. After removing missing data and outliers, the current investigation obtained a viable sample size of 487 responses to assess the stated hypothesis.

#### 3.2. Measures and Variables

**Trust as knowledge management enabler**

Trust was assessed by adopting a six-item scale from Seonghee and Boryung (2008). Sample items were “I trust my colleagues in general” and “I voluntarily share my important information and knowledge with my colleagues.”

**Organizational Culture**

Organizational culture was assessed using a three-dimensional organizational culture scale, including clan culture, adhocracy culture, and hierarchy culture.

**Clan Culture**

Clan culture was assessed by adapting a six-item scale from Cameron & Quinn (2011). Sample items were “The organization is like an extended family; it is a very personal place” and “The organization emphasizes human development (including employee morale), participation, and consensus”.

**Adhocracy Culture**

Adhocracy culture was assessed by adapting a six-item scale from Cameron & Quinn (2011). Sample items were “The University is dynamic and inclined toward risk-taking” and “The university environment is characterized by change, facing new challenges, and creativity”.

**Hierarchy Culture**

Hierarchy culture was assessed by adapting a six-item scale from Cameron & Quinn (2011). Sample items were “The environment is characterized by rigorous and clear procedures” and “The principles governing the University are formal, detailed rules and procedures”.

**Organizational effectiveness**


Organizational effectiveness was assessed using a four-dimensional organizational effectiveness scale, including competing value approach, goal approach, system resource approach and external adaptability approach.

Competing Value Approach
Competing value approach was assessed by adapting a four-item scale from Kareem (2019). Sample items were “My University makes efforts to improve productivity” and “My University makes efforts to ensure stability”.

Goal Approach
Goal approach was assessed by adapting a four-item scale from Kareem (2019). Sample items were “My University ensures goal achievement” and “My University makes efforts to improve the quality”.

System Resource Approach
System resource approach was assessed by adapting a four-item scale from Kareem (2019). Sample items were “My University has the ability to acquire resources” and “My University ensures the accreditation.”

External Adaptability Approach
External adaptability approach was assessed by adapting a three-item scale from Szumal (2012). Sample items were “My University implements new programs efficiently” and “My University responds effectively to external opportunities and threats.”

4. Data Analysis
4.1. Means and Correlations

<table>
<thead>
<tr>
<th>Construct</th>
<th>Means</th>
<th>SD</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Trust as a knowledge management enabler</td>
<td>3.27</td>
<td>1.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Organizational culture</td>
<td>3.13</td>
<td>.93</td>
<td>.34*</td>
<td></td>
</tr>
<tr>
<td>3. Organizational effectiveness</td>
<td>3.46</td>
<td>.96</td>
<td>.19**</td>
<td>.33**</td>
</tr>
</tbody>
</table>

Note. N=487. * p < .05; ** p < .01 level (2-tailed).

4.2. Measurement Model
The study utilized Confirmatory Factor Analysis (CFA) to evaluate the measurement model consisting of various constructs such as openness to communication, perceived organizational support, trust, organizational culture, and organizational effectiveness. The fit indices – $\chi^2$ (454) = 712.16, $\chi^2/df = 1.90$, RMSEA = .03, CFI = .97, TLI = .97 – revealed that the measurement model has an acceptable fit with the data. The factor loading scores showed that all the suggested factors have optimal loadings > .60.

<table>
<thead>
<tr>
<th>Construct</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>$\alpha$</th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>ASV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TR</td>
<td>.79</td>
<td></td>
<td></td>
<td>.89</td>
<td>.89</td>
<td>.62</td>
<td>.16</td>
<td>.09</td>
</tr>
<tr>
<td>2. OCL</td>
<td>.40</td>
<td>.78</td>
<td></td>
<td>.79</td>
<td>.85</td>
<td>.60</td>
<td>.18</td>
<td>.15</td>
</tr>
<tr>
<td>3. OE</td>
<td>.22</td>
<td>.42</td>
<td>.74</td>
<td>.81</td>
<td>.92</td>
<td>.57</td>
<td>.18</td>
<td>.06</td>
</tr>
</tbody>
</table>

Notes. n = 487. TR= Trust, OCL= Organizational effectiveness, MSV = Maximum shared variance. ASV = Average shared variance. AVE = Average variance extracted. CR = Composite Reliability. Bolded values on the diagonals of column 2 to 3 are the square root values of AVE. $\alpha$ = Cronbach alpha.

The values of convergent and discriminant validities presented in the Table 2 includes Cronbach alpha ($\alpha$), average variance extracted (AVE), average shared variance, and maximum shared variance (MSV). These values highlighted that $\alpha > .70$ and ASV < MSV, furthermore the ASV and MSV were less than AVE and The square root of AVE > inter-construct correlations. Taken together, all the values of the indices are well above the criteria and informed about the satisfactory validity and reliability of the scale used in the current research study.

4.3. Structural Model
To test the direct and indirect hypothesized relationship, the present study employed SEM path analysis using Mplus and simultaneously tested all the paths. The results presented in Table. 4.17 revealed a positive significant relationship between trust and organizational culture ($\beta = .25$, SE = .03, $p < .01$), indicating that employee feelings of trust play a crucial and significant role in creating, shaping, and developing organizational culture. Thus, hypothesis 3 was supported.

The results presented in Table. 4.17 showed a positive significant relationship between organizational culture and organizational effectiveness ($\beta = .41$, SE = .04, $p < .01$), suggesting that positive and strong organizational culture
lends support to the employee to perform their job effectively and positively and significantly contributes to the organization effectiveness. Thus, hypothesis 5 was supported.

Table 3: Hypothesis Testing Results

<table>
<thead>
<tr>
<th>Direct Paths</th>
<th>β</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust as a KME → Organizational culture</td>
<td>0.24**</td>
<td>0.05</td>
</tr>
<tr>
<td>Organizational Culture → Organizational Effectiveness</td>
<td>0.41**</td>
<td>0.06</td>
</tr>
<tr>
<td>Trust as a KME → Organizational effectiveness</td>
<td>0.09</td>
<td>0.06</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indirect Paths</th>
<th>β</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust as a KME → Organizational Culture → Organizational Effectiveness</td>
<td><strong>0.10</strong></td>
<td>0.03</td>
</tr>
</tbody>
</table>

Notes: N=487, β = Standardized coefficient, B= Unstandardized coefficient, SE= Standard error, Bootstrapping specified at 2000 with 95% confidence interval, KME = Trust as a Knowledge Management Enabler

The mediation analysis results presented in Table 4.17 showed a significant indirect relationship between perceived organizational support and organizational effectiveness via organizational culture (β = .10, SE = .03, p < .01). Organizational support uplifts employees' confidence and allows and boosts their sharing behaviors that contribute to organization culture of sharing inspires employees effectively acquire and utilize resources to enhance organizational effectiveness. Thus, hypothesis 9 was supported.

5. Discussion
The current research study proposes that trust as a knowledge management enabler is positively related to organizational culture. The present research study also suggests organizational culture is positively related to organizational effectiveness. Finally, the current study also proposes that organizational culture mediates the relationship between trust as knowledge management enablers and organizational effectiveness. Using data collected from the 487 teaching and non-teaching staff members from the universities in Punjab, Pakistan, and analyzing data using structural equation modeling in Mplus (8.9), the study found support for all the hypothesized relationships.

5.1. Findings of the Study
1. The study found a positive significant relationship between trust as knowledge management enabler and organizational culture.
2. The study found a positive significant relationship between organizational culture and organizational effectiveness.
3. The study found that organizational culture significantly mediates the relationship between knowledge management enabler and organization effectiveness.

6. Theoretical Contributions
The research study postulated and empirically established the link between trust and organizational culture. The results exhibited a significant positive link between trust as knowledge management enabler and organizational culture. By enlightening the positive link between trust as knowledge management enabler and organizational culture, the current study extends the existing literature on trust (Sahibzada et al., 2022; Yasir, Majid & Yasir, 2017) and organizational culture (Adeinat, & Abdulfatah, 2019; Azeem et al., 2021; Hussain et al., 2022). The findings of this study not only provide additional support and validation to existing research on the impact of knowledge management enablers in shaping positive work-related behaviors and cultivating a favorable work environment (Al-Husseini et al., 2021; Iqbal, 2021; Sahibzada et al., 2022) but also offer a valuable contribution to the emerging body of literature focused on knowledge management enablers in the context of employees within higher education institutions (Al-Husseini et al., 2021; Iqbal, 2021; Sahibzada et al., 2022).

Through the exploration of the underlying factors and their use by particular sectors, the study is one of the kind that determines how these factors are optimally utilized to rate the performance of the employees, effectiveness of the organization, and creation of a culture of knowledge sharing as well as dissemination within higher education (Yasir et al., 2017). Research findings reiterate the importance of the role of higher education institutions in the creation as well as dissemination of knowledge and their contribution to societal development (Adhikari & Shrestha, 2023). The research study also theorized and empirically examined the relationship between organizational culture and organizational effectiveness. The results uncovered a significant positive association between organizational culture and organizational effectiveness. By establishing and elucidating the positive linkage between organizational culture and organizational effectiveness, this study contributes to the existing body of literature on organizational culture.
It builds upon prior research by providing empirical evidence and further support to the notion that organizational culture plays a crucial role in shaping an organization's overall effectiveness (Olan, Liu, Neaga, Chen & Nakpodia, 2019; Qureshi, Parveen, Abdullah & Dana, 2021). Expanding on the existing literature, this research study delves into the specific dimensions and elements of organizational culture that contribute to organizational effectiveness (Olan et al., 2019; Qureshi et al., 2021). It highlights the importance of fostering a culture that promotes adaptability, collaboration, innovation, employee engagement, and customer orientation, as these cultural attributes positively influence overall organizational effectiveness (Olan et al., 2019; Qureshi et al., 2021).

Finally, the current research study also theorized and empirically tested the organizational culture as a mediator in the relationship between trust as knowledge management enabler and organizational effectiveness. The results posited a significant indirect relationship between trust and organizational effectiveness via organizational culture as a mediator. The present study established organizational culture as an important underlying mechanism in the relationship between trust and organizational effectiveness. In so doing, the current research study extends the literature on trust (Sahibzada et al., 2022; Yasar et al., 2017; Vanhala, 2019), organizational effectiveness (Ayatollahi & Zeraatk, 2020; Karamat et al., 2019; Sahibzada et al., 2020) and organizational culture (Adeinat, & Abdulfatah, 2019; Azeem et al., 2021; Hussain et al., 2022). Furthermore, this study makes an important theoretical contribution by exploring the intervening mechanisms in the relationship between trust and organizational effectiveness. Past research has called for the exploration of different mediating factors in this significant relationship, and this study fills that gap by highlighting the role of organizational culture as a key mediating variable.

7. Practical Implications
The current research study offers several practical insights that can help university management and policy makers promote trust as knowledge management enabler to enhance organizational culture and organizational effectiveness. Fostering transparency in decision-making processes, sharing information about organizational goals, and involving employees in decision-making when appropriate further strengthens trust and perceived organizational support. Finally, recognizing and rewarding employees' efforts and achievements reinforces trust and demonstrates that the organization values their contributions. By implementing these practical strategies, university management can cultivate a culture of perceived organizational support and trust, increasing employee engagement, commitment, and overall satisfaction.

The management of university should build a culture of engagement, clarity, and alignment by specifying its mission, vision, and values clearly. This way, the staff members will know the overall goals of the university and they will be able to know if the efficiency of their work is contributing to the attainment of the objectives. In the same vein of thought, making the workers to carry weight of decision-making process, and as well delegating functions so that they feel they are a part of the process end up making them accountable and committed to their work. In addition, by means of this university management may encourage the creation of a learning environment where moral, intellectual, and social training is available through the implementation of programs for personal development, training both professional and soft skills, and sharing of knowledge.

Policymakers have an important role in the promotion of knowledge management enablers in higher educational institutions in order to steer the institution’s culture towards the stronger organizational effectiveness. Policymakers can foster an environment where knowledge sharing, collaboration, and lifelong learning is prioritized by implementing such policies. Such policies will be instrumental in creating an environment that rewards and supports knowledge acquisition, creation, and sharing. This process can be enhanced through creating mechanisms and platforms that will promote the exchange of information, for example, through research collaboration, interdisciplinary initiatives, and knowledge sharing networks. Through the policy of knowledge management promotion and building an organizational culture committed to innovation, the policy makers will be able to enable higher education institutions to transform employees' innovation, which, in turn, will result in an enhanced organizational efficiency and an atmosphere of competitiveness on the part of these institutions in the face of a dynamic landscape of higher education.

8. Limitation and Future Research Directions
The current research study has some caveats that should acknowledged. First, the study employed Harman single-factor test and found that common method variance was not a problem in the study, however the cross section design of the research study is limitation as it does not allow to capture change over time and reverse causality (Podsakoff et al., 2003). The study urges future research scholars to employ a longitudinal research design in order to gauge change over time and cause and effect of the proposed relationships. Furthermore, the present study used trust as knowledge management enabler to examine its influence on organizational culture and organizational effectiveness; the future
research study should explore other knowledge management enablers to examine their influence on organizational culture and organizational effectiveness. Finally, the current study examined organizational culture as mediator in the relationship between organizational culture and organizational effectiveness. Future studies should explore for other alternative mechanism through which trust as knowledge management enabler transform its influence on organizational effectiveness.

References


