MOTIVATING TACIT KNOWLEDGE SHARING: THE ROLE OF PERCEIVED VALUE OF KNOWLEDGE AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR

Ayyaz Mahmood [A], Tasmin R [B], Bilal Saeed [C], Mai Nguyen [D], Aamer Hafeez [E]

ARTICLE INFO	ABSTRACT
	Purpose: This study investigates the challenge of retaining and sharing tacit knowledge during employee transitions in organizations, with a specific focus on software developers' motivations. We examine two key motivational beliefs: the perceived value of knowledge and organizational citizenship behavior (OCB), and their influence on sharing intentions. Additionally, we explore how these beliefs shape attitudes, subsequently affecting intentions regarding tacit knowledge sharing. **Theoretical Framework:** Grounded in the Theory of Reasoned Action (TRA), our research underscores the pivotal role of beliefs in shaping attitudes and intentions related to tacit knowledge sharing. Beliefs, encompassing the Perceived Value of Knowledge and OCB, play a significant role in molding attitudes. Using structural equation modeling, we analyze data collected from 197 software developers, employing confirmatory factor analysis to validate our measurement model and structural model analysis to explore relationships. **Findings:** Our findings indicate that software developers are indeed willing to share their tacit knowledge, with their willingness positively influenced by the perceived value of tacit knowledge and engagement in OCB. Attitudes towards sharing tacit knowledge act as mediators in the relationship between these beliefs and sharing intentions. **Implications:** In practical terms, organizations can foster tacit knowledge sharing by promoting positive attitudes, recognizing knowledge's perceived value, and cultivating a culture that encourages OCB. This facilitates a conducive environment for sharing, further enhanced by acknowledging and rewarding employees who exhibit OCB. Theoretical implications align with the Theory of Reasoned Action, emphasizing the role of attitude in shaping intentions. Our research contributes uniquely by exploring the underrepresented relationship between perceived knowledge value and tacit knowledge sharing, introducing a novel approach by examining the combined impact of OCB and perceived value. These insights are valuable for organizations looking to cultivate a culture of tacit knowledge sharing, driving innovation and enhancing performance. Doi: https://doi.org/10.26668/businessreview/2023.v8i11.3892

[A] *Master in Technology Management. Doctoral Candidate at Universiti Tun Hussein Onn Malaysia (UTHM). Batu Pahat, Johor, Malaysia. E-mail: gp170124@student.uthm.edu.my Orcid: https://orcid.org/0000-0003-0703-8266*

[B] *Doctor of Philosophy in Creative Multimedia. Associate Professor at Universiti Tun Hussein Onn Malaysia (UTHM). Batu Pahat, Johor, Malaysia. E-mail: rosmaini@uthm.edu.my Orcid: https://orcid.org/0000-0002-1568-2759*

[C] *Doctor of Philosophy in Technology Management, Universiti Tun Hussein Onn Malaysia (UTHM). Senior Manager Operations, PTCL. Islamabad, Pakistan. E-mail: e.bilalsaeed@gmail.com Orcid: https://orcid.org/0000-0001-6182-8926*

[D] *Doctor of Philosophy in E-Marketing, Griffith University. Associate Professor at University of Queensland. Queensland, Australia. E-mail: m.nguyen@business.uq.edu.au Orcid: https://orcid.org/0000-0002-4889-589X*

[E] *Master in Telecome Engineering, Assistant Professor, National University FAST. Islamabad, Pakistan. E-mail: aamer.hafeez@nu.edu.pk Orcid: https://orcid.org/0000-0002-5557-7355*

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MOTIVANDO O COMPARTILHAMENTO DE CONHECIMENTO TÁCITO: O PAPEL DO VALOR PERCEBIDO DO CONHECIMENTO E DO COMPORTAMENTO DE CIDADANIA ORGANIZACIONAL

RESUMO

Objetivo: Este estudo investiga o desafio de reter e compartilhar conhecimento tácito durante as transições de funcionários nas organizações, com foco específico nas motivações dos desenvolvedores de software. Examinamos duas crenças motivacionais principais: o valor percebido do conhecimento e do comportamento de cidadania organizacional (CCO), e sua influência nas intenções de compartilhamento. Além disso, exploramos como essas crenças moldam as atitudes, afetando subsequentemente as intenções em relação ao compartilhamento tácito de conhecimento.

Enquadramento Teórico: Fundamentada na Teoria da Acção Racionalizada (TRA), a nossa investigação sublinha o papel fundamental das crenças na formação de atitudes e intenções relacionadas com a partilha de conhecimento tácito. As crenças, abrangendo o Valor Percebido do Conhecimento e o CCO, desempenham um papel significativo na moldagem de atitudes. Usando modelagem de equações estruturais, analisamos dados coletados de 197 desenvolvedores de software, empregando análise fatorial confirmatória para validar nosso modelo de medição e análise de modelo estrutural para explorar relacionamentos.

Constatações: Nossas descobertas indicam que os desenvolvedores de software estão de fato dispostos a compartilhar seu conhecimento tácito, sendo sua disposição positivamente influenciada pelo valor percebido do conhecimento tácito e do envolvimento no CCO. As atitudes em relação ao compartilhamento do conhecimento tácito atuam como mediadoras na relação entre essas crenças e as intenções de compartilhamento.

Implicações: Em termos práticos, as organizações podem fomentar a partilha de conhecimento tácito, promovendo atitudes positivas, reconhecendo o valor percebido do conhecimento e cultivando uma cultura que incentive o CCO. Isto facilita um ambiente propício ao compartilhamento, aprimorado ainda mais pelo reconhecimento e recompensa dos funcionários que demonstram CCO. As implicações teóricas alinham-se com a Teoria da Ação Racionalizada, enfatizando o papel da atitude na formação das intenções. A nossa investigação contribui de forma única ao explorar a relação sub-representada entre o valor do conhecimento percebido e a partilha de conhecimento tácito, introduzindo uma nova abordagem ao examinar o impacto combinado do CCO e do valor percebido. Estas informações são valiosas para organizações que procuram cultivar uma cultura de partilha de conhecimento tácito, impulsionando a inovação e melhorando o desempenho.

Palavras-chave: Atitude, Intenções de Compartilhamento de Conhecimento Tácito, Comportamento de Cidadania Organizacional, Valor Percebido do Conhecimento, Gestão do Conhecimento, PLS-SEM.

MOTIVAR EL INTERCAMBIO TÁCITO DE CONOCIMIENTOS: EL PAPEL DEL VALOR PERCIBIDO DEL CONOCIMIENTO Y EL COMPORTAMIENTO DE CIUDADANÍA ORGANIZACIONAL

RESUMEN

Propósito: Este estudio investiga el desafío de retener y compartir conocimiento tácito durante las transiciones de los empleados en las organizaciones, con un enfoque específico en las motivaciones de los desarrolladores de software. Examinamos dos creencias motivacionales clave: el valor percibido del conocimiento y el comportamiento ciudadano organizacional (OCB), y su influencia en el intercambio de intenciones. Además, exploramos cómo estas creencias moldean las actitudes y posteriormente afectan las intenciones con respecto al intercambio tácito de conocimientos.

Marco teórico: Basada en la Teoría de la Acción Razonada (TRA), nuestra investigación subraya el papel fundamental de las creencias en la configuración de actitudes e intenciones relacionadas con el intercambio de conocimientos tácitos. Las creencias, que abarcan el valor percibido del conocimiento y el OCB, desempeñan un papel importante en la formación de actitudes. Utilizando modelos de ecuaciones estructurales, analizamos datos recopilados de 197 desarrolladores de software, empleando análisis factorial confirmatorio para validar nuestro modelo de medición y análisis de modelo estructural para explorar relaciones.

Hallazgos: Nuestros hallazgos indican que los desarrolladores de software están realmente dispuestos a compartir su conocimiento tácito, y su disposición está influenciada positivamente por el valor percibido del conocimiento tácito y el compromiso con OCB. Las actitudes hacia el intercambio de conocimientos tácitos actúan como mediadores en la relación entre estas creencias y las intenciones de compartir.

Implicaciones: En términos prácticos, las organizaciones pueden fomentar el intercambio tácito de conocimientos promoviendo actitudes positivas, reconociendo el valor percibido del conocimiento y cultivando una cultura que fomente el OCB. Esto facilita un entorno propicio para compartir, que se mejora aún más al reconocer y recompensar a los empleados que exhiben OCB. Las implicaciones teóricas se alinean con la Teoría de la Acción Razonada, enfatizando el papel de la actitud en la configuración de las intenciones. Nuestra investigación

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contribuye de manera única al explorar la relación subrepresentada entre el valor del conocimiento percibido y el intercambio de conocimiento tácito, introduciendo un enfoque novedoso al examinar el impacto combinado del OCB y el valor percibido. Estos conocimientos son valiosos para las organizaciones que buscan cultivar una cultura de intercambio tácito de conocimientos, impulsando la innovación y mejorando el desempeño.

Palabras clave: Actitud, Intenciones Tácitas de Compartir Conocimiento, Comportamiento de Ciudadanía Organizacional, Valor Percibido del Conocimiento, Gestión del Conocimiento, PLS-SEM.

INTRODUCTION

Knowledge is a valuable resource acquired through education and experience, benefiting individuals in achieving their goals and at the same time improving organizational efficiency and driving innovation. Within the realm of knowledge, two distinct categories emerge: explicit knowledge, which can be readily codified and transferred, and tacit knowledge, encompassing experiential insights that are challenging to articulate (Nonaka, 2007). The sharing of tacit knowledge is vital for organizations, as it enables them to harness invaluable expertise and skills deeply rooted in an individual's personal experiences, which are often intricate to articulate. To effectively promote such sharing, cultivating a collaborative culture, recognizing contributions, ensuring safe spaces, offering mentorship and training, and maintaining a commitment to continuous improvement are essential components.

Within the software development industry, professionals' expertise plays a pivotal role in crafting efficient and innovative products and services. Consequently, the sharing of tacit knowledge becomes essential for achieving successful product delivery. This knowledge-sharing process fosters a culture of collaboration and problem-solving, enabling teams to tap into each member's unique insights and approaches. As a result, the software industry benefits from reduced development time, improved code quality, enhanced problem-solving capabilities, and a greater capacity for innovation, leading to increased competitiveness and higher customer satisfaction. The failure to share tacit knowledge within the software industry can result in reduced innovation, knowledge silos, inconsistent quality, longer development cycles, high turnover impact, increased costs, and decreased competitiveness, all of which can hinder an organization's success in this highly dynamic and competitive field. Therefore, recognizing and understanding the motivating factors behind tacit knowledge sharing becomes imperative for harnessing the expertise of seasoned employees and ensuring the industry's sustained competitiveness (Ryan & O'Connor, 2013).

To gain valuable insights into the cognitive processes and motivations driving tacit knowledge-sharing behavior, the Theory of Reasoned Action (TRA) offers a robust theoretical

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framework. Developed by Fishbein and Ajzen in the 1970s, the TRA posits that an individual's behavioral intentions are influenced by their attitudes towards the behavior and their perceptions of social pressures or norms associated with it.

The strength of behavioral beliefs regarding the outcome (probability of successfully sharing or not sharing tacit knowledge) and the evaluation of potential behavior (positive or negative results) shape the attitudes towards tacit knowledge sharing, which, in turn, influences intentions to share tacit knowledge (Fishbein & Ajzen, 1975). This framework provides a valuable direction and source for understanding the motivating factors behind tacit knowledge sharing in the software industry.

Numerous studies employing the Theory of Reasoned Action (TRA) consistently reveal that individuals who maintain a positive attitude towards sharing their tacit knowledge are more likely to possess the intention to do so, as evidenced by research conducted by (Chen et al., 2009; Choi & Ahn, 2019; Wang & Noe, 2010). Furthermore, these investigations highlight the significant role played by a range of motivational factors, including trust, reciprocity, recognition, organizational culture, and social networks, in acting as initial drivers that shape attitudes, ultimately influencing intentions to share knowledge, as illustrated by (Bock, Zmud, Kim, & Lee, 2005).

As the study of motivational factors behind tacit knowledge sharing continues to advance, scholars have increasingly acknowledged the significance of delving into unexplored aspects within this field. Notable researchers like (H. E. Lin & Lee, 2011; Mahmood, A., Tasmin, R., Saeed, B., & Saeed et al., 2020; Nguyen, 2020; Wang & Noe, 2010) have stressed the importance of investigating emerging motivational factors, including perceived knowledge value and organizational citizenship behavior, with respect to intentions for sharing tacit knowledge. This focus on novel elements is particularly relevant due to the limited existing research in this area. When viewed through the lens of the Theory of Reasoned Action (TRA), these factors are found to be interconnected, and their effects are mediated by individuals' attitudes toward knowledge sharing. This perspective sheds light on the intricate dynamics that shape individuals' motivation in the context of sharing tacit knowledge.

This study, firmly grounded in the Theory of Reasoned Action (TRA), underscores the paramount significance of beliefs in shaping individuals' attitudes towards tacit knowledge sharing, subsequently influencing their intentions to participate in such sharing behaviors. In particular, our research delves into the influential roles played by factors such as the Perceived Value of Knowledge and Organizational Citizenship Behavior (OCB) in molding these pivotal

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beliefs. By meticulously unraveling the intricate relationships among these factors, attitudes, and intentions, our study aims to shed light on the profound impact that beliefs exert in driving knowledge-sharing behaviors. Within the TRA framework, these insights offer a comprehensive understanding of how individuals' beliefs serve as the driving force behind their attitudes and intentions concerning tacit knowledge sharing. This knowledge proves invaluable for organizations aspiring to cultivate a culture of tacit knowledge sharing, ultimately leading to enhanced organizational performance and a more fertile environment for nurturing creativity and innovation.

The purpose of this research is to examine the motivational factors influencing tacit knowledge sharing among professionals in the software development industry. By understanding these factors, organizations can devise effective strategies to promote a culture of knowledge sharing, leading to improved collaboration and innovation. To achieve the study's purpose, the following research questions will be explored:

- What is the influence of Perceived Value of Knowledge on the motivation for tacit knowledge sharing among professionals in the software development industry?

- How does Organizational Citizenship Behavior impact the motivation for tacit knowledge sharing in the software development context?

- To what extent do attitudes towards knowledge sharing mediate the relationship between Perceived Value of Knowledge, Organizational Citizenship Behavior, and intentions for tacit knowledge sharing?

By investigating these research inquiries, this study intends to make a meaningful contribution to the current knowledge management literature particularly the knowledge worker's tacit knowledge. It also seeks to offer valuable practical insights into capacity management in South Asia region particularly Pakistan as emphasized by (Froese et al., 2022). The overarching objective is to stimulate innovation within the software development sector, while acknowledging the profound influence of cultural congruence in facilitating effective knowledge sharing and fostering innovation.

The subsequent section of this paper reviews existing literature regarding the connection between attitude and intention, the link between perceived knowledge value, organizational citizenship behavior, and intentions, as well as the mediating function of attitude. The methodology, analysis, and discussion sections will follow, presenting the study's approach, findings, and interpretations.

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LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Following section covers literature on the relationships between exogenous, mediating and endogenous variables leading to development of the hypotheses and research model of the study.

Attitude and Intentions

In organizations, the exchange of tacit knowledge can be a powerful driver of innovation and competitive advantage (Hwang, 2022). This exchange is not just about transferring information but also about fostering a culture where employees are motivated and willing to share their valuable insights, experiences, and skills. The earlier discussion highlights that employees with positive attitudes anticipate recognition and appreciation for their contributions, which reinforces their intentions to willingly share tacit knowledge (Hwang, 2022).

Positive attitudes towards knowledge sharing contribute to an environment where employees feel valued, supported, and encouraged to contribute their expertise. This aligns with the idea that a culture of positive attitudes and knowledge-sharing fosters innovation, problem-solving, and continuous learning (Naim and Lenkla, 2016). When employees believe that their contributions matter and that they will be recognized for their efforts, they are more likely to engage in knowledge-sharing behaviors.

Moreover, studies, such as Reychav and Weisberg (2010), consistently show that individuals with a positive attitude towards sharing knowledge are more inclined to have the intention to share it. This aligns with the broader Theory of Reasoned Action (TRA), which suggests that attitudes significantly influence behavioral intentions (Reychav & Weisberg, 2010). In this context, the attitude towards sharing tacit knowledge (ASTK) becomes a crucial factor in determining whether individuals are inclined to share their tacit knowledge or not.

Therefore, the hypothesis posits that an individual's ASTK significantly influences their intention to share tacit knowledge (B Obrenovic et al., 2022). In other words, if an employee has a positive attitude towards sharing tacit knowledge, they are more likely to have the intention to engage in knowledge-sharing behaviors. This hypothesis underscores the importance of cultivating positive attitudes within organizations to promote a culture of knowledge sharing, which, in turn, can lead to enhanced innovation, problem-solving, and continuous learning, ultimately contributing to the organization's overall success

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Building on these studies and influences mentioned, we posit that an individual's Attitude towards Tacit Knowledge Sharing (ASTK) significantly influences their intention to share such knowledge, and we propose the following hypothesis:

Hypothesis 1

A positive relationship exists between Attitude towards Sharing Tacit Knowledge and Intentions to Share Tacit Knowledge.

Perceived value of tacit knowledge and tacit knowledge sharing intentions

The perceived value of knowledge refers to the extent to which individuals believe that their knowledge is valuable, useful, and essential in their personal and professional lives. Several factors, including education, personal experiences, cultural background, and social norms, shape knowledge's perceived value. Employees who perceive their knowledge as valuable are more likely to feel confident in their job, proud of their work, and motivated to continue learning and growing in their field (Galletta et al., 2003). The Perceived Value of Knowledge is a crucial aspect in the field of information behavior, as it directly affects the individual's decision to seek, retain, and utilize information (Cyr & Wei Choo, 2010). A high Perceived Value of Knowledge drives individuals to seek out new information and can increase their motivation to learn and retain knowledge.

Although only few studies have empirically tested the relationship between the Perceived Value of Knowledge and Knowledge-sharing from the owners' point of view, Ford & Staples (2006) confirmed that the PVK positively relates to knowledge-sharing intentions. Castañeda & Ignacio(2015), tested the relationship between the value and individual places on their knowledge and intentions to share knowledge. They found a positive relationship between the Perceived Value of Knowledge (PVK) and Knowledge-sharing intentions. PVK may play a moderating role between enjoyment in helping others and knowledge contribution intention in virtual communities.

On the other hand, Ye *et al*., (2006) proposed that the perception on the value of knowledge may adversely impact the willingness to share knowledge, especially with close colleagues. But their study results indicated otherwise and confirmed that knowledge contribution intentions are influenced positively by PVK. In the context of the perceived value of knowledge and tacit knowledge-sharing intentions Mahmood *et al.,*(2020) in their conceptual paper, proposed that there is a link between Tacit Knowledge-sharing and Perceived

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Value of Knowledge and propose to test this relationship as no known study has tested this relationship. In light of this suggestion, this research would like to test this relationship empirically. No further studies found from the owner perspective for which tested the relationship between PVK and tacit knowledge-sharing.

In conclusion, we believe that the value of knowledge plays a crucial role in knowledge-sharing behavior. The perceived value of knowledge beliefs influences the willingness to share knowledge among employees in the workplace, as employees who perceive their knowledge to be valuable and relevant to their organization are more likely to share it with others. We further believe that there is a positive relationship between the Perceived Value of Knowledge and tacit knowledge-sharing. Because the tacit knowledge gained through personal experience is not easily available to many and, therefore, useful and in demand by coworkers. Further, sharing it would also benefit the organization in the end. Hence, we theorize the following hypothesis:

Hypothesis 2

A positive relationship exists between the Perceived Value of Tacit Knowledge and Intentions to Share Tacit Knowledge.

Organizational citizenship behavior and tacit knowledge sharing intentions

OCB is a voluntary act and is usually done because it makes people feel happy and satisfied by helping others. As OCB is similar to knowledge-sharing, i.e. just as knowledge-sharing is a non-job role, OCB also relates to the demonstrated involvement in tasks unrelated to the employee's job. Thus, to show such extra-role behaviors, one must be willing to participate in such extra-role activities even though their job description does not include them. The individual who has already demonstrated OCB towards their organization may be expected to exhibit similar behaviors. So we posit that sharing knowledge allows people to help their co-workers do their jobs better, and they do this for altruistic reasons.

The effect of OCB and similar constructs such as 'enjoyment of helping others' reported their influence on knowledge-sharing (Hsien et al., 2014; Kankanhalli et al., 2005; H.-F. F. Lin, 2007; Sadegh, 2015). The study by H.-F. Lin (2007) found that enjoy assisting others was significantly positively correlated to knowledge donating and knowledge collecting, while Constance *et al*., (2019) reported positive correlations between the dimensions of OCB and knowledge-sharing in the medical profession. Amin *et al*., (2010), study established that OCB is related to knowledge-sharing behavior. The direct impact of OCB on both knowledge-sharing

intention and behavior was established. Previously Hsu & Lin (2008), also concluded that individuals with higher OCB and higher will to be involved in the organization's welfare would be more inclined towards knowledge-sharing. In another study by C.-P. Lin,(2008), the role of OCB and knowledge-sharing in Taiwanese organizations was researched. They tested the relationship between OCB dimensions and knowledge-sharing behavior. The study's findings showed that all the components (i.e., altruism, courtesy, civic virtue, sportsmanship, conscientiousness) had a positive and significant impact on knowledge-sharing behavior.

Hsien *et al.*, (2014) study supported the direct effects of OCB, psychological capital and psychological empowerment on knowledge-sharing behavior in a study conducted on professional staff in 20 hospitals. Their study found that the OCB has a positive effect on knowledge-sharing behavior. Two studies have also been conducted to identify the relationship of OCB with tacit knowledge-sharing. Constance *et al.*, (2019), while conducting a study on medical professionals, identified that tacit knowledge-sharing is influenced by OCB, which further affect innovation. In another study by Obrenovic *et al*., (2020), altruism, a dimension of OCB, leads to the willingness to share knowledge, which then is converted into sharing of tacit knowledge behavior.   In some cases, the relation was not clearly established such as Wasko & Faraj, (2000), reported a low significant relationship between enjoying helping others and the helpfulness of contributions to an electronic network of practice, on the other hand, the relationship between enjoyment of helping others and the amount of contributions was not significant. Similarly, H.F. Lin (2007) study, altruism was not important in knowledge-sharing. Based on the above discussion and findings, we hypothesize:

Hypothesis 3

There is a positive relationship between Organizational Citizenship Behavior and Intentions to Share Tacit Knowledge.

Mediation

According to the Theory of Reasoned Action (TRA), attitudes are influenced by two main factors: behavioral beliefs and evaluation of outcomes. Behavioral beliefs refer to how likely an individual perceives themselves to perform a particular behavior, while evaluation of outcomes involves assessing the positive or negative consequences associated with that behavior (Ajzen & Fishbein, 2000). Previous research has shown that factors and beliefs aligned with behavioral beliefs and outcome evaluation can significantly shape attitudes towards

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knowledge-sharing behaviors (Bock et al., 2005). When these factors are directly related to an individual's interests and goals, they hold more sway in shaping attitudes by tapping into the behavioral belief component. Similarly, when these factors align with an individual's values and experiences, they are more likely to be embraced and integrated into the attitude system, thus influencing the evaluation of outcomes (Jung et al., 2014).

In our study, we focus on two main motivating factors: organizational citizenship behavior and perceived value of knowledge. These factors are essential in shaping attitudes towards knowledge sharing, which, in turn, play a crucial role in determining individuals' intentions to share tacit knowledge. To effectively promote tacit knowledge sharing within an organization, communicators and influencers should tailor their messages to consider these motivating factors. By doing so, they can shape positive attitudes towards knowledge sharing and foster a favorable evaluation of the outcomes associated with it. Now, let's explore the relationship of these motivating factors on attitude for sharing tacit knowledge and their impact on forming intentions.

Mediation of attitude between OCB and intentions

Employees who exhibit elevated levels of OCB perceive knowledge sharing as a means to make a positive difference, fostering a collaborative and supportive environment where knowledge flows freely, benefiting both individuals and the organization as a whole (Constance et al., 2019). They have a strong belief in the inherent goodness of helping others, which significantly influences their attitudes towards knowledge sharing (Aruștei and Leon, 2013). Their positive attitude towards sharing tacit knowledge is shaped by the recognition that sharing knowledge is a positive gesture that benefits others and aligns with their altruistic values.

Employees demonstrating forthcoming, supportive, helpful, and conscientious of his/her work and work environment would certainly have developed a positive attitude toward sharing this tacit knowledge. An individual with strong organizational citizenship behavior would have a positive attitude toward activities that help his colleagues and organization. Based on the TRA, it is hypothesized that employees who have previously exhibited Organizational Citizenship Behavior (OCB) would have a favorable attitude toward knowledge-sharing. It would lead them to have positive intentions toward sharing their tacit knowledge with their colleagues and organization, and they would not hesitate to share their knowledge.

Based on the above discussion, it can be hypothesized that employees who believe and exhibit OCB will develop a positive attitude towards sharing their tacit knowledge. This

positive attitude, influenced by their altruistic values and belief in the value of helping others, fosters their willingness to share knowledge. Therefore, OCB indirectly influences intentions to share tacit knowledge, as it builds a positive attitude towards knowledge sharing, reinforcing the importance and benefits of exchanging valuable information with others within the organization. So we hypnotize that:

Hypothesis 4a

Attitude to Share Tacit Knowledge mediates the association between Organizational Citizenship Behavior and Intentions to Share Tacit Knowledge.

Mediation of attitude between perceived value of knowledge and intentions

Ford & Staples (2006) defined Perceived Value of Knowledge (PVK) from the owners' perspective as the worth an individual assigns to their knowledge. They found that the PVK is directly related to the intention of knowledge-sharing when the sharer does not lose, partially or totally, the value of a particular knowledge-sharing it. PVK implies high communication and low knowledge protection (Ford & Staples, 2006). In contrast, if knowledge is regarded as unique or singular, the individual may perceive that it might lose value while sharing it. In this case, a person will not intend to share it.

The impact of these relationships would be more accurate when considering tacit knowledge, given its elevated value compared to explicit knowledge due to its personal nature. Additionally, these relationships would foster a positive disposition towards sharing tacit knowledge, thereby influencing a positive inclination to share such knowledge. As discussed earlier, that the perceived value of knowledge is the value an individual places on their knowledge, encompassing beliefs that knowledge shared is beneficial, useful, and originates from a special source, thus formulating the overall value of knowledge (Ford and Staples, 2006). These beliefs collectively become the basis of attitude formation towards the sharing of knowledge. In the context of tacit knowledge sharing, the influence of these beliefs is particularly significant due to the unique nature of tacit knowledge, which is experiential, individual-specific, and based on know-how, know-whom, and know-where. Consequently, the value of tacit knowledge is considered higher, leading to a more positive attitude towards its sharing. In other words, attitude towards sharing of tacit knowfedge acts as a mediator between perceived value of tacit knowledge (PVTK) and intentions. So from the above statements, the following mediating hypothesis is formulated:

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Hypothesis 4b

Attitude to share tacit knowledge (ASTK) mediates the association between PVTK and Intentions to share tacit (ISTK)

To depict the relationships between different variables and hypotheses of the research study see figure 1.

Figure1. Research Model mapped to Theoretical Framework
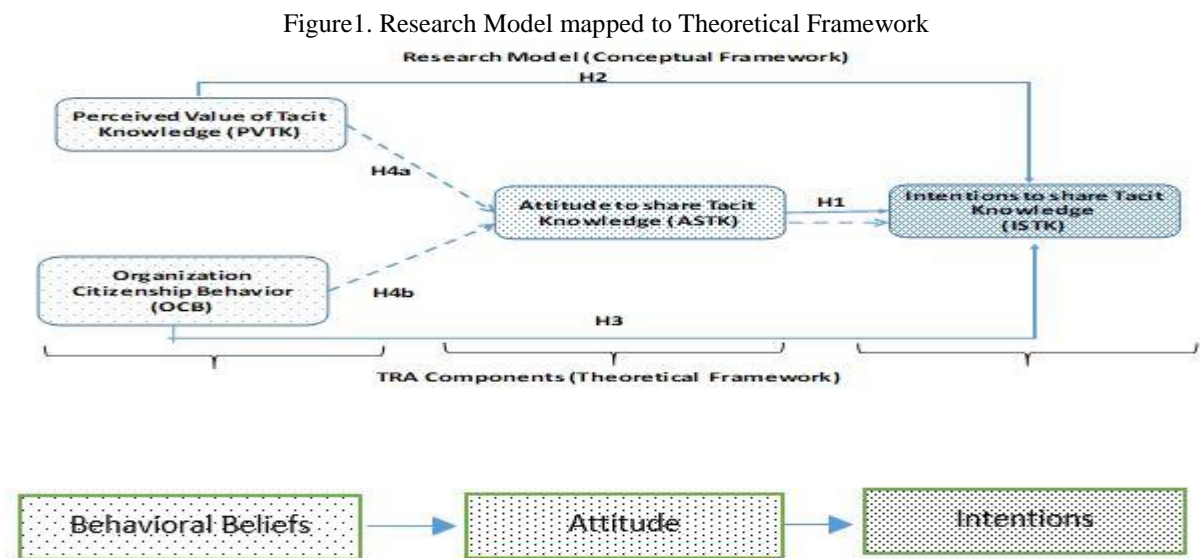
Source: Research Model Prepared by Authors (2023) & TRA Componets (Theoretical Framework) adapted from Theory of Reason Action (Fishbein & Ajzen 1975)

METHODOLOGY

Population

According to the Government of Pakistan, Board of Investment (MoITT, 2023), the Information Technology (IT) sector in the country has experienced significant growth, with IT exports surpassing $2 billion. To promote the IT industry, the Pakistan Software Export Board (PSEB), a government organization, runs various development programs and maintains a directory of around 2000 plus registered IT companies in Pakistan. Annually, the PSEB publishes a list of the top 100 software exporters, highlighting the most active and sizable companies in the sector. For this research, a sample of these top software export companies were selected based on recommendations from PSEB officials, who identified the most dynamic companies for data collection. These companies employ a diverse range of professionals, including software developers, hardware engineers, technical support personnel, and IT project management professionals. According to the PSEB official there are around 700 to 800 software developers working in these top software firms, hence our population are these experts.

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The focus of this study is on software developers working in the selected top software export companies. Since there was no readily available list of all software developers within these companies, convenience sampling was adopted as the method for data collection. The research team reached out to HR managers through email letters, requesting them to facilitate the questionnaire filling process by 4 to 5 of their software developers to ensure that representation of different sizes of companies is obtained.

Control Variables

As a control variables, HR managers were requested to have 4 to 5 software developer who had been with the firm for at least two years complete the online survey. This approach ensured that the selected software developers had established trust, familiarity, and deeper insights, creating an environment conducive to sharing tacit knowledge with colleagues. Further, to further enhance the study's validity and mitigate potential biases, another control was introduced i.e. responses from 4 to 5 software developers were solicited from each company. This approach aimed to prevent any single company from overpowering the overall responses, ensuring a more balanced representation of perspectives across different companies, regardless of their size.

Measures

The researchers adapted the measures used in this study from existing published research. We assessed the Attitude to Share Knowledge measurement which was derived from (Bock et al., 2005) study. The original research reported a Cronbach's Alpha value of 0.91 for this scale. Y Wu *et al*. (2023) integrated the Attitude to Share Knowledge measurement from (Bock et al., 2005) study into their research entitled "The Effects of Attitudes Toward Knowledge Sharing, Perceived Social Norms and Job Autonomy on Employees' Knowledge-Sharing Intentions," featured in the Journal of Knowledge Management. Similarly, Yoon & Park (2023) also employed this measurement scale in their research. The consistent use of the Attitude to Share Knowledge measurement scale in these recent studies underscores its ongoing relevance and applicability within the knowledge-sharing research domain.

Intentions to share knowledge measurement is again derived from (Bock et al., 2005) study. The original research reported a Cronbach's Alpha value of 0.93 for this scale. Pham Thi & Duong (2022) integrated the Intentions to Share Knowledge measurement from (Bock et al., 2005) study into their research entitled " Factors influencing knowledge-sharing intention on

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social network sites: An empirical study in Vietnam featured in the Social Network Analysis and Mining. The use of the Intentions to Share Knowledge measurement scale in recent studies underscores its ongoing relevance and applicability within the knowledge-sharing research domain.

Perceived Value of Knowledge using the scale developed by Ford and Staples (2006), which consists of three main dimensions (Benefits, Usefulness, and Source), where the Source is defined as a Formative measure and the other two as the reflective measures. The scale demonstrated decent Cronbach's alpha values close to 0.70, excluding the Source dimension as it had formative items. Islam *et al*. (I2022) integrated the Perceived Value of Knowledge measurement from (Jewels et al., 2006) study into their research entitled " Mitigating knowledge hiding behavior through organizational social capital: A proposed framework" in the VINE Journal of Information and Knowledge Management Systems. Further, (Silva, 2023) used Perceived Value of Knowledge measurement scale in recent studies underscores its ongoing relevance and applicability within the knowledge-sharing research domain.

To measure Organizational Citizenship Behavior, this scale was adapted from the study of Kelloway et al.(2002), having nine items based on the Smith et al. (1983) study. This scale reportedly demonstrated a good Cronbach's alpha value of 0.74. Bock et al. (2005) adapted items for measuring Attitude to Share Knowledge and Intentions to Share Implicit Knowledge, which were reported to have good Cronbach's alpha values of 0.91 and 0.93, respectively. Smithikrai (2019) also adopted the OCB measurement from (Kelloway et al., 2002) study into their research entitled "Antecedents and consequences of work engagement among Thai employees" featured in the Journal of behavioral Science. Similarly, Bloemer (2009) also employed this measurement scale in their research. The consistent use of this OCB measurement scale in these studies underscores its ongoing relevance and applicability within the organizational behavior research domain.

We have introduced minor adjustments to the study's variables by explicitly incorporating "Tacit" to differentiate tacit knowledge from general knowledge. These modifications resulted in the creation of the following constructs: Perceived Value of Tacit Knowledge (PVTK), Organizational Citizenship Behavior (OCB), Attitude to Share Tacit Knowledge (ASTK), and Intentions to Share Tacit Knowledge (ISTK). To ensure the appropriateness and face validity of these adapted measures, we engaged in a validation process. This involved consulting with one software developers and one psychologist who meticulously reviewed and discussed the validity of the survey questions.

Data collection was conducted through Google Forms, utilizing a five-point Likert scale with values ranging from "strongly disagree" to "strongly agree". A total of 205 responses were collected, based on approximate population size of 800 and a desired margin of error of 6.5%, a sample size of 205 is considered adequate for statistical analysis, in accordance with established sampling principles (Creswell & Creswell, 2017). While specific literature support for this exact scenario may be limited, the methodology aligns with standard research practices.

To ensure data quality, we removed eight multivariate outlier records out of the collected data. These outliers were identified using the Mahalanobis test, which measures the distance of each data point from the centroid of the multivariate data (De Maesschalck et al., 2000). After eliminating the outliers, our final sample size comprised 197 records, which aligns with the sufficient sample size criteria for SEM models. For our specific study, with 2 independent variables, 1 mediating variable, and 1 dependent variable, the total number of estimated parameters in the SEM model is 15. Following the guideline of having at least 10 observations per estimated parameter, a minimum required sample size of 150 is deemed adequate, as suggested in the literature and considered acceptable within SEM studies, as discussed by Teh and Sun (2012).

Descriptive Statistics

Out of the 197 respondents most of the respondents were male. The average age of the respondents is 28 and most of the respondents have Bachelor's Degree or more. The average experience within the current organization is around three and half years where as the average experience of the respondents in the industry is five years please see table 1.

Table 1 Participants' demographic characteristics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Gender					
Male	188	1	2	1.06	0.230
Female	9				
Age	197	20.0	50.0	28.083	5.0249
Education	197	1	5	3.34	.699
Org (Experience)	197	2	23	3.57	2.959
Industry (Experience)	197	4	30	5.03	3.405

Source: Own Survey by SPSS 23, 2023

Method

We used Partial Least Square (PLS) Structural Equation Modeling (SEM) for analysis. PLS-SEM is an extension of traditional regression analysis, as it simultaneously considers the

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measurement and structural models. In the measurement model, PLS-SEM analyzes the relationships between observed indicators and latent constructs, while in the structural model, it examines the relationships between latent constructs. PLS-SEM is widely used in social/management sciences studies and has many strengths. It makes it appropriate for this study because it does not impose distribution assumptions, it has the flexibility for modeling hierarchical component models, and it can handle complex models such as the combination of mediating and moderating effects (Chin, 2010; Henseler et al., 2009; Ringle et al., 2015).

Common Method Bias

One limitation of our research is the possibility of common method bias. This arises because both the variables we measured as criteria (ASTK and ISTK) and the predictor variables (OCB, PVTK) were obtained from the same respondents through self-report measures. Although using marker variables could have been a potential solution to address this issue, our primary focus was on assessing participants' intentions rather than their actual behaviors. Unfortunately, collecting data from external sources, such as managers or knowledge receivers, to validate intentions with behaviors was not feasible and went beyond the scope of our study.

Given the constraints, adopting procedural remedies, such as incorporating multiple raters, was not appropriate since the questions mainly pertained to personal self-perceptions. However, we took specific measures to mitigate potential biases. For instance, participants were allowed to skip providing personal information, such as their names or email addresses, ensuring anonymity and reducing respondent biases. Furthermore, the data collection process was carried out using an online survey through Google Forms, which enhanced anonymity and eliminated any potential pressure from the workplace or coworkers. Despite the acknowledged limitation of common method bias, we believe that transparently addressing this concern and explaining the rationale behind not using marker variables adds credibility to our research findings. Additionally, the implementation of procedural controls to protect respondent anonymity further strengthens the integrity of our study's results and helps to address any potential issues associated with relying on self-report data.

After collecting the data, we employed the Variance Inflation Factor (VIF) analysis to address the potential issue of Common Method Variance (CMV) in our research. The VIF analysis allows us to assess the presence of multicollinearity between the predictor variables and the method (measurement) variables, which are collected from the same source and may

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lead to inflated correlations or variance in the data. Our evaluation of the constructs in the study indicated that the measures identified four distinct variables, as originally designed and placed in the research model. Subsequently, we examined the VIF values for all four variables, and the results showed that the VIF values ranged from 1.37 to 2.14. These relatively low VIF values are well below the typical threshold for multicollinearity concerns (often considered as 5 or 10). This finding suggests that common method bias is not a significant issue in our study, meaning that the method (measurement) variables did not substantially inflate the relationships between the predictor variables.

RESULTS

In the first stage, as per our research model, the measurement model is initially evaluated at the first-order of the reflective and formative model, then the second-order measurement model is assessed of the reflective model, and finally, the structural model is evaluated.

Assessing first-order Reflective Measurement Models

Hair et al. (2021) suggest examining the reflective measurement model by checking the indicator loadings. We checked the reflective measurement model's factor loading, consisting of the OCB, ASTK, ISTK, and PVTK (Usefulness), and PVTK (Beneficial) constructs and their respective items. According to Hair et al. (2017) the loadings should be 0.70 or higher. Our analysis revealed low loadings for two indicators: "This knowledge makes me better at what I do" and "This gives me job security" in the PVTK dimensions of Usefulness and Beneficial, respectively. Hair et al. (2017) suggest dropping items with loadings below 0.40 if similar items measure the same concept. As PVTK (Usefulness) had five items and PVTK (Beneficial) had 4 items, dropping the low loading items would not affect the overall essence of the variable and could improve Cronbach Alpha. Therefore, we dropped these items from the model. A revised scale can be requested from the corresponding author. The analysis of the revised model run on Smart PLS 3.2.8. A decent internal consistency Cronbach Alpha (C.A.) coefficient 0.7 or higher is desirable and Composite Reliability (C.R.) estimates between 0.7 to 0.9 is recommended, on the other hand for convergent validity the Average Variance Extracted (AVE) is assessed of the reflective constructs and the acceptable AVE is 0.50 or higher (Hair et al., 2017). The factor loading, C.A. and C.R. values are above the recommended cutoff ranges. According to Sarstedt *et al.,* (2019), the AVE values for the reflective constructs, including ASTK, ISTK, OCB, PVTK (Usefulness), and PVTK (Beneficial), range from 0.675 to 0.842. These values are more

significant than the recommended threshold of 0.5, indicating that the measurement model has convergent validity. For the formative construct i.e., PVTK (Source) only the weights are reported in first-order see table 2.

Table 2. Overall Measurement Model (First-Order)

Construct/Indicators	Loadings	Weight	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Attitude to Share Tacit Knowledge (Reflective)ASTK			0.894	0.922	0.703
A1	0.868				
A2	0.934				
A3	0.776				
A4	0.839				
A5	0.762				
Intentions to Share Tacit Knowledge (Reflective) ISTK			0.906	0.941	0.842
ISTK1	0.903				
ISTK2	0.945				
ISTK3	0.904				
Organizational Citizenship Behavior (Reflective) OCB			0.938	0.948	0.669
OCB1	0.845				
OCB2	0.769				
OCB3	0.789				
OCB4	0.863				
OCB5	0.838				
OCB6	0.829				
OCB7	0.837				
OCB8	0.783				
OCB9	0.806				
Perceived Value of Tacit Knowledge (PVTK)			0.867	0.900	0.675
PVTK(Beneficial) (Reflective)			0.867	0.919	0.791
PVB1	0.900				
PVB2	0.857				
PVB3	0.909				
PVTK(Usefulness) (Reflective)			0.887	0.922	0.747
PVU1	0.900				
PVU2	0.885				
PVU3	0.862				
PVU4	0.806				

Source: Own Survey by Smart PLS version 3.2.8

For discriminant validity, two criteria's are used to measure the discriminant validity for the reflective indicators. First to check the cross-loadings, and second to check the discriminant validity (Hair et al., 2017; Henseler et al., 2015). The cross loading refers to an item's correlation with other constructs in the measurement model. The individual items

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loading should be loaded higher on their respective constructs as compared to loading of these items on other constructs. And the cross loading of items of our model meets the criterion.

As a second criterion to check discriminant validity, we used the Heterotrait-monotrait (HTMT) ratio of correlations as suggested by Henseler at al. (2015). Most values are below the conservative threshold value of 0.85 (Clark et al., 1995; Kline, 2011). One value is 0.94, which indicates that PVTK(Usefulness) and PVTK(Beneficial) are similar conceptual constructs. Overall the results provide evidence that most of the constructs are empirically distinct see Table 3.

Table 3 Heterotrait-Monotrait Ratio (HTMT) First order

	ATSK	ISTK	OCB	PVTK(Beneficial)	PVTK(Usefulness)
ATSK					
ISTK	0.778				
OCB	0.574	0.642			
PVTK(Beneficial)	0.420	0.522	0.513		
PVTK(Usefulness)	0.452	0.600	0.465	0.943	

Source: Own Survey by Smart PLS version 3.2.8

Assessing First-order Formative Measurement Model

To assess the first-order formative measurement model, Hair et al. (2017) suggested the following three checks:

First, to assess the indicator collinearity of the formative indicator, the VIF is checked for having values 5 or above of formative measured construct as recommended by Hair et al. (2017). For our study, the value of VIF for the formative indicators is between 1.00 to 1.47 and below 5, indicating no collinearity issues see Table 4.

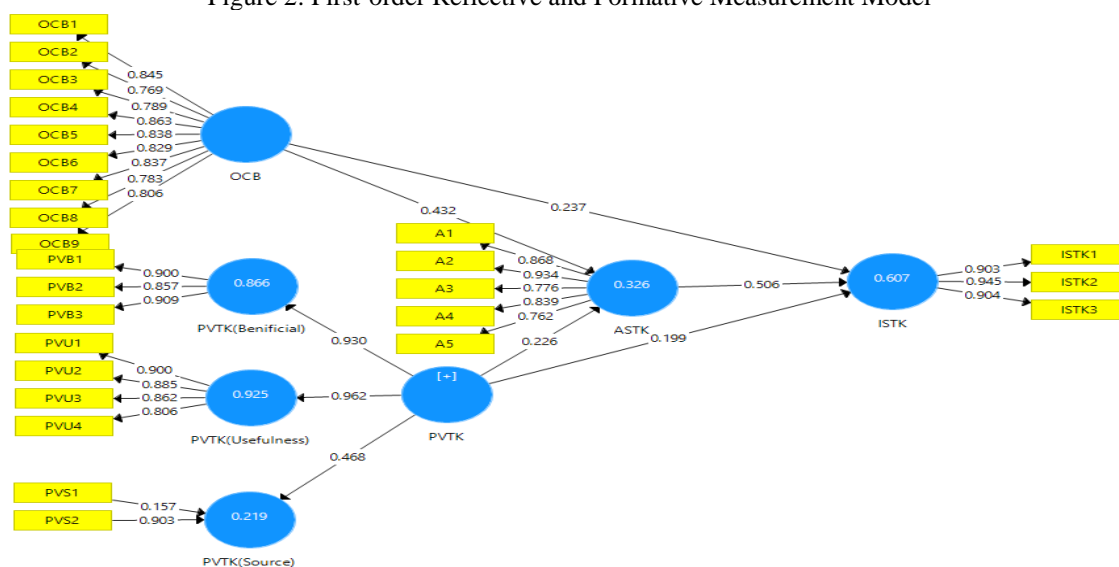Table 4. PVTK (Source) Formative Measurement Model (First-Order)

Construct	Items	Loading	Weights	VIF	T-Value	P-Value Relevance
	PVS1	0.66	0.14	1.44	0.71	0.23 Weak Positive
PVTK(Source)	PVS2	0.98	0.90	1.47	6.59	0.00 Strong Positive
	PVS3	0.07	0.06	1.00	0.32	0.37 Very Weak Positive

Source: Own Survey by Smart PLS version 3.2.8

The second and third check assesses the indicators' weights for statistical significance and relevance. For our study the weights of formative indicators PVS1 and PSV3 are not significant, whereas the loading for PVS1 is significant, but for PSV3, loading is not significant. According to Hair et al. (2017) indicators with non-significant weights should be removed when loading for those indicators is also non-significant. Hair et al. (2017) further cautioned that removing a formative indicator compromises the construct as it is based on theory and must be

justified. Keeping a view of the statistics outputs and general guidelines for removing formative measures, we deliberated on the issue of eliminating the indicator PVS3 for which the loadings and weight were very low. An expert on psychology scale development was approached to check the language of the indicators. We also interviewed few of the respondents to obtain their feedback on the statement and issue faced by them. We concluded that for this study removal of this indicator maybe considered on three grounds (a) at this stage, we were unable to modify the indicator Source PVS3 as the data had already been collected. However, we found that the item had low weights and loading, making a very insignificant contribution to the construct. Therefore, removing it would not affect the findings of this research. To account for theoretical considerations, it is recommended that the question "This knowledge was learned in the 'school of hard knocks'" in the PVTK (Source) PSV3 construct be reworded in future studies. This is because the phrase is not commonly used in south Asian countries, despite the fact that the respondents were educated professionals, which may affect the results' reliability and validity. We approached an expert on psychology scale development to check the language of the indicators, and we also interviewed a few respondents to obtain their feedback on the statements and issues they faced. A more straightforward question should be to replace the phrase "school of hard knocks" with a direct question such as "this tacit knowledge is learned after facing many challenges. Accordingly, the revised proposed scale is placed in Appendix A. The measurement model consists of both reflective and formative indicators in this study see Figure 2.

Figure 2: First-order Reflective and Formative Measurement Model

Source: Own Survey by Smart PLS version 3.2.8

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Assessing Second-order Reflective Measurement Models

The assessment of the second-order of measurement model for the dimensions of the PVTK constructs two-step approach Mode A is used, as proposed by (Henseler et al., 2009; Sarstedt et al., 2019). At the first step we compute manifest indicators onto the constructs, and the results are saved in the data file and then used again for the step two as the manifest indicators and calculate the C.A., C.R., AVE and HTMT.

The PVTK dimensions Beneficial, Source and Usefulness are indicators at the second order; hence, they are checked for loading if they are within the prescribed limit of 0.70 or higher. The indicators at the second-order Beneficial and Usefulness have good loadings but the indicator Source at the second-order shows low loadings i.e. 0.496 see Fig 3. The Source indicator at the second-order is an important dimension of PVTK at the first-order, which measures a distinctive aspect of value of knowledge and helps to measure the perceived value of tacit knowledge from different angle. As the other two variables (Beneficial, Usefulness) do not capture this aspect of value of tacit knowledge, further according to Hair et al. (2017) that the indicator which have weaker loadings may be retained on the basis of their contribution, so indicator having slightly weak loading may be acceptable. Therefore, for our study we retain this second-order indicator for our study. For the other indicators for OCB, ASTK, ISTK, loadings of our measurement model depicts acceptable indicator ranging from 0.76 to 0.94. To check the internal consistency for the second-order measurement model the C.A. and C.R. is to be obtained and the values must be greater than 0.70 Hair et al. (2017). For our study, the results are within the prescribed limits i.e. C.A. and C.R. are between 0.74 and 0.94, indicating internal consistency reliability. To check the convergent validity the AVE values are to be higher than 0.5 as suggested by Hair et al. (2017) and for our study the value of AVE is within the acceptable range between 0.66 to 0.84 see table 5.

Table 5. Overall Measurement Model Formative-Formative (Second-Order)

Construct/Item	Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Attitude to Share Tacit Knowledge (Reflective)ASTK		0.894	0.922	0.703
A1	0.868			
A2	0.934			
A3	0.776			
A4	0.839			
A5	0.762			
Intentions to Share Tacit Knowledge (Reflective) ISTK		0.906	0.941	0.842
ISTK1	0.903			
ISTK2	0.945			
ISTK3	0.904			
Organizational Citizenship Behavior (Reflective) OCB		0.938	0.948	0.669
OCB1	0.845			
OCB2	0.769			
OCB3	0.789			
OCB4	0.863			
OCB5	0.838			
OCB6	0.829			
OCB7	0.837			
OCB8	0.783			
OCB9	0.806			
Perceived Value of Tacit Knowledge (PVTK)		0.748	0.851	0.673
PVTK(Beneficial) (Reflective)	0.936			
PVTK(Source) (Formative)	0.481			
PVTK(Usefulness) (Reflective)	0.954			

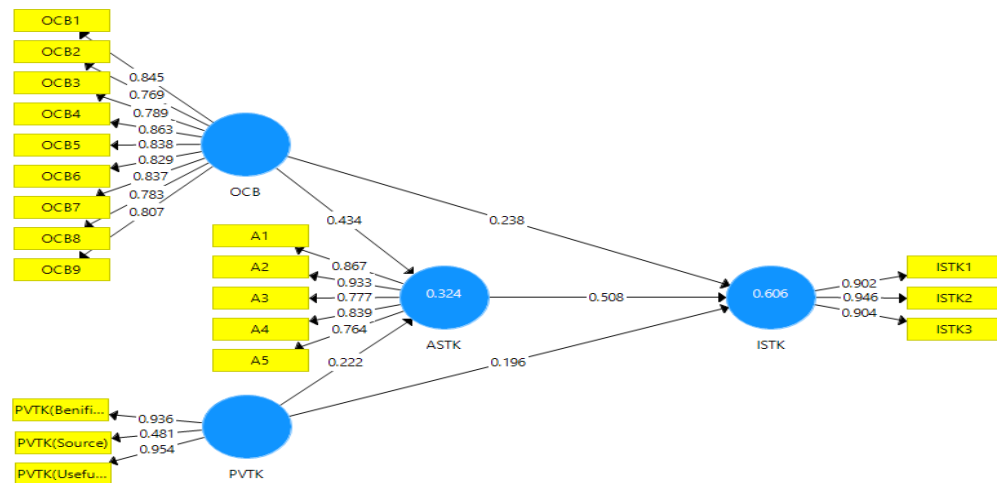Source: Own Survey by Smart PLS version 3.2.8

To assess the discriminant validity cross-loadings of the individual is checked. The items loading should be higher on its' construct as compared to loadings of this item on the other constructs. The cross loading of items of our model meets the criterion. In addition, the discriminant validity is checked through Heterotrait-monotrait (HTMT) ratio of correlations. According to Henseler et al. (2015), the HTMT values should be less than 0.9 and our case all values are within the prescribed limits see table 6.

Table 6: Heterotrait-Monotrait Ratio Second-Order (HTMT)

	ATSK	ISTK	OCB	PVTK
ATSK				
ISTK	0.778			
OCB	0.574	0.642		
PVTK	0.457	0.567	0.483	

Source: Own Survey by Smart PLS version 3.2.8

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Figure 3. Structural Model (Two-Stage Approach)

Source: Own Survey by Smart PLS version 3.2.8

Structural Model

First, the multi-co linearity between all predictor (PVTK, OCB) constructs must be checked to assess the structural model. As per Hair *et al.,* (2017) the VIF value has to be less than 5 to indicate no existence of multi-co linearity. In this study, all the predictor construct's inner VIF values range from 1.25 to 1.52 indicating low co linearity among variables.

In the second step, the path coefficients are evaluated to access the model fit of the proposed structural model. A bootstrapping-sampling procedure (1,000 re-samples) was used then proceeded to test the proposed hypotheses using the t-tests significance level set at 5%. The results of bootstrapping re-sampling analysis indicate that all path coefficients are statistically significant (t values greater than 1.65) and in the predicted direction, hence support our H1, H2 and H3 see Table 7.

Table 7 T-values and Inferences

Relationship	Hypothesis	Path coefficient	Std Error	t values	Inference	f^2	Inference	p-value
ATSK – ISTK	H1	0.508	0.057	8.91	Supported	0.443	Large effect	0.000
PVTK – ISTK	H2	0.196	0.051	3.80	Supported	0.074	Weak effect	0.000
OCB –ISTK	H3	0.238	0.064	3.74	Supported	0.094	Moderate effect	0.000

Source: Own Survey by Smart PLS version 3.2.8

The R² for Intention to Share tacit knowledge was 0.606, indicating that independent variables explain 60% variance on ISTK. The results implied a satisfactory and substantial model (see Fig. 3). The R² for ASTK was 0.324 indicating that 32% variance on ASTK by OCB and PVTK.

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Blindfolding

To evaluate the predictive relevance of a PLS path model, the Blindfolding technique is used (Geisser, 1974; Stone, 1974). The magnitude of the R² values commonly evaluates the endogenous variable ISTK but additionally to cross-validated predictive relevance of the PLS path model Blindfolding procedure is used. The Blindfolding test of our study revealed Q² value is greater than 0 for the endogenous latent variable ISTK i.e. (0.494) and ASKT i.e. (0.219), indicating a sufficient predictive relevance (Chin, 1998; Henseler et al., 2009).

Mediation

To check the mediation role of ASTK between OCB to ISTK and PVTK to ISTK, Smart PLS bootstrapping was run to get the t-values to assess whether the direct relationships are significant prior to test the mediating effects. In Smart PLS the setting is set to so that we do Bias-Corrected and Accelerated (BCa) options and Two-Tailed are selected as recommended by Ramayah et al. (2018). Based on the results, we conclude the both mediations are significant as t-values are >1.96 and the p-value <0.05. To further check the magnitude and any biases in mediation, we need to calculate the 95% bootstrap confidence interval bias by observing the Confidence Intervals Bias (CIB) for Lower Limit (L.L.) and Upper Limit (U.L.) see table 8.

Table 8. Total Indirect Effect

	Original Sample (O)	Mean (M) Standard	Deviation (STDEV	T Statistics (|O/STDEV|)	P Values
OCB-ISTK	0.22	0.22	0.05	4.39	0.00
PVTK-ISTK	0.11	0.11	0.04	2.44	0.01

Source: Own Survey by Smart PLS version 3.2.8

Further, the results depicted that the indirect effects of PVTK and OCB on ISTK are β = 0.22 and β = 0.11, with significant t-values of 4.39 and 2.44. The indirect effects of 95% Bias Corrected: [L.L. = 0.114, U.L. = 0.318] and [L.L. = 0.021, U.L. = 0.200] which do not have a 0 in between hence indicating that there is mediation (Preacher & Hayes, 2004, 2008). Thus, we can conclude that these paths are mediated, and the mediation is significant. This confirms that Hypothesis **H4a** and **H4b** are substantiated see Table 9.

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Table 9 Confidence Interval Bias

	Original Sample (O)	Mean (M) Standard	Bias	2.5%	97.5%
OCB-ISTK (H4a)	0.22	0.22	0.00	0.11	0.31
PVTK-ISTK(H4b)	0.11	0.11	0.04	0.02	0.20

Source: Own Survey by Smart PLS version 3.2.8

DISCUSSION

The objectives of this study were to assess the effect of motivational factors Organizational Citizenship Behavior (OCB) and Perceived Value of Tacit Knowledge (PVTK) on the Intentions to Share Tacit Knowledge (ISTK) and to test the influence of Attitude to Share Tacit Knowledge (ASTK) as a mediator in forming Intentions to Share Tacit Knowledge. This study's findings contribute to our understanding of some novel factors motivating employees' Intentions to Share Tacit Knowledge and Attitude to Share Tacit Knowledge.

First, our study supports the postulation of TRA that attitude influences intentions. This finding supports the TRA model by Fischbein and Ajzen (1975), indicating that attitude affects intention forming. In our study, exogenous variables PVTK and OCB influence the intentions to share tacit knowledge, but the attitude mediates both. Notably, the influence of attitude in this context is influenced by the unique cultural beliefs prevalent in South Asia country, which differ significantly from Western cultural norms.

Second, our findings suggest that individuals who believe their tacit knowledge is valuable and beneficial and comes from significant sources are more willing to share it. This is in contrast to earlier literature, such as the study by Ye et al. (2006), which suggested a negative association between the perceived value of knowledge and the willingness to share it. It may be due to two factors. One, the nature of the object being considered for sharing may differ. Physical objects, when shared, can mean partially or permanently losing the object (Ford and Staples, 2006). However, for intangible objects such as knowledge, sharing does not necessarily mean losing it permanently because it remains with the owner even if it is shared. The difference may also be associated with the way the value construct is defined and measured. Previous studies often measured value based on the perception of how rare an object is, whereas the scale proposed by Ford and Staples (2006) focuses on the object's importance. In the case of tacit knowledge, although it may be considered a unique object, sharing it does not necessarily lead to a loss of the knowledge itself, as the knowledge remains with the individual even after sharing it. However, when knowledge is perceived as useful, beneficial, and obtained from a special source, it is considered an important object worth sharing and must be shared. Importantly, these observations are underpinned by the unique belief sets and cultural

perspectives of individuals in South Asia including Pakistan it is characterized by a collectivist approach (Hofstede, 2023), individuals are motivated to share their tacit knowledge for the greater good of society.

Our study results indicate that the higher the perception of the value of tacit knowledge i.e. "the tacit knowledge is important" the higher the attitude toward sharing it. This then will lead to forming of intention towards sharing it. This is because humans are social beings who often desire to connect with others and contribute to their communities' well-being. Sharing important information or knowledge can help individuals establish and strengthen their relationships with others and contribute to the overall success and progress of the group or community. Sharing important information or knowledge can be viewed as a way to showcase expertise, competence, and value to colleagues. Our study's findings support previous research by (Castañeda & Ignacio, 2015) and (Ford & Staples, 2006), who used a multidimensional approach to measure the value of knowledge, highlighting its significance in the workplace and the importance of sharing it with coworkers for the overall benefit of the organization. Notably, these findings hold true when considering the unique cultural beliefs and social dynamics prevalent in South Asian workplaces.

Third, our finding shows that OCB impacts intentions, interpolating that employees with strong OCB tendencies would feel more inclined to share their tacit knowledge (Obrenovic et al., 2020). For our research, OCB has a positive relationship with intentions to share tacit knowledge and is consistent with the finding of Trong Tuan (2017) and Arustei and Leon (2013) studies. It is pertinent to mention that OCB has a positive direct relationship with the intention to share tacit knowledge, but the impact is weak.

On the other hand, OCB substantially directly affects attitude to share tacit knowledge. OCB mostly influences the attitude, which then acts as a mediator to influence the intentions to share tacit knowledge. The influence of OCB on attitudes is further amplified when viewed through the lens of South Asian cultural values and expectations in the workplace.

CONCLUSION

In this section we present the theoretical and practical implications of the study. Finally we also discuss the limitations of the study.

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THEORETICAL IMPLICATIONS

This research paper makes several significant theoretical contributions to the literature on tacit knowledge sharing and the Theory of Reasoned Action (TRA) model.

Firstly, it advances our understanding of tacit knowledge sharing by shedding light on the area of novel motivational factors driving knowledge exchange within organizations. Through a meticulous analysis and identification of these motivational factors, the study enriches our knowledge of how tacit knowledge is shared and offers deeper insights using TRA into the underlying mechanisms influencing knowledge-sharing behaviors.

Secondly, this study confirms the applicability of TRA in the context of Pakistani- South Asian organizations and the study enhances the TRA model by integrating motivation as a crucial component forming the beliefs for knowledge sharing and allowing us to comprehend tacit knowledge sharing. By incorporating motivational factors like Organizational Citizenship Behavior and Perceived Value of Knowledge into the TRA model, the research expands the theoretical framework, making it more comprehensive and applicable to the specific context of knowledge sharing. This extension of the TRA model provides a deeper understanding of the various factors/beliefs that influence knowledge-sharing intentions.

The third theoretical contribution of this study revolves around the intricate relationship between beliefs, specifically those related to Organizational Citizenship Behavior (OCB) and the Perceived Value of Knowledge (PVTK), and the formation of attitudes toward tacit knowledge sharing. By recognizing that these beliefs serve as fundamental building blocks for shaping individuals' attitudes, this research unveils a critical mediation role of attitudes in the context of tacit knowledge sharing. This perspective sheds light on how OCB and PVTK beliefs influence and give rise to attitudes that, in turn, drive intentions to share tacit knowledge. Consequently, our study offers a nuanced understanding of the underlying cognitive processes that govern knowledge-sharing behaviors, enriching the comprehension of the intricate mechanisms at play in the context of tacit knowledge sharing within organizations.

Additionally, the study validates the multidimensional construct of Perceived Value of Knowledge, encompassing dimensions of benefit, usefulness, and source. This validation enhances the theoretical understanding of how individuals perceive the value of their knowledge, offering researchers and practitioners a reliable measurement tool to assess attitudes and behaviors related to knowledge sharing accurately.

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PRACTICAL IMPLICATIONS

Practical implications for promoting tacit knowledge sharing among software developers in software export firms registered with the Pakistan Software Export Board (PSEB) should also consider the unique South Asian perspective. The study's findings, emphasizing the influence of motivating factors such as Organizational Citizenship Behavior (OCB) and the Perceived Value of Tacit Knowledge (PVTK) on tacit knowledge sharing attitudes and intentions, offer valuable guidance for enhancing knowledge-sharing practices within this specific cultural context.

To foster a culture of knowledge sharing within PSEB-registered software export firms, it's essential to recognize and respect the cultural nuances prevalent in South Asia. South Asian cultures often emphasize collective goals and interdependence, making it vital to identify and involve individuals exhibiting OCB as knowledge-sharing champions. These champions can inspire others by embodying the cultural values of teamwork, mutual support, and community. Furthermore, acknowledging the role of software experts who highly value tacit knowledge (PVTK) is crucial. South Asian cultures place importance on respecting expertise and knowledge. Thus, welcoming these experts and creating platforms for them to share their specialized knowledge can greatly enhance project outcomes and personal growth within the organization. Highlighting the cultural value of knowledge and expertise can motivate these software experts to contribute even more, benefiting the entire organization and promoting a collaborative and innovative environment rooted in South Asian cultural values.

Recognizing tacit knowledge sharing efforts should be done in a culturally sensitive manner, taking into account South Asian values of humility and respect. Public acknowledgment, bonuses, and career advancement can be designed to align with these values. Training sessions should focus on effective cross-cultural communication and highlight the cultural significance of tacit knowledge sharing. Encouraging cross-functional collaboration and diverse projects should be promoted as a way to foster innovation, while user-friendly knowledge-sharing platforms should be culturally tailored to resonate with the South Asian perspective. Demonstrating leadership buy-in and regularly evaluating knowledge-sharing initiatives will facilitate continuous improvement while respecting South Asian cultural values.

By incorporating these practical implications while considering the South Asian perspective, PSEB-registered software export firms can cultivate a culture of collaboration and innovation

among software developers, ultimately enhancing their competitiveness in the global market while honoring cultural values.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This study has identified several limitations that suggest avenues for future research. Firstly, this study is limited to beliefs, attitude and intentions domain of TRA and suggest the researchers to further study the role of subjective norms and behavior components of the TRA in context of tacit knowledge sharing. Future studies could explore additional beliefs that influence tacit knowledge sharing behavior and also consider the role of willpower or self-control in determining individuals' willingness to share their tacit knowledge.

Secondly, the use of cross-sectional data limits our ability to infer causal relationships. A longitudinal investigation could provide valuable insights into the temporal effects of motivation on tacit knowledge-sharing attitudes and intentions.

Thirdly, the generalizability of our findings may be restricted as the model was tested only in software export firms in Pakistan in context of South Asian countries perspectives. Future research should validate the model in other technology-based companies as well to understand potential industry variations/confirmations.

Fourthly, the use of convenience sampling to select participants from organizations registered with the Pakistan Software Export Board may introduce sampling bias and limit the generalizability of our results. Randomized or stratified sampling methods could enhance the representativeness of the sample. Furthermore, while employing Harman's single-factor analysis in line with (Podsakoff & Organ, 1986) guideline, our analysis indicated that common method biases were not present in our data. But, future studies could explore alternative methods to further mitigate this limitation especially when measuring the actual tacit knowledge sharing behavior.

Overall, we acknowledge these limitations and their impact on the scope and interpretation of our findings. We encourage future researchers to address these limitations and build upon our work to deepen understanding of the motivational factors driving tacit knowledge-sharing behavior. By addressing these limitations, we can enhance the applicability and significance of research in the field of knowledge management and employee behavior.

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APPENDIX-A

(Revised Version of the Items for the Questionnaire**)**

Perceived Value of Tacit Knowledge

(Benefit Dimension):

1.   This Tacit knowledge gives me a competitive advantage in my field.

2.   This Tacit knowledge gives me power

3.   This Tacit knowledge makes me more valued by my coworkers and manager.

(Usefulness Dimension):

4.   This tacit knowledge helps me meet my project objectives.

5.   This tacit knowledge helps me to meet the challenges of my job.

6.   This tacit knowledge helps me work more efficiently.

7.   This tacit knowledge tends to be helpful for me in my job.

(Source Dimension):

8.   A mentor or someone important to me gave me this tacit knowledge.

9.   This tacit knowledge is based on my life experiences.

10.   This tacit knowledge is learned after facing many challenges

Attitude towards Tacit Knowledge Sharing

1.   To me, sharing tacit knowledge with my coworkers is harmful

2.   To me, sharing tacit knowledge with my coworkers is good

3.   To me, sharing tacit knowledge with my coworkers is pleasant

4.   To me, sharing tacit knowledge with my coworkers is worthless

5.   To me, sharing tacit knowledge with my coworkers is wise

Intentions to Share Tacit Knowledge

1.   I intend to share my experience or know-how from work with other Organizational members more frequently in the future.

2.   I will always provide my know-where or know-whom at the request of other organizational members.

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3.   I will try to share my expertise from my education or training with other organizational members in a more effective way.

Organizational Citizenship Behavior

1.   I help other employees with their work when they have been absent

2.   I volunteer to do things not formally required by the job

3.   I take the initiative to orient new employees to the department even though it is not part of my job description

4.   I help others when their work load increases

5.   I assist supervisor with his/her duties

6.   I make innovative suggestions to improve the quality of the department.

7.   I punctually arrive at work on time and after lunch/dinner break

8.   I exhibit attendance at work beyond the common practice, for example I take less days off than most individuals or less than allowed

9.   I give advance notice if unable to come to work