

HOW DOES SELF-SACRIFICIAL LEADERSHIP AFFECT KNOWLEDGE SHARING AND KNOWLEDGE HIDING? THE MEDIATING EFFECTS OF SAFETY AND SUPPORT

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ABSTRACT: The present study is based on Social-Exchange Theory and examines the relationship between self-sacrificial leadership and employees' knowledge-sharing and knowledge-hiding behaviors. This study represents an advancement in the field by building upon previous research. Additionally, scholarly research has examined the mediatory role psychological safety and perceived supervisor support. A longitudinal field survey was conducted to gather data from 452 employees employed at various levels within small and medium enterprises in Medan, Indonesia. The findings indicate a positive and significant correlation between self-sacrificial leadership and employees' Knowledge sharing behavior. It has been observed that an adverse correlation exists between self-sacrificial leadership and the tendency of employees to conceal their knowledge. Additionally, the findings indicate a relationship between self-sacrificial leadership and employees' knowledge-sharing and knowledge-hiding behaviors, which are influenced by psychological safety and perceived supervisor support. The statement mentioned above illustrates a process of exchange whereby the endeavors of self-sacrificing leaders are transformed into the establishment of safety among employees, thereby fostering perception of supervisor support to share Knowledge amongst peers while simultaneously discouraging the concealment of Knowledge. Moreover, the present investigation has contributed to the existing literature on the consequences of self-sacrificial leadership. It has also delved into the underlying mechanisms that facilitate such outcomes, particularly in the setting of small and medium-sized enterprises (SMEs) in Indonesia. The paper concludes by proposing key policy insights, theoretical implications, practical implications, and future research directions.

Keywords: Self-Sacrificial Leadership, Supervisor Support, Safety, Knowledge sharing, Knowledge Hiding, Social exchange Theory

1. Introduction

Small and medium-sized enterprises, commonly called SMEs, are characterized by their varying sizes, number of employees, and operational scope. These entities are recognized for their significant contributions to the economy and their role in promoting a country's progress (Eggers, 2020). The proliferation of small enterprises can be attributed to their relatively low startup costs, resulting in a significant disparity in numbers compared to more giant corporations (Dalle et al., 2020b; Eggers, 2020). Small and medium-sized enterprises (SMEs) are a foundation for fostering innovation, creativity, and specialized marketing strategies. They prioritize novel concepts to acquire a more significant market presence (O'Dwyer, Gilmore, & Carson, 2009). In addition, small and medium-sized enterprises (SMEs) constitute a significant portion of commercial operations in Indonesia. According to Linawati et al. (2020), the Ministry of Cooperatives and SMEs of the Republic of Indonesia has reported that in 2020, the number of small and medium-sized enterprises (SMEs) in the country amounted to 816,000. These SMEs provided employment opportunities to

over 7.9 million individuals and contributed 27% to the country's gross domestic product (GDP).

Furthermore, the consistent escalation of short-term and long-term loans extended by the Indonesian government, exhibiting a yearly growth rate of 19.4% between 2011 and 2020, serves as evidence of heightened confidence among lenders in the financial stability of Indonesian small and medium-sized enterprises. The present research is centered on the leadership style of self-sacrifice, specifically on knowledge sharing and Knowledge hiding among employees of small and medium-sized enterprises (SMEs) in Indonesia. This area of investigation has not yet been examined in existing scholarly literature.

Self-sacrificial leadership pertains to a novel leadership style model that advocates sacrificing an individual manager's interests in favor of their employees' collective well-being and the organization's overall benefit (Liu et al., 2021). According to Yang et al. (2020), prioritizing collective welfare over personal interests and privileges and risking everything to achieve the best outcome for one's followers is abandonment or postponement.

HOW DOES SELF-SACRIFICIAL LEADERSHIP AFFECT KNOWLEDGE SHARING AND KNOWLEDGE HIDING? THE MEDIATING EFFECTS OF SAFETY AND SUPPORT

Several studies have examined the effects of self-sacrificial leadership on various employee outcomes. For instance, Yang et al. (2020) investigated the impact of self-sacrificial leadership on employees' unethical pro-organizational behavior, while Zhang, Li, and Huang (2020) explored its effects on employees' voices. Liang and Fan (2020) also examined the relationship between self-sacrificial leadership and employees' creativity. There is a lack of research on the correlation between self-sacrificial leadership and employees' knowledge-sharing and knowledge-hiding behavior within a comprehensive framework. The present study contributes to the existing body of literature by examining the direct and indirect correlation between self-sacrificial leadership and employees' knowledge-sharing and knowledge-hiding, via psychological safety and perceived supervisor support.

In addition, knowledge sharing among employees is a significant aspect that has received limited attention in the literature about small and medium-sized enterprises. According to Arsawan et al. (2022), knowledge sharing refers to individuals exchanging information, skills, and expertise. The sharing of Knowledge among SMEs is a process that comprises four distinct stages, namely identification, medium selection, engagement, and feedback, as outlined by Kim and Shim (2018). Small and medium-sized enterprises (SMEs) are commonly distinguished by their capacity for adaptability and unrestricted communication channels among their staff, resulting in improved overall performance (Dalle et al., 2020a). According to Oliveira et al. (2020), smaller corporate organizations possess an advantage over larger ones in exhibiting lower resistance toward change. This is attributed to the exchange of important information and feedback among employees. The facilitation of Knowledge sharing behavior in organizations is commonly achieved through implementing a knowledge management system, as Curado and Vieira (2019) noted. The present study has centered on investigating the impact of self-sacrificial leadership on Knowledge sharing behaviors among employees operating in small and medium-sized enterprises (SMEs).

Compared to sharing Knowledge, concealing Knowledge is deemed crucial and is perceived to harm employee motivation. The act pertains to the deliberate suppression or concealment of information deemed of significant importance and security to an organization (Grimstad, Glavee-Geo, & Fjørtoft, 2020). The concealment of information within small and medium-sized enterprises (SMEs) may pose a

challenge. However, it is not entirely impossible, as specific policies or employee conduct may contribute to its existence (Yamamori, 2019). Newman et al. (2019) have identified two distinct forms of knowledge-hiding behavior among employees. The first type, evasive hiding, involves a certain degree of deception, whereby the hider intentionally presents incorrect Knowledge. The second type rationalized hiding, involves a form of conditional deception, whereby the hider justifies their failure to provide the requested information. The current study addresses the literature gap on the determinants of employees' knowledge-hiding behaviors.

The psychological safety of employees is a significant determinant of the success of small and medium-sized enterprises (SMEs). Psychological safety refers to the extent to which employees feel safe to take interpersonal risks, such as sharing ideas or raising concerns, without fear of negative consequences (Hu & Jiang, 2018). Small and medium-sized enterprises (SMEs) are often challenged by their limited size, which can impede their ability to attract, cultivate, and retain a talented workforce (Noda, 2020). Thus, organizations must establish a safe environment for their employees as a fundamental basis for achieving success and prosperity. According to Dalle and Hastuti (2017), psychologically safe environment creates a workplace where employees feel comfortable expressing their thoughts, opinions, and innovative ideas without the fear of being ridiculed or penalized. Additionally, extant literature indicates that heightened levels of safety within a workplace environment can lead to increased employee ideation and problem-solving capabilities (Rubel et al., 2018). Despite of utmost significance employees' psychological safety, limited research has been conducted on the relationship between self-sacrificial leadership, knowledge sharing, and knowledge-hiding behavior. This study aims to investigate this factor.

Furthermore, perceived supervisor support, on the other hand, reflects employees' perception of the level of support, care, and understanding demonstrated by their immediate supervisors (Chen et al., 2018). According to Nedal and Alcoriza (2018), when employees believe that their supervisors genuinely care about their well-being, value their contributions, and are available to provide guidance and assistance, they are more likely to engage in knowledge sharing behaviors. When. Perceived supervisor support creates a positive work environment where employees feel valued and acknowledged, leading to increased safety and support to share knowledge with their colleagues (Feusner et al., 2017). This behavior may

provide employees with a competitive advantage over their peers. Furthermore, limited empirical evidence regarding the correlation between self-sacrificial leadership and this phenomenon is available. The present study aims to address the gaps in the existing literature by examining the impact of perceived supervisor support on the relationship between self-sacrificial leadership and employees' knowledge-hiding and Knowledge sharing behaviors. Understanding the complex dynamics between self-sacrificial leadership, psychological safety, and perceived supervisor support will contribute to a deeper understanding of the factors that influence employees' knowledge sharing and knowledge hiding behaviors in organizations.

The present investigation is founded on the social exchange theory, which posits that social conduct arises from a process of exchange between individuals to achieve mutual advantage and reduce expenses (Zhang et al., 2020). The concept of the social exchange process is particularly pertinent to the present study, which investigates knowledge exchange behavior and related factors among SMEs. The theory underlying the evaluation of costs and benefits associated with knowledge-hiding behavior pertains to the employee's perception of withholding information. Moreover, Sadeghi et al. (2018) argue that self-sacrificial leadership can be congruent with reciprocal advantages obtained by prioritizing employees' interests in fostering a robust rapport. The current study aims to establish social exchange theory.

- Examine the unique association of self-sacrificial leadership with knowledge-sharing and knowledge-hiding behavior of the employees.
- Examine the unique association of self-sacrificial leadership with employees' psychological safety and perceived supervisor support.
- Examine the unique association between employees' psychological safety and perceived supervisor support with knowledge sharing and hiding behavior.
- Investigate the novel mediatory role of employee psychological safety and perceived supervisor support between the association of self-sacrificial leadership with employee knowledge-sharing and knowledge-hiding behavior.

2. Literature Review and Theoretical Foundation of the Study

Theoretical Foundation

The present investigation is grounded in the theoretical framework of social exchange theory, which aims to elucidate the knowledge-sharing and withholding conduct among workers under the influence of self-sacrificial leadership (Liang, Liu, & Wu, 2008). The

Social Exchange Theory elucidates how individuals exchange values, taking into account the potential benefits and losses involved. According to Ali (2019), leadership entails providing followers with more significant benefits and rewards than burdens and costs to attain objectives. Hughes and Avey (2009) research show a cross-level association between empowering leadership and knowledge sharing. The statement mentioned above pertains to furnishing subordinates with the necessary resources and perks to enhance their contribution toward the organization's overall prosperity. The social exchange theory has also been linked to facilitating favorable employee conduct, such as citizenship (Madhu & Krishnan, 2005). Based on the social exchange theory, it is posited that implementing self-sacrificial leadership can enhance the caliber of social connections among personnel in the enterprise (Babič et al., 2019). The present study proposes that self-sacrificial leadership entails the leader's willingness to make personal sacrifices to foster employees' perception of supervisor support and safe workplace environment, ultimately leading to knowledge sharing among peers. Conversely, scholarly research has suggested and examined a detrimental correlation between self-sacrificial leadership and knowledge hiding.

Self-Sacrificial Leadership, Employee Knowledge Sharing, and Knowledge Hiding Behaviour

According to Li, Zhang, and Tian (2016), self-sacrificing leadership manifests a leader's spirit or behavior that demonstrates a willingness to undertake various risks and losses for the betterment of the entire organization and its subordinates. According to Zhang and Ye (2016) research, organizations that adopt this approach enable their employees to make significant decisions and manage resources effectively. Sharing Knowledge is widely regarded as a crucial factor in achieving success within an organization and fostering the creation of new Knowledge. According to Kim and Shim (2018), the existing literature posits that an organization's ability to attain a competitive edge is contingent upon the willingness of its employees to share Knowledge. Ogunmokun et al. (2020) conducted a study that found that promoting Knowledge sharing behavior among employees can be achieved by emphasizing the link between their well-being, success, and benefits with the organization's profit gain. The arguments mentioned above are based on the principles of social exchange theory. This theory posits that when leaders, managers, and supervisors engage in Knowledge sharing behavior with their subordinates, it can encourage them to

HOW DOES SELF-SACRIFICIAL LEADERSHIP AFFECT KNOWLEDGE SHARING AND KNOWLEDGE HIDING? THE MEDIATING EFFECTS OF SAFETY AND SUPPORT

reciprocate in kind. Chen et al. (2018) provide support for this notion. Thus, the present study posits that;

H1a: Self-sacrificial leadership is positively associated with employees' Knowledge sharing behavior.

According to Babič et al. (2019), Knowledge can be categorized as either "explicit," meaning it can be codified, or "tacit," which remains with the individual and is difficult to codify. The conversion of tacit Knowledge into explicit Knowledge is a challenging task. According to Xia et al. (2019), employees cannot be compelled to disclose tacit Knowledge, as they cannot be deemed responsible for withholding it. Nevertheless, this can impact an organization's innovation, problem-solving, and teamwork. According to recent research conducted by Malik et al. (2019), there is a phenomenon known as "knowledge hiding," which refers to the behavior of employees who intentionally withhold information from their colleagues. This pertains to the deliberate withholding of information in response to inquiries made by others. Škerlavaj et al. (2018) have established a correlation between it and perceived psychological safety, reciprocation, and decreasing creativity. Self-sacrificial leadership is predicated on enabling employees to collaborate harmoniously in pursuit of organizational goals, as Yang et al. (2020) posited. According to Xia et al. (2019), research indicates that employees' concealment of knowledge can negatively impact their rapport with managers, leading to communication barriers, decreased concentration, and reduced productivity. Despite prior research's insufficient evidence regarding the correlation between self-sacrificial leadership and knowledge-hiding behavior, it can be inferred from the above discourse that self-sacrificial leadership is anticipated to exhibit a negative association with knowledge-hiding behavior. Therefore, a hypothesis is proposed;

H1b: Self-sacrificial leadership is negatively associated with employees' Knowledge of hiding behavior.

Self-Sacrificial Leadership, Psychological Safety, and Perceived Supervisor Support

According to Jungert et al. (2013), leadership that involves self-sacrifice emphasizes the importance of establishing a robust connection with employees through efficient communication, shared comprehension, and organizational citizenship behavior. This approach fosters the development of employees, encourages cooperation, and cultivates a sense of affiliation among them. Prior studies suggest that psychological safety is crucial in the relationship between subordinates and supervisors (Curado & Vieira, 2019). The phenomenon

mentioned above serves as a cohesive element and a means of promoting employee retention. According to Hu and Jiang (2018) research, there exists a correlation between an employee's perception of being safe and secure at workplace to perform good. Prior research suggests that security is crucial in fostering employee job satisfaction (Noda, 2020). According to Newman et al. (2019), employees perceive that the organization and their supervisors prioritize their well-being through self-sacrificial leadership. This perception fosters a sense of security among employees, leading them to believe that any instances of unjust behavior, discrimination, or harassment will be effectively addressed by management. Rubel et al. (2018) demonstrated that self-sacrificial leadership establish safety and compassion among employees by consistently prioritizing their needs and earning respect. Drawing from the literature review and guided by social exchange theory, which posits that sacrificial leadership can enhance employee psychological safety by prioritizing employee rights and welfare, a hypothesis is formulated as follows:

H2a: Self-sacrificial leadership is positively associated with employees' psychological safety.

According to Malinga, Stander, and Nell (2019), effective leadership can inspire and encourage individuals to work toward attaining the leader's aspirations, targets, and aims. According to De Cremer, van Dijke, and Bos (2004), leaders who exhibit self-sacrificial behavior utilize their charisma to cultivate an image of being their employees' and subordinates' most effective protectors. In addition, the concept of empowerment has been historically linked to selfless leadership, which prioritizes the interests of others over personal benefits (Dong et al., 2015). Simultaneously, a correlation exists between sacrificial leadership and supervisor support, as Babič et al. (2019) indicated. The concept encompasses various forms, i.e., emotional support and motivational support, delineating many reasons encouraging individuals to engage in proactive behavior. According to de Almeida, Lesca, and Canton (2016), research indicates that intrinsic motivation is more effective than perceived supervisor support in achieving organizational goals in the long run. This suggests that employees require supervisors' support to achieve long-term organizational objectives.

According to Xia et al. (2019), scholarly literature indicates that leaders can significantly impact their subordinates' cognitive processes, attitudes, and conduct, facilitating their progress toward achieving

their goals. Drawing from the literature and social exchange theory, it is hypothesized that leaders can support their employees to take appropriate measures and cultivate competencies that enhance their overall performance and competitive advantage.

H2b: Self-sacrificial leadership is positively associated with perceived supervisors' support.

Psychological Safety, Employee Knowledge Sharing, and Knowledge Hiding Behaviour

Psychological safety refers to the belief that one can freely express their ideas, opinions, and concerns without fear of negative consequences and potential to regulate the circumstances. The literature suggests a correlation between the interdependence among individuals (Kelloway et al., 2012) and the connections between families, friends, communities, and organizations (Brown et al., 2015). Newman et al. (2019) have established a correlation between employee safety and protecting their rights with their peers, supervisors, and managers. Furthermore, it can be posited that sharing Knowledge is predicated upon a fundamental presupposition of safety of the involved parties (Oliveira et al., 2020). According to Škerlavaj et al. (2018), employees share both implicit and explicit Knowledge with the expectation that it will yield personal benefits and ultimately contribute to the success of their organization. According to Rawlins' (2008) research, organizational practices and policies are influential in determining employee safety. The knowledge management system of organizations has been a crucial factor in guaranteeing the appropriate organization and utilizing employees' information (Ali, 2019). Promoting knowledge-sharing behavior in employees through establishing mutual understanding has been associated with decentralization and empowerment (de Almeida et al., 2016; Dugar & Fox, 2022). Therefore, a hypothesis has been formulated based on the literature mentioned above and social exchange theory, which posits that individuals engage in value exchange predicated on psychological safety and comprehension.

H3a: Psychological safety is positively associated with their knowledge-sharing behavior.

According to Connelly et al. (2019), the literature suggests that specific counterproductive work

behaviors (CWB) hinder employees from engaging in activities such as sharing crucial information, assisting colleagues, and contributing to the overall success of the organization. One aspect worth noting is self-serving behavior, which can manifest in various forms, such

as loafing, cheating, stealing, and Knowledge hiding. Additionally, this behavior may indicate a more significant issue related to corruption. The actions mentioned above are demonstrated to achieve individual benefits, even if sacrificing the well-being of fellow peers, colleagues, and organization resources (Babič et al., 2019). Knowledge-hiding behaviors typically result from social interaction, unfavorable exchange, and amplification among team members in a work setting, as noted by Hu and Liden (2011). According to Rawlins (2008), knowledge hiding is subject to the influence of various factors such as organizational culture, authoritarian leadership, stringent rules and regulations, and communication barriers. This has been supported by existing research. According to Kelloway et al. (2012), employees exhibit reluctance to share Knowledge owing to apprehensions of mistreatment, nepotism, and disapproval from senior management. supervisor's support is crucial for cultivating sound relationships that facilitate transparent and easily accessible communication channels (Nikandrou, Papalexandris, & Bourantas, 2000). According to Durst and Zieba (2017), the absence of supervisor's support may result in the withholding of crucial information. According to Ahmad and Guzmán (2021), scholarly investigations indicate that knowledge concealment is also encouraged due to the authorities' apprehension regarding the misuse of information, with supervisor support as a fundamental factor. The literature on the relationship between supervisor support and knowledge-hiding behavior among employees is limited. Therefore, to address this gap in the existing literature and draw from the arguments mentioned above, it is suggested that;

H3b: Perceived supervisor support is negatively associated with their knowledge-hiding behavior.

Supervisor Support, Employee knowledge Sharing, and Knowledge Hiding Behaviour

According to Jungert et al. (2013), supervisor support leads to employees taking interpersonal risks, engaging in open communication, and sharing their knowledge with others. Research has indicated a correlation between supervisor support and experiences of satisfaction and enjoyment (Welschen, Todorova, & Mills, 2012), achievement, competence, and personal growth (Chen et al., 2018) In addition, sharing Knowledge is often motivated by the desire to showcase one's expertise and receive recognition and rewards for generating innovative ideas, as noted by Welschen et al. (2012). Several organizations employ idea-generation boards, recognize employees of the week, and launch innovative campaigns to encourage Knowledge sharing

HOW DOES SELF-SACRIFICIAL LEADERSHIP AFFECT KNOWLEDGE SHARING AND KNOWLEDGE HIDING? THE MEDIATING EFFECTS OF SAFETY AND SUPPORT

behaviors among their staff (Arsawan et al., 2022; Sawatsuk et al., 2018). According to de Almeida et al. (2016), recognizing and empowering employees can positively impact intrinsic motivation for teamwork and the transfer of tacit Knowledge among team members. The social exchange theory posits that the exchange of Knowledge is predicated on employees assessing its advantages in light of supervisor support (Luczak & Kalbag, 2018). Drawing upon the existing body of literature and the social exchange theory, which posits that an organization's system of rewards and appraisals fosters creativity and innovation, thereby facilitating knowledge sharing among employees, it is posited that;

H4a: Perceived supervisor support is positively associated with their knowledge-sharing behavior.

perceived supervisor support has previously been studied to be highly beneficial for the organization and employees' personal development (Rani & Desiana, 2019). Additionally, there is a correlation between increased job performance and a feeling of pleasure and perceived contentment, as Malinga et al. (2019) noted. Scarce evidence exists regarding the correlation between counterproductive behaviors and their potential to negatively impact fellow employees, organizational culture, and the overall achievement of organizational objectives. In addition, concealing Knowledge may result in a lack of direction, impede innovative thinking, and induce unease. The study by Škerlavaj et al. (2018) identified several factors contributing to knowledge hiding, including inadequate employee incentives, fear of retaliation, feelings of insecurity, and a sense of psychological ownership. There is a shortage of empirical evidence about the relationship between supervisor support and its potential influence on knowledge concealment. Therefore, to address the existing gap in the literature and social exchange theory, it is proposed that employees with supportive supervisors may be able to mitigate Knowledge hiding to alleviate uncertainty, anxiety, and depression. Therefore, a hypothesis is proposed;

H4b: Perceived supervisor support is negatively associated with their knowledge-hiding behavior.

Mediation Psychological Safety as a Mediator between Self-Sacrificial Leadership with Employee Knowledge sharing and Knowledge Hiding Behaviour

The act of sharing Knowledge is inherently an individualistic endeavor, as Knowledge contained within an individual cannot be disseminated without

the volition of said individual (Lin, 2007a). The concept is propagated by emphasizing value creation (De Cremer et al., 2004). It has been associated with altruistic characteristics, positing that individuals disseminate Knowledge to aid others (Urbonavicius & Sezer, 2019). In addition, establishing security for employees has been found to facilitate the dismantling of communication obstacles, foster the development of robust interpersonal connections, and enhance team synergy (Ahmad & Guzmán, 2021). Han, Wang, and Yan (2019) have illustrated that providing employee safety is contingent upon implementing diverse policies and actions by leaders and managers. Concurrently, leaders who practice self-sacrifice believe that demonstrating ethical behavior is crucial in establishing credibility and fostering confidence among their subordinates (Mostafa & Bottomley, 2020). Promoting an equitable, impartial system that provides equal opportunities for all individuals to engage, advance, and grow within the workplace is advocated.

In addition, Halverson et al. (2004) assert that leaders who display self-sacrificial tendencies by demonstrating empathy, efficacy, and commitment toward their employees go above and beyond their prescribed job duties and personal interests. Despite limited literature on the impact of self-sacrificial leadership on employee safety, no research has explored the relationship between employee safety and the effectiveness of self-sacrificial leaders in fostering Knowledge sharing behavior among employees. Therefore, to fill this void and drawing upon the principles of social exchange theory, which suggests that selfless leadership fosters a climate of safety that promotes Knowledge sharing among employees for the sake of collective interests and goal attainment, it is conceivable to anticipate that,

H5a: Employees' psychological safety mediates the association between self-sacrificial leadership and employees' Knowledge sharing behavior.

The act of withholding valuable information from colleagues or peers is commonly referred to as knowledge hiding, as Malik et al. (2019) noted. Confidentiality may engender knowledge concealment within various organizations owing to the cultural and inherent characteristics of the job (Brown et al., 2015). Counterproductive work behaviors are commonly referred to as unethical. They can encompass a lack of effort towards work, noncompliance with rules and guidelines about the work environment, and, notably, withholding critical information from colleagues that may impact their performance (Robinson et al., 2020).

Ngamvichaikit and Beise-Zee (2014) have linked Knowledge hiding to mentorship and apprenticeship, which are associated with an authoritarian style that opposes self-sacrificial leadership. The current body of literature presents a dearth of research on the correlation between self-sacrificial leadership and employees' knowledge-hiding behavior and the potential mediating role of psychological safety among employees in this relationship. The utility of social exchange theory in comprehending exchange relationships and ethical behavior in the workplace is attributed to its emphasis on moral indebtedness and reciprocity (Busser, Shulga, & Kang, 2019).

Furthermore, according to Choi and Mai-Dalton (1998) research, leaders who exhibit self-sacrificial behavior are commonly regarded as possessing traits of trustworthiness, honesty, and fairness. Thus, fostering robust and secure workplace to the subordinates through self-sacrificial leadership may mitigate unfavorable perceptions of employee knowledge concealment. Therefore, a hypothesis is proposed;

H5b: Psychological safety mediates the association between self-sacrificial leadership and employees' knowledge-hiding behavior.

Perceived Supervisor Support as a Mediator between Self-Sacrificial Leadership and Employee's Knowledge Sharing and Knowledge Hiding Behaviour

According to Olatokun and Nwafor (2012), the existing body of literature indicates that employees can be incentivized to share Knowledge and information, thereby making a valuable contribution to the organizational database. This knowledge-sharing can occur both within and across teams, and can facilitate problem-solving, innovation, and informal interaction with peers. The concept mentioned above is associated with a dynamic learning process that entails organizational interaction and resource exchange, including but not limited to IT, artificial intelligence, and diverse software programs. These resources encourage employee participation in knowledge sharing, as per De Cremer et al. (2006). Managers in small and medium-sized enterprises (SMEs) may benefit from cultivating a close rapport with their employees by recounting personal anecdotes of surmounting difficulties and barriers and inspiring other employees to follow suit.

Furthermore, the field of information technology assumes a significant function in facilitating the expeditious and instantaneous dissemination of

information to others Chuang (2020). According to Halverson et al. (2004), self-sacrificial leadership fosters a culture of knowledge sharing by improving communication networks, promoting adaptability, and encouraging the exchange of all types of information, regardless of their productivity. This fosters a workplace environment that cultivates comprehension and self-determination among personnel, thereby incentivizing their enthusiastic engagement. Drawing upon the social exchange theory, which posits that positive employee behaviors can be fostered through leader sacrifice and care, as well as the creation of motivational incentives, it has been suggested that;

H6a: Perceived supervisor support mediates the association between self-sacrificial leadership and employees' Knowledge sharing behavior.

According to Malik et al. (2019), the current emphasis on knowledge hiding has been found to foster a sense of competitiveness and mistrust among employees. The subject matter pertains to the dynamics of organizational politics within a mastery-oriented environment, as posited by Malik et al. (2019). Conversely, sacrificial leadership has the potential to facilitate the implementation of anonymity policies, thereby mitigating the adverse effects of knowledge concealment concerning issues such as nepotism, harassment, and ethical impropriety (Saad, Jamaludin, & Yusuf, 2018). Lin (2007b) has shown that leaders can inspire employees by offering recognition, appraisal, and resources to minimize the concealment of Knowledge, particularly tacit Knowledge. Kiani and Laroche (2019) posit that leaders can establish a culture that fosters competitiveness by generating ideas, sharing information, and addressing current problems. According to existing research, a correlation exists between knowledge-hiding behavior and supervisor support, with introverted individuals being more hesitant to disclose and exchange information (Harter, 1981; Jungert et al., 2013). Therefore, leadership that involves self-sacrifice may implement wellness programs grounded in these particular personality traits to promote participation. Therefore, drawing from the preceding discourse and the social exchange theory, it is posited that leaders who exhibit self-sacrificial behavior can foster employees' intrinsic motivation to engage in positive and effective participation, thereby mitigating the phenomenon of Knowledge hiding among employees and cultivating a culture of support. Therefore, a hypothesis is proposed.

H6b: Perceived supervisor support mediates the association between self-sacrificial leadership and employees' knowledge-hiding behavior.

HOW DOES SELF-SACRIFICIAL LEADERSHIP AFFECT KNOWLEDGE SHARING AND KNOWLEDGE HIDING? THE MEDIATING EFFECTS OF SAFETY AND SUPPORT

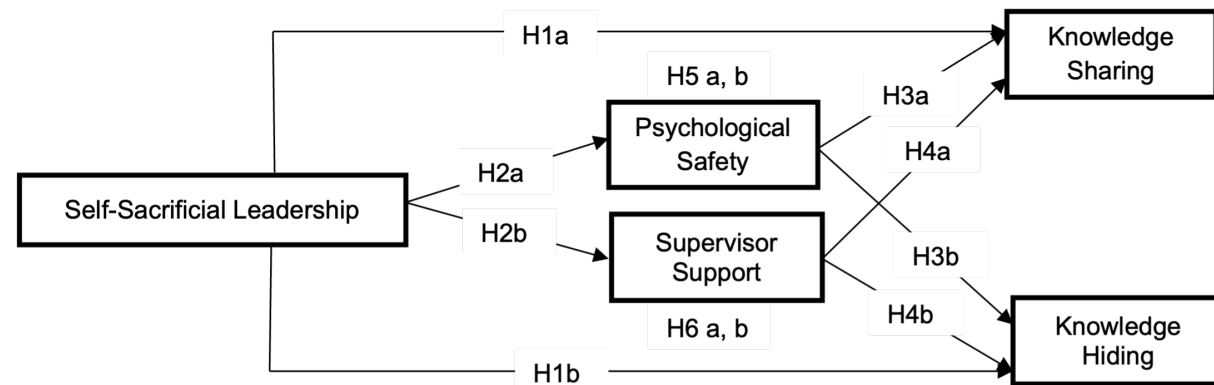


Figure 1: Theoretical Framework of the Study

3. Research Methodology

The primary objective of this study was to examine the relationship between self-sacrificial leadership and knowledge sharing and knowledge hiding behaviors through the mediatory role of psychological safety and perceived supervisor support small and medium-sized enterprises (SMEs) located in Medan City, North Sumatra Province, Indonesia. Indonesia as a developing nation is home to a large number of SMEs that operate in various sectors, contributing significantly to the country's economic growth. According to Triandini, Djunaidy, and Siahaan (2017), the agricultural sector is particularly prominent among SMEs in Indonesia due to the nation's vast agricultural land and its importance for rural communities. Many SMEs in Indonesia focus on serving local markets rather than expanding to broader regions hence playing a major role in socio-economic prosperity of the nation.

In contrast, some aim to gain a larger market share by offering subcontracted systems to diverse multinational corporations (Samsir, 2018). Additionally, Medan was chosen as a survey location due to its status as the primary urban center and most populous city in the North Sumatra province of Indonesia. It is recognized as a highly productive metropolis within the Sumatra region, characterized by a diverse range of commercial establishments spanning small, medium, and large-scale enterprises.

Initially, the Supervisory and Management Board accessed data about small and medium-sized enterprises (SMEs) in Medan to gather information

about them. Upon identification of small and medium enterprises operating within the city during the Movement Control Order (MCO) period, it was observed that they were adhering to the Covid-19 Standard Operating Procedures (SOP) mandated by the government. Most of these small and medium-sized enterprises were involved

in producing food, beverages, grocery items, and medical supplies. The authors-initiated visits to small and medium-sized enterprises (SMEs) to obtain management's consent to collect data from their employees. The authors also requested that the management provide details of their employees for this purpose. The purpose of the study was communicated to the participants by the authors, and they were assured that any data obtained would be exclusively used for research purposes and not disclosed to any third party. The visits mentioned above were conducted with strict adherence to the Standard Operating Procedures (SOPs) about social distancing and other essential precautions in light of the Covid-19 pandemic. In the preliminary stages, the administration of twenty-three small and medium-sized enterprises consented to furnish the particulars of their staff members to survey said personnel.

Individuals who assented furnished the contact details of their staff members occupying diverse positions and departments and reporting to distinct supervisors. Upon receipt of the contact information, all employees were contacted via social media and email. The participants were informed about the purpose of the study. They were assured of the strict anonymity of their responses to obtain their voluntary consent to participate in the research. Participants were requested to indicate their English language proficiency and only those who demonstrated a high proficiency in reading and comprehension were eligible for inclusion in the research study. Given that this study utilized original scales in English that were reported to possess good reliability, it was deemed imperative to conduct an English proficiency check before disseminating the survey to participants. 750 employees who consented to partake in the time lag investigation met the eligibility requirements for English proficiency.

Physical contact was avoided due to COVID-19, so the online survey consisting of two parts was sent to the respondents. The initial section of the survey consisted

of inquiries regarding the demographic attributes of the participants, such as their age, gender, marital status, educational attainment, job title, work experience, market orientation, and type of ownership. The latter

component comprises a survey comprising five items about the study constructs, specifically those related to sacrificial leadership. The initial segment was dispatched to participants on July 01, 2020. Following four weeks after the initial distribution of the questionnaire, the authors proceeded to issue a gentle reminder to individuals who had yet to respond. Over three months, the author received 617 completed responses after sending two reminders within twelve weeks.

On October 01, 2020, 617 respondents were administered part 2 of the survey, comprising items pertaining to psychological safety and perceived supervisor support. In this instance, subsequent reminders were issued weekly, resulting in the acquisition of 560 completed responses within two months. The researcher opted to delay the dissemination of the third segment of the survey to the participants mentioned above by an additional month. After six months, the final segment of the survey was distributed to the entire cohort of 560 participants who had previously completed the two preceding questionnaires within the same six-month timeframe. The final segment of the survey was distributed to participants on January 01, 2021. Drawing from prior experience, participants were prompted to promptly select responses for nine items about the dissemination and concealment of Knowledge. The third phase of the study involved conducting time-three surveys, finalized within two months, culminating in the data collection's conclusion on Feb 31, 2021. A total of 490 questionnaires were returned to the authors. A meticulous screening process determined that 23 responses contained missing values, while 15 were deemed unengaged.

Consequently, these responses were excluded from subsequent analyses. The study yielded a final response rate of% over a data collection period of 8 months. A total of 452 responses were deemed complete, with all three parts of the survey satisfactorily filled out by the study participants.

Measures of study

Self-sacrificial leadership was measured with the five-item scale developed by De Cremer et al. (2006). *psychological safety* was measured with an 11-items scale well developed by Carmeli, and Gittel (2009). To measure *perceived supervisor support*, we used the six-item scale developed by DeConinck (2010).

Knowledge sharing was measured using Lin's four-item knowledge-sharing scale. Finally, *knowledge Hiding* was measured with a five-items scale, adapted from the study of Peng (2013).

Demographic Characteristics of the Respondents

The demographic statistics of the respondents indicated that a higher proportion of males (76.7%) participated in the study than females (23.3%). The proportion of young participants within the age range of 20-30 years (25.2%) and 31-40 years (48.7%) was comparatively more significant than that of participants aged above 41-50 years (19.2%). In contrast, the proportion of participants aged above 50 years was limited to 5.9%. The survey results indicate that 44.2% of the participants held a graduate degree, 18.8% were pursuing an undergraduate degree, and 26.5% had completed a postgraduate program. Additionally, approximately 11.5% of the respondents possessed qualifications that did not fall under the abovementioned categories. According to the statistics on experience, most respondents, precisely 64.2%, reported having more than ten years of experience. 11.6% of the respondents reported having a service experience ranging from 7-10 years, while 16% reported serving their duties for 4-6 years. A small proportion of the respondents indicated having the least experience of 1-3 years. In addition, it was found that 27.4% of the firms under consideration were publicly owned, while 40.3% were privately owned. Furthermore, 11.8% of the firms had foreign ownership, and 19.5% were categorized as mixed or joint ventures.

4. Data Analysis and Results Assessing the measurement model

The present investigation employed the SmartPLS software to analyze structural equation modeling (SEM). Before conducting an empirical investigation of the hypothesized connections, an Analysis of Variance (ANOVA) was performed to ascertain the potential influence of the participants' demographic characteristics on the dependent variable. The analysis of variance (ANOVA) findings indicate that the employees' experience level had a statistically significant effect on the dependent variables. Subsequently, the experience of the employees was regulated during subsequent analysis. Furthermore, to examine the psychometric characteristics of the assessments, confirmatory factor analysis was performed utilizing

SmartPLS3. The reliability of measures was evaluated using Cronbach's α and composite reliability (CR)

HOW DOES SELF-SACRIFICIAL LEADERSHIP AFFECT KNOWLEDGE SHARING AND KNOWLEDGE HIDING? THE MEDIATING EFFECTS OF SAFETY AND SUPPORT

following the guidelines outlined by Henseler, Ringle, and Sinkovics (2009). Table 1 displays the reliability of the reflective measures, as determined by values of Cronbach's α (above 0.70) and CR.

Furthermore, the evaluation of the "convergent and discriminant validity" was evaluated, as reported by

Mansoor, Fatima, and Ahmad (2020). The study's findings indicate that the factor loadings of all other indicator variables were within a significant range of loading for each item ($p < 0.001$) onto its underlying variable. Additionally, the average variance extracted (AVE) of latent variables was above 0.50 for all study constructs, establishing convergent validity (Hair et al., 2010).

Table 1: Factor loadings, reliability, and validity

Constructs/Indicators	Factor Loadings					AVE	CR	Cronbach's α
	1	2	3	4	5			
Self-Sacrificial Leadership						0.570	0.869	0.768
SSL1	0.788							
SSL2	0.768							
SSL3	0.752							
SSL4	0.695							
SSL5	0.764							
Psychological Safety						0.530	0.899	0.800
PS1		0.678						
PS2		0.757						
PS3		0.770						
PS4		0.687						
PS5		0.793						
PS6		0.753						
PS7		0.696						
PS8		0.696						
PS9		0.714						
PS10		0.702						
PS11		0.690						
Perceived Supervisor Support						0.556	0.884	0.786
PSS1			0.783					
PSS2			0.849					
PSS3			0.705					
PSS4			0.721					
PSS5			0.702					
PSS6			0.697					
Knowledge Sharing						0.557	0.830	0.724
KS1				0.727				
KS2				0.790				
KS3				0.697				
KS4				0.764				
Knowledge Hiding						0.577	0.869	0.766
KH1					0.804			
KH2					0.758			
KH3					0.724			
KH4					0.735			
KH5					0.771			

Note: CR, composite reliability; AVE, average variance extracted.

Discriminant Validity

Noor, Mansoor, and Rabbani (2022) utilized the Heterotrait-Monotrait (HTMT) ratio to evaluate the

constructs' discriminant validity. The findings presented in Table 2 indicate that the HTMT values for the entire model were below 0.9.

Table 2: Heterotrait-Monotrait Ratio

Constructs	Mean	STD.	1	2	3	4	5
Self-Sacrificial Leadership	3.90	0.77	0.754				
Psychological Safety	3.94	0.70	0.349	0.730			
Perceived Supervisor Support	3.87	0.90	0.533	0.431	0.744		
Knowledge Sharing	4.11	0.56	0.471	0.624	0.549	0.745	
Knowledge Hiding	3.98	0.68	0.601	0.591	0.454	0.429	0.758

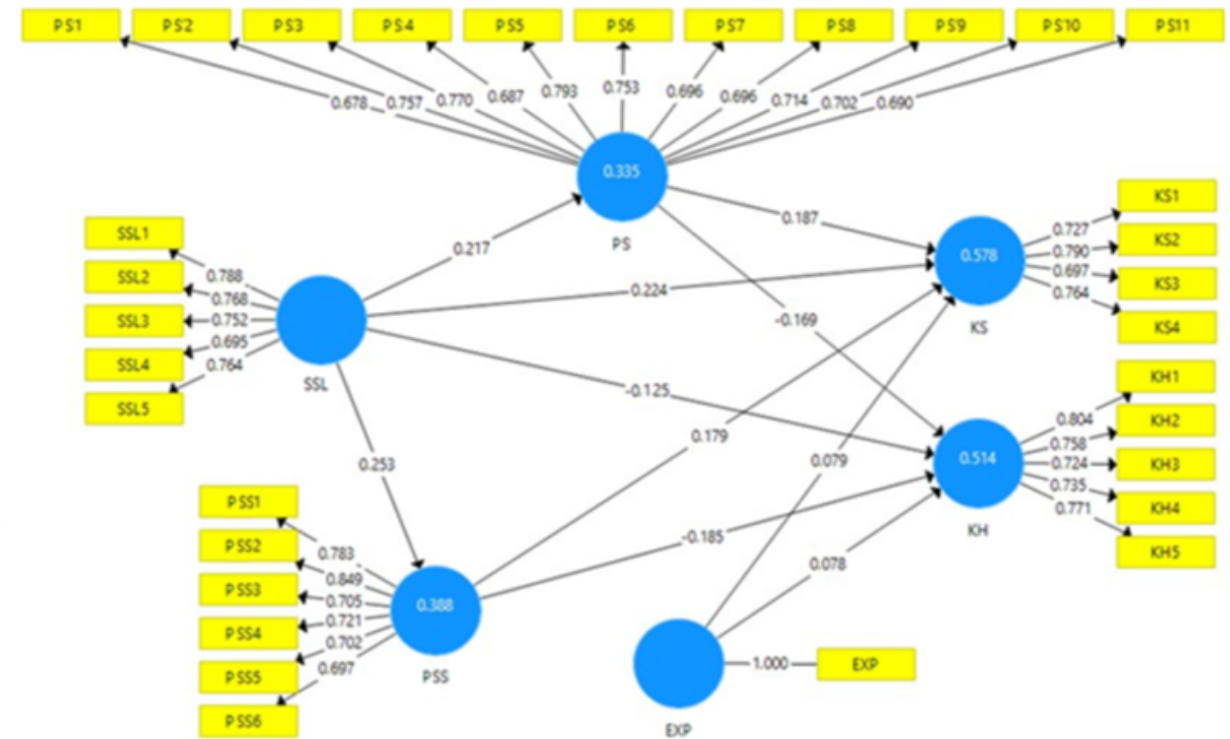


Figure 2: Full Measurement Model

Assessment of the Structural Model

To test the proposed links via structural paths, the authors applied the bootstrapping technique applying 500 sub-samples. β -coefficient, p -value, and t -value were recorded to confirm the proposed associations. Simultaneously, the Coefficient of Determination (R^2) was calculated to assess the theoretical framework's overall fitness. The R^2 change of 57.8% in *knowledge sharing* and 51.4% in the *knowledge hiding* behaviors of the employees working in SMEs situated in Medan City, Indonesia, have been revealed by the results due to the impact of all direct as well as mediating variables. R^2 values reflect good model fitness.

knowledge sharing ($\beta=0.224^{***}$, $t=4.431$), *psychological safety* ($\beta=0.217^{***}$, $t=4.753$), and *perceived supervisor support* ($\beta=0.253^{***}$, $t=5.180$). In contrast, a negative and significant association of *self-sacrificial leadership* with *Knowledge hiding* ($\beta=-0.162^{**}$, $t=3.311$) was revealed in the results. Moreover, *psychological safety* ($\beta=0.187^{**}$, $t=3.928$) and *supervisor support* ($\beta=0.179^{**}$, $t=3.524$) were found to be positively related *knowledge sharing*. At the same time, a negative association between employees' *safety* ($\beta=-0.169^{**}$, $t=3.393$) and supervisor support ($\beta=-0.125^{***}$, $t=3.797$) with *knowledge hiding* has been proved by the results. Therefore, as shown in Table 3, hypothesis $H1 a, b, H2 a, b, H3 a, b$, and $H4 a, b$ of the current study was supported by study results.

Direct hypothesis.

The results of the direct and mediation hypothesis are shown in Table 3. Results depicted a positive and significant association of *self-sacrificial leadership* with

Mediation Hypothesis

As shown in Table 3, the mediation hypotheses $H5$

HOW DOES SELF-SACRIFICIAL LEADERSHIP AFFECT KNOWLEDGE SHARING AND KNOWLEDGE HIDING? THE MEDIATING EFFECTS OF SAFETY AND SUPPORT

a, b and H6 a, b was also supported. An indirect and positive effect of self-sacrificial leadership with knowledge sharing in the presence of employees' safety ($\beta=0.191^{***}$, $t=4.027$) and supportive supervisor ($\beta=0.201^*$, $t=4.201$) as mediators were proved in the results of the study. On the other hand, an indirect and negative effect of self-sacrificial leadership with Knowledge hiding in the presence of employees' safety ($\beta=-0.122^*$, $t=2.737$) and supervisor support ($\beta=-0.151^{**}$, $t=3.279$) as mediators were found as proposed by the authors. Further, results showed the non-zero value for the lower and upper limit confidence interval supporting the findings' significance level.

Table 3: Hypothesis Testing Results

	Hypotheses	Std. Beta	t-Value	p-values	Findings
H1a	SSL→KS	0.224	4.431	0.000	Supported
H1b	SSL→KH	-0.162	3.311	0.004	Supported
H2a	SSLàPS	0.217	4.753	0.000	Supported
H2b	SSLàPSS	0.253	5.180	0.000	Supported
H3a	PS→KS	0.187	3.928	0.000	Supported
H3b	PS→KH	-0.125	3.393	0.002	Supported
H4a	PSS→KS	0.179	3.524	0.001	Supported
H4b	PSS→KH	-0.185	3.797	0.000	Supported
H5a	SSLàPS→KS	0.191	4.027	0.000	Supported
H5b	SSLàPS→KH	-0.122	2.737	0.013	Supported
H6a	SSLàPSS→KS	0.201	4.201	0.000	Supported
H6b	SSLàPSS→KH	-0.151	3.279	0.007	Supported

Where : SSL =Self-sacrificial Leadership ; PS=Psychological Support; PSS=Perceived Supervisor Support; KS= Knowledge Sharing; KH=Knowledge Hiding

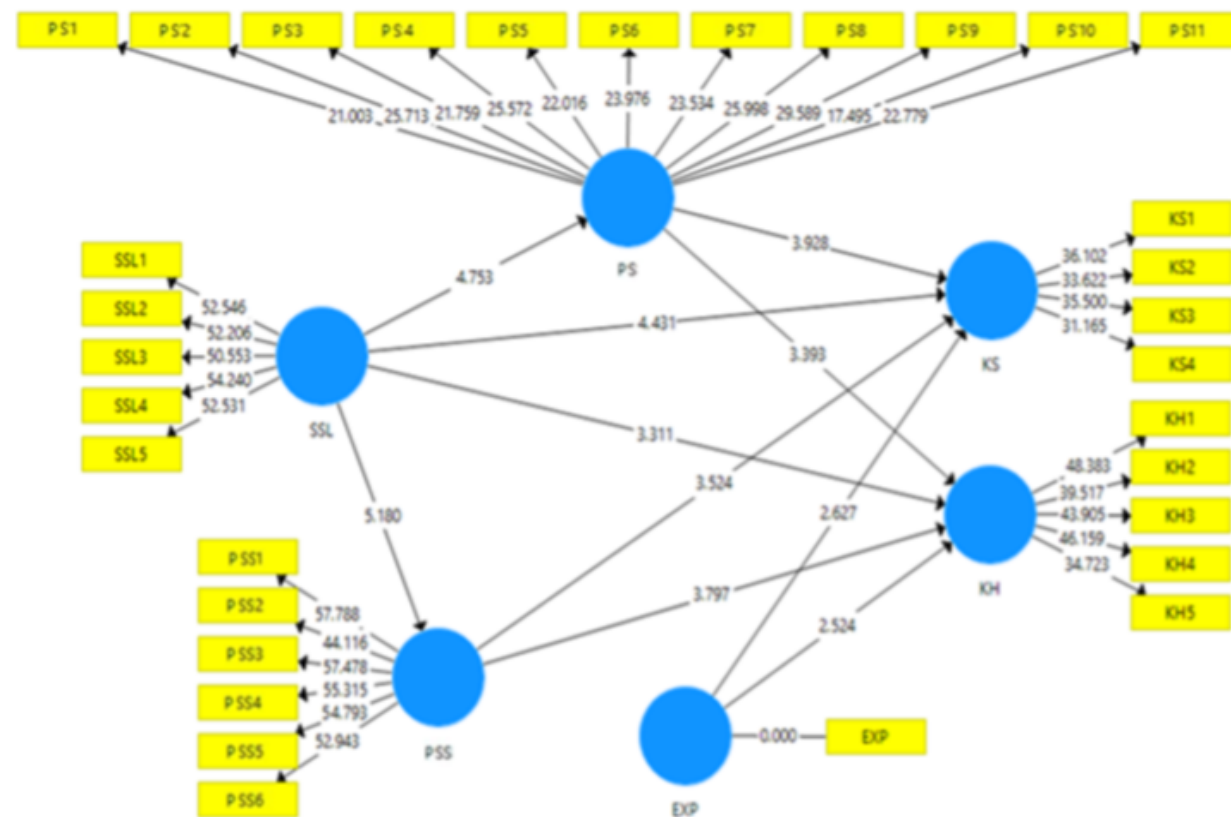


Figure 3: Full Structural Model

5. Discussion, Implications, Limitations, and Future Research Directions Findings of the Study

The present research examined the phenomenon of knowledge sharing and hiding among employees in small and medium-sized enterprises (SMEs) located in Medan City, North Sumatra Province of Indonesia. Specifically, the study investigated the influence of

safety and supervisor support on such behaviors in the context of self-sacrificial leadership. The present study examined the contribution of self-sacrificial leadership to employee knowledge-sharing activities, safety-advancements, and supervisors support. The findings indicate a clear and noteworthy correlation between self-sacrificial leadership and supervisors support, and Knowledge sharing behavior among

employees. The concept of self-sacrificial leadership is a distinct construct that has the potential to guide followers toward achieving self-fulfillment rather than focusing solely on extrinsic benefits that are centered around material possessions. According to Liang and Fan (2020), effective leadership and management strategies facilitate the cultivation of long-term commitment and loyalty among team members, thereby promoting collaborative efforts toward attaining shared objectives. Furthermore, the study's outcomes are consistent with the research conducted by Zhang et al. (2020), which demonstrated that self-sacrificial leadership functions by establishing a workplace atmosphere characterized by reciprocal trust, esteem, and concordance. According to Yang et al. (2020), implementing this practice fosters a feeling of inclusivity among employees, as it reinforces the notion that managers prioritize the welfare and advancement of their subordinates.

This observation highlights the propensity of self-sacrificing leaders to take risks and make significant sacrifices to support their subordinates. By adopting this leadership style, supervisors can establish closer relationships with their employees, gain a deeper understanding of the difficulties faced by their subordinates, and develop effective strategies to address these challenges. According to De Cremer et al. (2009), the leadership style of self-sacrifice results in employee satisfaction and supervisor support to contribute to and participate in the organization's success through sharing tacit Knowledge. Conversely, scholarly research has examined the adverse correlation between self-sacrificial leadership and employees' tendency to conceal Knowledge. The aforementioned negative association portrays that a leader who engages in self-sacrifice encourages subordinates to share their knowledge with colleagues during interactions. Influential leaders endeavor to comprehend the challenges and predicaments encountered by their subordinates and endeavor to rectify them, even if it entails personal sacrifice. This fosters a sense of loyalty among employees towards the organization and instills a belief in assisting their colleagues while refraining from withholding crucial information or Knowledge, owing to the trust established by their leaders.

Furthermore, the present research examined the function of psychological safety, which has previously been scrutinized regarding turnover, harassment, and performance metrics. However, a limited number of research studies have explored its significance in the context of employee knowledge-sharing behavior. The

present study underscores the significance of ps in fostering Knowledge sharing behavior. Specifically, the study supports the notion that employees are more likely to share knowledge when they have confidence that the information they provide will be utilized optimally. According to Wen et al. (2019), the individual believes that sharing Knowledge can yield benefits for the organization, facilitate employees' personal growth, and garner esteem and admiration from colleagues and team members. In addition, sharing Knowledge has been found to foster collaboration among team members. It can lead to the emergence of novel and demanding prospects that confer a significant competitive edge (Xia et al., 2019). This study highlights knowledge-hiding behavior among employees, which can be attributed to their lack of trust in their supervisors and company policies. Employees may withhold Knowledge out of fear that the company could exploit it for its benefit without aligning with the employees' personal goals. According to Ramayah et al. (2020), instances of inadequate recognition for knowledge sharing and the persistence of nepotism can result in biased and inequitable treatment of employees. As such, it is recommended that management and supervisors develop unambiguous policies for the dissemination of Knowledge and subsequently evaluate employees based on their performance in this regard.

This study investigated the significance of intrinsic motivation for knowledge sharing and knowledge hiding, a topic that has not been previously examined in the existing literature. According to Rani and Desiana (2019) research, support is crucial in promoting employees' engagement in citizenship behavior.

An instance of such behavior is sharing knowledge to aid colleagues, team members, and the organization. According to Chen et al. (2018), an employee possessing robust support is likely to engage actively and share their tacit Knowledge with supervisors and peers, thereby demonstrating altruistic tendencies. Similarly, employees who are driven by motivation tend to prefer a collaborative work environment that prioritizes mutual interests and values teamwork. In such an environment, they view their colleagues' success as just as necessary as their own and are, therefore, less likely to withhold information or Knowledge from their peers. The study results depict the same.

This study contributes to the existing literature by examining the mediating influence of psychological safety and supervisor support in facilitating the transmission of positive outcomes of self-sacrificial leadership. Specifically,

HOW DOES SELF-SACRIFICIAL LEADERSHIP AFFECT KNOWLEDGE SHARING AND KNOWLEDGE HIDING? THE MEDIATING EFFECTS OF SAFETY AND SUPPORT

the study aims to encourage knowledge sharing among peers. Furthermore, the present study's findings indicate that leaders who exhibit self-sacrificial behavior can establish safety for their employees, thereby diminishing the likelihood of employees engaging in the concealment of information. The study's findings indicate that supervisor support mediates the relationship between sacrificial leadership and knowledge hiding. Specifically, it was observed that support mitigates knowledge-hiding behavior by fostering employee engagement in knowledge-sharing activities. The findings suggest that an equitable evaluation and incentive structure would motivate staff members to impart their expertise to the organization. Consequently, small and medium-sized enterprises (SMEs) must possess robust technological systems that facilitate effective knowledge management and incentivize employees by providing points and recognitions.

Theoretical Implications

The present research contributed valuably to the extant literature on leadership, support, and knowledge management through its incremental approach. The primary contribution to the field of literature pertains to the significance of self-sacrificial leadership in the context of small and medium-sized enterprises (SMEs). This area has received limited attention in the existing literature. The concept of self-sacrificial leadership in the context of small and medium-sized enterprises (SMEs) pertains to the practice of managers and supervisors placing their employees' rights, preferences, and well-being above the goals and accomplishments of their own company. In a previous study conducted by De Cremer et al. (2009), leaders making personal sacrifices to earn the rights of their followers were examined. However, the current study represents a significant theoretical advancement by establishing a connection between this phenomenon and constructs related to knowledge management. The research made a significant contribution by examining the role of Knowledge hiding among employees of small and medium-sized enterprises (SMEs), which represents a novel area of inquiry that has received limited attention in prior studies. The phenomenon of knowledge hiding has been identified as a significant factor that can negatively impact a company's overall success. It has been observed that this behavior can lead to conflicts between employees and impede their creativity. However, the existing literature on this topic has not provided sufficient evidence to explain why employees hide knowledge. Thus, the present study investigated the significance of employee engagement in small and medium-sized enterprises (SMEs) and identified the underlying factors that contribute to it.

The third contribution pertains to an inquiry into the significance of psychological safety and supervisors' support concerning knowledge sharing and hiding. It is noteworthy that previous studies have only examined the role of these factors in performance-related behaviors. The present investigation addressed a gap in the existing literature by examining the interaction between the constructs mentioned above and self-sacrificial leadership, with the aim of augmenting employees' Knowledge sharing tendencies while impeding their knowledge-hiding proclivities. This research made a significant theoretical contribution by establishing a connection between a distinctive leadership style and innovative constructs such as knowledge management. Additionally, the study highlighted the underlying role of safety and support in elucidating the impact of leadership on knowledge outcomes. Therefore, this comprehensive framework is considered a significant contribution to the management literature and presents numerous opportunities for future research endeavors. The fifth significant theoretical development involves the provision of empirical validation for a distinct framework within the context of a multi-cultural study in Indonesia, utilizing a longitudinal study design. The design and theoretical approach utilized in the context mentioned above constitutes a distinctive contribution toward elucidating causal relationships within the framework of the study.

This study's ultimate contribution was applying social exchange theory to elucidate the functions of knowledge concealment and dissemination practices among small and medium-sized enterprises (SMEs). The theory of social exchange has been employed to elucidate the dynamics of social relationships among individuals who engage in a cost-benefit analysis of such relationships, aiming to optimize gains and minimize undesirable consequences such as loss of esteem and appreciation. Simultaneously, this research investigated the phenomenon within the framework of self-sacrificial leadership, aiming to foster safety for subordinates and motivate them to enhance their Knowledge-sharing behaviors to promote innovation and creativity while reducing their tendency to conceal tacit Knowledge, ultimately leading to improved productivity.

Practical Implications

The present study has various practical implications. The present study specifically focuses on small and medium-sized enterprises (SMEs) in Indonesia, which constitute a significant and crucial component of the country's economic landscape and play a pivotal role in driving its economic and financial development. Small and Medium Enterprises (SMEs) contribute significantly to the country's Gross Domestic Product (GDP) and

offer diverse employment prospects to the populace. In addition, they function as a fundamental component of innovation by introducing distinctive concepts to market their merchandise. The sector is highly manageable, leading governments to allocate loans and resources to incentivize its growth within the economy. The present study underscores the significance of enabling employees and fostering safety in employees to benefit governments and communities from small and medium-sized enterprises (SMEs). The competitive advantage that small and medium-sized enterprises (SMEs) possess over other firms can be attributed to their relatively small workforce, enabling them to respond more quickly to changes and generate novel ideas. Hence, governments and policymakers must support small and medium-sized enterprises (SMEs) to leverage their innovative and adaptable nature in contrast to more giant corporations.

A crucial factor for policymakers to contemplate is the significance of sacrificial leadership demonstrated by higher-level management and supervisors in fostering a conducive atmosphere for their staff. Human resource managers can utilize this study to implement this leadership style and foster employee safety and commitment to knowledge sharing. One can establish management training and development objectives suitable. This research is significant for organizational management to implement effective knowledge management systems that foster employee participation in knowledge sharing, thereby enhancing competitive advantage through utilizing tacit Knowledge.

In addition, the findings of this study can be utilized by managers to devise strategies that enhance the innate drive of their subordinates to articulate their ideas and expertise. Managers and supervisors may detect instances of Knowledge hiding among their employees by prioritizing their concerns and actively listening to them. This approach can foster safety and supervisor support, reducing knowledge-hiding behavior.

Limitations and Future Directions

Despite addressing the factors contributing to knowledge-sharing and hiding behavior, this study has some limitations. The study examines the perspective of employees regarding knowledge sharing and knowledge-hiding behavior in small and medium-sized enterprises (SMEs). However, it does not include a comparative analysis of the knowledge management resources available to SMEs versus those available to larger organizations with advanced technological capabilities. Henceforth, forthcoming research endeavors may delve into the impact of technology on knowledge-sharing or concealing

conduct within expansive corporate entities. Furthermore, an analysis of gender roles was not conducted about knowledge sharing and hiding behaviors, as these factors may influence the attitudes of males and females towards such behaviors, depending on the prevailing culture and system within the organization. The outcomes of the one-way ANOVA analysis indicated the absence of significant distinctions regarding gender. However, it is suggested that a distinct investigation be conducted to explore the potential variations in response and motivation between genders concerning knowledge sharing and hiding. The present investigation is limited to a sample of employees and relies solely on self-reported measures obtained from subordinates. Future research could address this limitation by collecting data from supervisors and subordinates to verify the consistency of employee-reported behaviors. This study has a limitation in that it did not explore the influence of personality on establishing safety talking about support. This is crucial in predicting their inclination towards sharing knowledge or concealing information. Future research could explore the relationship between Big Five personality traits, various leadership styles, knowledge-sharing, and hiding behaviors. Subsequent research endeavors could investigate the potential impact of leader-member exchange on the Knowledge sharing and concealing behaviors of personnel. While the sample size of 279 is deemed adequate for a longitudinal study design, it is recommended that future studies employ cross-validation techniques on a larger dataset to enhance the generalizability of the findings. The impact of Covid-19 on employees' attitudes and behaviors in high-pressure work environments cannot be disregarded when considering the findings. Subsequent cross-cultural investigations in the post-Covid-19 epoch would corroborate the outcomes observed in the conventional occupational milieu.

Reference

- Ahmad, F., & Guzmán, F. (2021). Brand equity, online reviews, and message trust: the moderating role of persuasion knowledge. *Journal of Product & Brand Management*, 30(4), 549-564. <https://doi.org/10.1108/JPBM-09-2019-2564>
- Ali, H. (2019). *Impact of despotic leadership on employee's performance with the mediating role of anger rumination and moderating role of trait anxiety*. (Master's Thesis). Capital University. <https://thesis.cust.edu.pk/UploadedFiles/hamid%20222.pdf>
- Arsawan, I. W. E., Koval, V., Rajiani, I., Rustiarini, N. W., Supartha, W. G., & Suryantini, N. P. S. (2022). Leveraging knowledge sharing and innovation culture into SMEs sustainable competitive advantage. *International Journal of Productivity and Performance Management*, 71(2), 405-428. <https://doi.org/10.1108/IJPPM-04-2020-0192>

HOW DOES SELF-SACRIFICIAL LEADERSHIP AFFECT KNOWLEDGE SHARING AND KNOWLEDGE HIDING? THE MEDIATING EFFECTS OF SAFETY AND SUPPORT

- Babič, K., Černe, M., Connelly, C. E., Dysvik, A., & Škerlavaj, M. (2019). Are we in this together? Knowledge hiding in teams, collective prosocial motivation and leader-member exchange. *Journal of Knowledge Management*, 23(8), 1502-1522. <https://doi.org/10.1108/JKM-12-2018-0734>
- Brown, S., Gray, D., McHardy, J., & Taylor, K. (2015). Employee trust and workplace performance. *Journal of economic behavior & organization*, 116, 361-378. <https://doi.org/10.1016/j.jebo.2015.05.001>
- Busser, J. A., Shulga, L. V., & Kang, H. J. A. (2019). Customer disposition to social exchange in Co-innovation. *International journal of hospitality management*, 76, 299-307. <https://doi.org/10.1016/j.ijhm.2018.05.018>
- Carmeli, & Gittell, (2009). High-quality relationships, psychological safety, and learning from failures in work organizations. *Journal of Organizational Behavior*, 30(6), 709-729. <https://doi.org/10.1002/job.565>
- Chen, H., Baptista Nunes, M., Ragsdell, G., & An, X. (2018). Extrinsic and intrinsic motivation for experience grounded tacit knowledge sharing in Chinese software organisations. *Journal of Knowledge Management*, 22(2), 478-498. <https://doi.org/10.1108/JKM-03-2017-0101>
- Choi, Y., & Mai-Dalton, R. R. (1998). On the leadership function of self-sacrifice. *The Leadership Quarterly*, 9(4), 475-501. [https://doi.org/10.1016/S1048-9843\(98\)90012-1](https://doi.org/10.1016/S1048-9843(98)90012-1)
- Chuang, S.-H. (2020). Co-creating social media agility to build strong customer-firm relationships. *Industrial Marketing Management*, 84, 202-211. <https://doi.org/10.1016/j.indmarman.2019.06.012>
- Connelly, C. E., Černe, M., Dysvik, A., & Škerlavaj, M. (2019). Understanding knowledge hiding in organizations. *Journal of Organizational Behavior*, 40(7), 779-782. <https://doi.org/10.1002/job.2407>
- Curado, C., & Vieira, S. (2019). Trust, knowledge sharing and organizational commitment in SMEs. *Personnel Review*, 48(6), 1449-1468. <https://doi.org/10.1108/PR-03-2018-0094>
- Dalle, J., & Hastuti, D. (2017). Prototype decision support system selecting employee for certain position using profile matching. *Journal of Engineering and Applied Sciences*, 12(2), 183-185. <https://doi.org/10.3923/jeasci.2017.171.175>
- Dalle, J., Hayat, A., Karim, A., Tirtayasa, S., Sulasmi, E., & Prasetya, I. (2020a). The Influence of Accounting Information System and Energy Consumption on Carbon Emission in the Textile Industry of Indonesia: Mediating Role of the Supply Chain Process. *International Journal of Energy Economics and Policy*, 11(1), 536-543. http://zbw.eu/econis-archiv/bitstream/11159/8149/1/1766005063_0.pdf
- Dalle, J., Siyoto, S., Astika, N. D., Negara, D. J., Chandra, T., & Anam, K. (2020b). Moderating role of IT adoption and mechanism of dynamic capabilities on Indonesian pharmaceutical firms performance. *Systematic Reviews in Pharmacy*, 11(9), 982-992. <https://doi.org/10.31838/srp.2020.9.142>
- de Almeida, F. C., Lesca, H., & Canton, A. W. (2016). Intrinsic motivation for knowledge sharing—competitive intelligence process in a telecom company. *Journal of knowledge management*, 20(6), 1282-1301. <https://doi.org/10.1108/JKM-02-2016-0083>
- DeConinck, J. B. (2010). The effect of organizational justice, perceived organizational support, and perceived supervisor support on marketing employees' level of trust. *Journal of business research*, 63(12), 1349-1355. <https://doi.org/10.1016/j.jbusres.2010.01.003>
- De Cremer, D., van Dijke, M., & Bos, A. (2004). Distributive justice moderating the effects of self-sacrificial leadership. *Leadership & Organization Development Journal*, 25(5), 466-475. <https://doi.org/10.1108/01437730410544773>
- De Cremer, D., van Knippenberg, D., van Dijke, M., & Bos, A. E. (2006). Self-sacrificial leadership and follower self-esteem: When collective identification matters. *Group dynamics: theory, research, and practice*, 10(3), 233-245. <https://doi.org/10.1037/1089-2699.10.3.233>
- Dong, Y., Liao, H., Chuang, A., Zhou, J., & Campbell, E. M. (2015). Fostering employee service creativity: Joint effects of customer empowering behaviors and supervisory empowering leadership. *Journal of Applied Psychology*, 100(5), 1364-1380. <https://doi.org/10.1037/a0038969>
- Dugar, K. K., & Fox, J. (2022). Stigma Around the Consumption of Sanitary Napkins and Implications for International Marketing Strategy: A Case Study from Rural India. *International Journal of Instructional Cases*, 6. http://www.ijicases.com/search/vimukt_case
- Durst, S., & Zieba, M. (2017). Knowledge risks-towards a taxonomy. *International Journal of Business Environment*, 9(1), 51-63. <https://doi.org/10.1504/IJBE.2017.084705>
- Eggers, F. (2020). Masters of disasters? Challenges and opportunities for SMEs in times of crisis. *Journal of business Research*, 116, 199-208. <https://doi.org/10.1016/j.jbusres.2020.05.025>
- Feusner, J. D., Lidström, A., Moody, T. D., Dhejne, C., Bookheimer, S. Y., & Savic, I. (2017). Intrinsic network connectivity and own body perception in gender dysphoria. *Brain imaging and behavior*, 11(4), 964-976. <https://doi.org/10.1007/s11682-016-9578-6>
- Grimstad, S. M. F., Glavee-Geo, R., & Fjørtoft, B. E. (2020). SMEs motivations for CSR: an exploratory study. *European Business Review*, 32(4), 553-572. <https://doi.org/10.1108/EBR-01-2019-0014>
- Hair, J., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th ed.). NJ: Prentice-Hall Publication.
- Halverson, S. K., Holladay, C. L., Kazama, S. M., & Quinones, M. A. (2004). Self-sacrificial behavior in crisis situations: The competing roles of behavioral and situational factors. *The Leadership Quarterly*, 15(2), 263-275. <https://doi.org/10.1016/j.leaqua.2004.02.001>
- Han, Z., Wang, Q., & Yan, X. (2019). How responsible leadership motivates employees to engage in organizational citizenship behavior for the environment: A double-mediation model. *Sustainability*, 11(3), 605. <https://doi.org/10.3390/su11030605>
- Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. *Developmental psychology*, 17(3), 300-312. <https://doi.org/10.1037/0012-1649.17.3.300>
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In R. R. Sinkovics & P. N. Ghauri (Eds.), *New Challenges to International Marketing* (Vol. 20, pp. 277-319). Emerald Group Publishing Limited. [https://doi.org/10.1108/S1474-7979\(2009\)0000020014](https://doi.org/10.1108/S1474-7979(2009)0000020014)
- Hu, J., & Liden, R. C. (2011). Antecedents of team potency and team effectiveness: An examination of goal and process clarity and servant leadership. *Journal of Applied Psychology*, 96(4), 851-862. <https://doi.org/10.1037/a0022465>
- Hu, X., & Jiang, Z. (2018). Employee-oriented HRM and voice behavior: a moderated mediation model of moral identity and trust in management. *The International Journal of Human Resource Management*, 29(5), 746-771. <https://doi.org/10.1080/09585192.2016.1255986>
- Hughes, L. W., & Avey, J. B. (2009). Transforming with levity: Humor, leadership, and follower attitudes. *Leadership & Organization Development Journal*, 30(6), 540-562. <https://doi.org/10.1108/01437730910981926>
- Jungert, T., Koestner, R. F., Houliort, N., & Schattke, K. (2013). Distinguishing source of autonomy support in relation to workers' motivation and self-efficacy. *The Journal of Social Psychology*, 153(6), 651-666. <https://doi.org/10.1080/00224545.2013.806292>
- Kelloway, E. K., Turner, N., Barling, J., & Loughlin, C. (2012). Transformational leadership and employee psychological well-being: The mediating role of employee trust in leadership. *Work & Stress*, 26(1), 39-55. <https://doi.org/10.1080/02678373.2012.660774>
- Kiani, I., & Laroche, M. (2019). From desire to help to taking action: Effects of personal traits and social media on market mavens' diffusion of information. *Psychology & Marketing*, 36(12), 1147-1161. <https://doi.org/10.1002/mar.21263>
- Kim, N., & Shim, C. (2018). Social capital, knowledge sharing and innovation of small-and medium-sized enterprises in a tourism cluster. *International journal of contemporary hospitality management*, 30(6), 2417-2437. <https://doi.org/10.1108/IJCHM-07-2016-0392>
- Li, R., Zhang, Z. Y., & Tian, X. M. (2016). Can self-sacrificial leadership promote subordinate taking charge? The mediating role of organizational identification and the moderating role of risk aversion. *Journal of Organizational Behavior*, 37(5), 758-781. <https://doi.org/10.1002/job.2068>
- Liang, T.-P., Liu, C.-C., & Wu, C.-H. (2008). Can Social Exchange Theory Explain Individual Knowledge-Sharing Behavior? A Meta-Analysis. *ICIS 2008 Proceedings*, 171. <https://aisel.aisnet.org/icis2008/171>
- Liang, X., & Fan, J. (2020). Self-sacrificial leadership and employee creativity: The mediating role of psychological safety. *Social Behavior and Personality: an international journal*, 48(12), 1-9. <https://doi.org/10.2224/sbp.9496>
- Lin, H.-F. (2007a). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of information science*, 33(2), 135-149. <https://doi.org/10.1177/0165551506068174>
- Lin, H. F. (2007b). Knowledge sharing and firm innovation capability: an empirical study. *International Journal of manpower*, 28(3/4), 315-332. <https://doi.org/10.1108/01437720710755272>
- Linawati, N., Moeljadi, M., Djumahir, D., & Aisjah, S. (2020). The Role of Peer to Peer Lending in Increasing Funding for Micro, Small, and Medium Enterprises. *SHS Web of Conferences*, 76(SHS Web Conf.), 01031. <https://doi.org/10.1051/shsconf/20207601031>
- Liu, X., Wen, J., Zhang, L., & Chen, Y. (2021). Does organizational collectivist culture breed self-sacrificial leadership? Testing a moderated mediation model. *International Journal of Hospitality Management*, 94, 102862. <https://doi.org/10.1016/j.ijhm.2021.102862>
- Luczak, C., & Kalbag, A. (2018). The appropriateness and effectiveness of cross-aged peer mentoring in the learning environment. *International Journal of Humanities, Arts and Social Sciences*, 4(2), 76-84. <https://doi.org/10.20469/ijhss.4.10003-2>
- Madhu, B., & Krishnan, V. R. (2005). Impact of Transformational Leadership and Karma-Yoga on Organizational Citizenship Behavior. *Prestige Journal of Management and Research*, 9(1), 1-20. <https://www.researchgate.net/profile/Venkat-Krishnan-6/publication/237692726>
- Malik, O. F., Shahzad, A., Raziq, M. M., Khan, M. M., Yusaf, S., & Khan, A. (2019). Perceptions of organizational politics, knowledge hiding, and employee creativity: The moderating role of professional commitment. *Personality and Individual Differences*, 142, 232-237. <https://doi.org/10.1016/j.paid.2018.05.005>

HOW DOES SELF-SACRIFICIAL LEADERSHIP AFFECT KNOWLEDGE SHARING AND KNOWLEDGE HIDING? THE MEDIATING EFFECTS OF SAFETY AND SUPPORT

- Malinga, K. S., Stander, M., & Nell, W. (2019). Positive Leadership: Moving Towards an Integrated Definition and Interventions. In L. E. Van Zyl & S. Rothmann Sr (Eds.), *Theoretical Approaches to Multi-Cultural Positive Psychological Interventions* (pp. 201-228). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-20583-6_9
- Mansoor, M., Fatima, T., & Ahmad, S. (2020). Signaling effect of brand credibility between fairness (price, product) and attitude of women buyers. *Abasyn University Journal of Social Sciences*, 13(1), 263-276. <https://doi.org/10.34091/AJSS.13.1.19>
- Mostafa, A. M. S., & Bottomley, P. A. (2020). Self-sacrificial leadership and employee behaviours: An examination of the role of organizational social capital. *Journal of business ethics*, 161(3), 641-652. <https://doi.org/10.1007/s10551-018-3964-5>
- Nedal, O. A., & Alcoriza, M. G. O. (2018). Challenges in education: The untold story of students in Lanao Kapanglao, Glan, Sarangani province. *Journal of Advances in Humanities and Social Sciences*, 4(3), 118-126. <https://doi.org/10.20474/jahss-4.3.1>
- Newman, A., Cooper, B., Holland, P., Miao, Q., & Teicher, J. (2019). How do industrial relations climate and union instrumentality enhance employee performance? The mediating effects of perceived job security and trust in management. *Human resource management*, 58(1), 35-44. <https://doi.org/10.1002/hrm.21921>
- Ngamvichaikit, A., & Beise-Zee, R. (2014). Customer preference for decision authority in credence services. *Managing Service Quality*, 24(3), 274-299. <https://doi.org/10.1108/MSQ-03-2013-0033>
- Nikandrou, I., Papalexandris, N., & Bourantas, D. (2000). Gaining employee trust after acquisition: Implications for managerial action. *Employee Relations*, 22(4), 334-355. <https://doi.org/10.1108/01425450010340344>
- Noda, T. (2020). Employee trust in management and mutual gains hypothesis in Japanese firms. *Journal of the Japanese and International Economies*, 55, 101062. <https://doi.org/10.1016/j.jjie.2020.101062>
- Noor, U., Mansoor, M., & Rabhani, S. (2022). Brand hate and retaliation in Muslim consumers: does offensive advertising matter? *Journal of Islamic Marketing*, 13(6), 1395-1413. <https://doi.org/10.1108/JIMA-10-2020-0316>
- O'Dwyer, M., Gilmore, A., & Carson, D. (2009). Innovative marketing in SMEs. *European Journal of Marketing*, 43(1-2), 46-61. <https://doi.org/10.1108/03090560910923238>
- Ogunmokun, O. A., Eluwole, K. K., Avci, T., Lasisi, T. T., & Ikhida, J. E. (2020). Propensity to trust and knowledge sharing behavior: An evaluation of importance-performance analysis among Nigerian restaurant employees. *Tourism Management Perspectives*, 33, 100590. <https://doi.org/10.1016/j.tmp.2019.100590>
- Olatokun, W., & Nwafor, C. I. (2012). The effect of extrinsic and intrinsic motivation on knowledge sharing intentions of civil servants in Ebonyi State, Nigeria. *Information Development*, 28(3), 216-234. <https://doi.org/10.1177/0266666912438567>
- Oliveira, M., Curado, C., Balle, A. R., & Kianto, A. (2020). Knowledge sharing, intellectual capital and organizational results in SMES: are they related? *Journal of Intellectual Capital*, 21(6), 893-911. <https://doi.org/10.1108/JIC-04-2019-0077>
- Peng, H. (2013). Why and when do people hide knowledge? *Journal of knowledge management*, 17(3), 398-415. <https://doi.org/10.1108/JKM-12-2012-0380>
- Rawlins, B. R. (2008). Measuring the relationship between organizational transparency and employee trust. *Public Relations Journal*, 2(Issue 2), 1-21. <https://scholarsarchive.byu.edu/facpub/885>
- Ramayah, T., Soto-Acosta, P., Kheng, K. K., & Mahmud, I. (2020). Developing process and product innovation through internal and external knowledge sources in manufacturing Malaysian firms: the role of absorptive capacity. *Business Process Management Journal*, 26(5), 1021-1039. <https://doi.org/10.1108/BPMJ-11-2019-0453>
- Rani, R., & Desiana, P. (2019). The impact of owners' intrinsic motivation and work-life balance on SMEs' performance: The mediating effect of affective commitment. *International Journal of Business*, 24(4), 393-411. <https://ijb.cyut.edu.tw/var/file/10/1010/img/865/V24N4-3.pdf>
- Robinson, S., Orsingher, C., Alkire, L., De Keyser, A., Giebelhausen, M., Papamichail, K. N., Shams, P., & Temerak, M. S. (2020). Frontline encounters of the AI kind: An evolved service encounter framework. *Journal of Business Research*, 116, 366-376. <https://doi.org/10.1016/j.jbusres.2019.08.038>
- Rubel, M. R. B., Rimi, N. N., Yusliza, M.-Y., & Kee, D. M. H. (2018). High commitment human resource management practices and employee service behaviour: Trust in management as mediator. *IIMB Management Review*, 30(4), 316-329. <https://doi.org/10.1016/j.iimb.2018.05.006>
- Saad, M., Jamaludin, N., & Yusuf, M. (2018). Analysis of the use of interpersonal communication emoji on WhatsApp use among students. In *5th International Conference on Social and Political Sciences (IcoSaPS 2018)* (pp. 214-217). Atlantis Press. <https://doi.org/10.2991/icosaps-18.2018.43>
- Sadeghi, S., Sajjadi, S. N., Nooshabadi, H. R., & Farahani, M. J. (2018). Social-cultural barriers of Muslim women athletes: Case study of professional female athletes in Iran. *Journal of Management Practices, Humanities and Social Sciences*, 2(1), 06-10. <http://www.global-jws.com/ojs/index.php/global-jws/article/view/7>
- Samsir, S. (2018). The effect of leadership orientation on innovation and its relationship with competitive advantages of small and medium enterprises in Indonesia. *International Journal of Law and Management*, 60(2), 530-542. <https://doi.org/10.1108/IJLMA-01-2017-0005s>
- Sawatsuk, B., Darmawijaya, I. G., Ratchusanti, S., & Phaokrueng, A. (2018). Factors determining the sustainable success of community-based tourism: Evidence of good corporate governance of Mae Kam Pong Homestay, Thailand. *International Journal of Business and Economic Affairs*, 3(1), 13-20. <https://doi.org/10.24088/IJBEA-2018-31002>
- Škerlavaj, M., Connelly, C. E., Cerne, M., & Dysvik, A. (2018). Tell me if you can: time pressure, prosocial motivation, perspective taking, and knowledge hiding. *Journal of Knowledge Management*, 22(7), 1489-1509. <https://doi.org/10.1108/JKM-05-2017-0179>
- Triandini, E., Djunaidy, A., & Siahaan, D. (2017). A maturity model for e-commerce adoption by small and medium enterprises in Indonesia. *Journal of Electronic Commerce in Organizations (JECO)*, 15(1), 44-58. <https://doi.org/10.4018/JECO.2017010103>
- Urbonavicius, S., & Sezer, A. (2019). Accommodation providers' motives in sharing economy: comparison between Turkey and Lithuania. *International Journal of Culture, Tourism and Hospitality Research*, 13(4), 393-409. <https://doi.org/10.1108/IJCTHR-07-2018-0096>
- Welschen, J., Todorova, N., & Mills, A. M. (2012). An investigation of the impact of intrinsic motivation on organizational knowledge sharing. *International Journal of Knowledge Management (IJKM)*, 8(2), 23-42. <https://doi.org/10.4018/jkm.2012040102>
- Wen, X., Zeng, J., Shahzad, K., Salam, S., & Latif, Z. (2019). Customer-knowledge enabled innovation: An empirical assessment. *Human Systems Management*, 38(2), 179-196. <https://doi.org/10.3233/HSM-180405>
- Xia, Q., Yan, S., Zhang, Y., & Chen, B. (2019). The curvilinear relationship between knowledge leadership and knowledge hiding: the moderating role of psychological ownership. *Leadership & Organization Development Journal*, 40(6), 669-683. <https://doi.org/10.1108/LODJ-10-2018-0362>
- Yamamori, K. (2019). Classroom practices of low-cost STEM education using scratch. *Yamamori, K. (2019). Classroom practices of low-cost STEM education using scratch. Journal of Advanced Research in Social Sciences and Humanities*, 4(6), 192-198. <https://doi.org/10.2139/ssrn.3791166>
- Yang, J., Lu, L., Yao, N., & Liang, C. (2020). Self-sacrificial leadership and employees' unethical pro-organizational behavior: Roles of identification with leaders and collectivism. *Social Behavior and Personality: an international journal*, 48(2), 1-12. <https://doi.org/10.2224/sbp.8285>
- Zhang, H., & Ye, M. (2016). A literature review of self-sacrificial leadership. *Psychology*, 7(9), 1205-1210. <http://doi.org/10.4236/psych.2016.79121>
- Zhang, J., Li, J., & Huang, J. (2020). How self-sacrificial leadership influences employee voice: Psychological safety as a mediator. *Social Behavior and Personality: an international journal*, 48(12), 1-8. <https://doi.org/10.2224/sbp.9555>