

科技部補助專題研究計畫報告

倫理領導對知識分享之影響－多元認同機制的中介探討

報告類別：成果報告

計畫類別：個別型計畫

計畫編號：MOST 108-2410-H-231-003-SSS

執行期間：108年08月01日至109年07月31日

執行單位：健行學校財團法人健行科技大學國際企業經營系暨國際企業管理研究所

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本研究具有政策應用參考價值：☒否 ☐是，建議提供機關
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本研究具影響公共利益之重大發現：☐否 ☐是

中 華 民 國 109 年 10 月 10 日

中文摘要：根據社會認定理論的視角，本計畫探討道德領導、群體認同、關係認同、組織認同，以及知識分享間之關係。本研究以台灣學校行政人員為實證調查對象，藉由問卷調查法與剔除無效問卷後，本研究共取得510份有效樣本進行後續之統計分析。在於假說驗證部分，本研究主要藉由Mplus軟體中的路徑分析與拔靴法針對計畫中的假說進行統計分析，檢驗道德領導如何透由多元的認同機制影響員工的知識分享行為。研究結果顯示，道德領導對知識分享同時有直接與間接的正向影響效果。具體而言，道德領導能藉由兩個不同的認同機制對於知識分享產生影響。首先，道德領導能強化成員群體認同，進而提升其知識分享行為。第二，道德領導亦能經由提升關係認同與組織認同，進而提升成員知識分享行為。基本上，雖然目前已有相關文獻探討道德領導與知識分享間之關係，然而其中間的中介機制，仍是一個尚未被充分探討的重要研究議題。根據本研究結果所示，社會認定理論將能對此類型之知識分享研究，提供一個嶄新的研究觀點與方向。

中文關鍵詞：道德領導、知識分享、群體認同、關係認同、組織認同、社會認定理論

英文摘要：The aim of this study is to investigate the associations among ethical leadership, group identification, relational identification, organizational identification, and knowledge sharing. This study conducted a survey in Taiwan to collect the data. The administrative group members of schools were invited to participate in this study. The sample included 510 participants, and the hypotheses were tested by using the path analysis and bootstrapping methods in the Mplus program to examine how ethical leadership influences knowledge sharing, through various means of identification. The results of this study show that ethical leadership has both a direct and indirect effect on knowledge sharing. There are two mediating paths in the ethical leadership-knowledge sharing relationship. Firstly, group identification mediates the relationship between ethical leadership and knowledge sharing. Secondly, ethical leadership has an influence on knowledge sharing by means of increased relational and organizational identification. This is a pioneering article that explores the psychological mechanism between ethical leadership and knowledge sharing, using the social identity approach. This study has shown that the social identity theory is a useful and promising perspective for future research studies on ethical leadership-knowledge sharing.

英文關鍵詞：Ethical leadership, Knowledge sharing, Group identification, Relational identification, Organizational identification, Social identity theory

Introduction

In the knowledge economy, knowledge is one of the most important assets and a critical source of competitive advantage (Nonaka and Takeuchi, 1995). Most companies are eagerly accumulating a stock of knowledge by using well-established knowledge management. However, successful knowledge management cannot be performed easily. For example, individuals sometimes tend to avoid sharing valuable knowledge with others, in order to secure their jobs or to gain power in the workplace (Davenport and Prusak, 1998). When there is no knowledge sharing among employees, it is difficult to achieve knowledge management (Wu and Lee, 2017). As a result, knowledge sharing is considered to be an important issue in knowledge management research.

In the past two decades, researchers have put a lot of effort into exploring the antecedents of knowledge sharing (Wang and Noe, 2010). Currently, the extant research has revealed several environmental factors that can effectively promote the knowledge sharing of employees, such as the reward/incentives system, culture, leadership, team characteristics, etc. (Kankanhalli *et al.*, 2005; Cabrera *et al.*, 2006; Hsu *et al.*, 2011; Liu and DeFrank, 2013). Of these antecedents, the influence of leadership has increasingly received the attention of researchers in recent years. Studies have begun to discuss how the leadership style of the immediate supervisors of employees impacts their knowledge-sharing performance. This is not surprising, because immediate leaders can always have a significant impact on the behavior of their subordinates (Higgins and Thomas, 2001; Sluss and Ashforth, 2008). Regarding the influence of immediate leadership on knowledge sharing, most extant studies argue that positive leadership, like empowering and transformational leadership, has a positive impact on knowledge sharing (Srivastava *et al.*, 2006; Liu and Defrank, 2013; Wu and Lee, 2017), and negative leadership, such as abusive supervision, has a negative effect on knowledge sharing (Kim *et al.*, 2015; Wu and Lee, 2016; Lee *et al.*, 2018).

Although knowledge sharing can also basically be considered as a moral challenge, leadership-knowledge sharing research is rarely conducted under a moral lens (Bavik *et al.*, 2018). Previous studies have claimed that knowledge sharing is an important moral issue (Lin, 2007; Lin and Joe, 2012). If there is a lack of willingness to engage in knowledge sharing by most employees, companies might lose their competitive advantage. Therefore, successful knowledge sharing is vital for a company's survival and sustainable operations. Bavik *et al.* (2018) first point out that it is necessary and important to employ a moral lens, in order to explore how to foster knowledge sharing, and that ethical leadership is an essential antecedent of knowledge sharing. Although

numerous previous studies have addressed how leadership styles influence knowledge sharing, only a few focus on the impact of ethical leadership. In order to further realize how ethical leadership influences knowledge sharing, this study draws on the social identity theory (SIT) (Tajfel, 1981; Ashforth and Mael, 1989) to investigate the identity-mediation mechanism that links ethical leadership and knowledge sharing. In particular, this study will explore the knowledge-sharing behavior of employees within the context of work groups, because they are the most common team units in a company and also the place where knowledge sharing occurs most often (Wu and Lee, 2017).

It is reasonable to apply the perspective of SIT to the relationship between ethical leadership and knowledge sharing. Firstly, in ethical leadership literature, researchers argue that SIT is an emerging and promising theoretical perspective from which to explore the underlying mechanism linking ethical leadership and the attitudes and behavior of the followers (Brown and Mitchell, 2010; Walumbwa *et al.*, 2011; Zhu *et al.*, 2015). Since ethical leadership normally displays positive and prestigious images, and employees usually want to be associated with such identities, leaders with a high level of ethical leadership can play an important role in developing the followers' identification and then influencing their attitudes and behaviors (Brown and Mitchell, 2010). Secondly, according to the social identity model of leadership, scholars argue that leaders have a huge influence on building the identification of employees, and then influencing their attitudes and behavior (Hogg, 2001; van Knippenberg and Hogg, 2003; Epitropaki *et al.*, 2017). Therefore, shaping the identification of employee is an important psychological mechanism that can be used to connect leadership (e.g., ethical leadership) and the desired organizational behavior (e.g., knowledge sharing).

This study has two main purposes. Firstly, because it is important to understand how leadership affects knowledge sharing under a moral lens (Bavik *et al.*, 2018), it explores the relationship between ethical leadership and knowledge sharing, within a group context. Secondly, drawing on SIT, this study investigates the underlying identity mechanism that links ethical leadership with knowledge sharing. In this study, we expect that the ethical leadership of a group leader will directly build and shape the group identification and the relational identification of group members, because they are the identifications that members would develop within a group mostly (van Dick *et al.*, 2008; Sluss and Ashforth, 2008; Zhang *et al.*, 2014). Furthermore, according to SIT, we argue that ethical leadership will influence knowledge sharing by means of two types of social identity paths. Firstly, this study expects that leadership has a positive impact on knowledge sharing through group identification, as members with high levels of group identification will take the group's interests into account (van Knippenberg *et*

al., 2004) and then engage in knowledge sharing. Secondly, the research on SIT has shown that relational identification is positively related to organizational identification (Sluss *et al.*, 2012); based on SIT, organizational identification is also supposed to be positively connected to knowledge sharing, because members with high levels of organizational identification tend to share knowledge, in order to benefit their organizations. Thus, this study argues further that there is a serial mediation effect of ethical leadership on knowledge sharing via relational and organizational identification. The research framework of this study is presented as Figure 1.

Insert Figure 1 about here.

This study will provide some important theoretical contributions to the relevant literature. Firstly, with regard to the research on the antecedents of knowledge sharing, although many studies have explored the relationship between leadership and knowledge sharing, few have revealed how leadership influences knowledge sharing under a moral lens. By exploring the underlying identity mechanism that links ethical leadership and knowledge sharing, we extend the limited extant knowledge-sharing research on how moral leadership (i.e. ethical leadership) is linked to knowledge sharing. Secondly, previous research on ethical leadership has been applied mainly to the theoretical perspectives of the social learning and social exchange theories to explain how ethical leaders influence the psychological mechanisms of their employees and, in turn, to achieve positive organizational behaviors. By applying SIT in this study, we will enrich the theoretical development of ethical leadership research. Thirdly, individuals usually identify with multiple social referents in the workplace. By investigating the dual-identity mechanism of identification, and the convergence process of identification within the relationship between ethical leadership and knowledge sharing, we extend the usefulness of SIT in a new and important research stream (i.e., knowledge-sharing research).

Literature review

Social identity theory and knowledge sharing

Organizational researchers have shown much interest in the concepts of identity and identification. For an employee, identity refers to “what something is” and identification is “the extent to which the employee includes that identity as a partial identification of self.” SIT is a major theoretical perspective for discussing how individuals connect themselves to, and identify with, various referents in an

organization; the referents could be the organization, the group and the relationships that form the organizational, group, and relational identification, respectively (Sluss and Ashforth, 2008). Basically, individuals can have multiple referents at the same time, so individuals will have simultaneous multi-identifications (Sluss and Ashforth, 2008; Epitropaki *et al.*, 2017). Furthermore, different types of identification can cooperate and converge (Sluss and Ashforth, 2008; Sluss *et al.*, 2012; Carmeli *et al.*, 2011). According to SIT, when individuals define 'self' in terms of their collective level, they also take the interests of the collective to heart (Turner *et al.*, 1987; van Knippenberg *et al.*, 2004). When applying this concept to this study, if an employee can include the group or organization in his or her "self-concept" (i.e., the collective level of self), such as group and organizational identification, the employee will be willing to engage in knowledge sharing, because he or she already perceives a sense of unity with, or belonging to, the group or organization.

Knowledge sharing

Knowledge sharing is the foundation of knowledge management (Foss *et al.*, 2010). Without it, there will be no successful knowledge creation or other related knowledge management activities (Nonaka and Takeuchi, 1995). As for the nature of knowledge, there are two types: explicit knowledge and tacit knowledge (Nonaka and Takeuchi, 1995). Explicit knowledge can be clearly defined, coded and written, and thus, it is easier to transfer and share; whereas tacit knowledge is hard to define, explain, and teach, and therefore, it usually takes a long time for employees to share tacit knowledge. Basically, tacit knowledge is more valuable and precious than explicit knowledge in the workplace; therefore, when researchers discuss the issue of knowledge sharing, they refer mainly to the sharing of tacit knowledge, as does this study.

In general, managers want their employees to share their knowledge, as it will definitely benefit their companies. But, employees would not engage in knowledge sharing without any hesitation or concern. When employees share their unique and valuable knowledge with others, it means that this shared knowledge becomes a public good; other people can obtain this knowledge at no cost (Cabrera and Cabrera, 2002). If most of the employees within a group are willing to share their tacit knowledge with others, every employee can be both a sharer and a receiver. In this case, although they share their tacit knowledge with others, they also learn from their colleagues, leading to a win-win situation. However, due to the intangible nature of tacit knowledge, it is difficult to judge, with certainty, whether employees have really shared their knowledge, or if they have just received another employees' knowledge, while hoarding their own

(Lam and Lambermont-Ford, 2010). This leads to the social dilemma of knowledge sharing (Cabrera and Cabrera, 2002; Lam and Lambermont-Ford, 2010). If an employee always shares his/her tacit knowledge with others, but the others are opportunistic in that they are only learning, without sharing, and acting as free-riders, then the knowledge sharer faces not only the cost of his/her time spent teaching other people, but it also decreases his/her chances for advancement, or even increases the possibility of losing his/her job. Thus, previous studies have put a lot of effort into exploring the antecedents of knowledge sharing, and leadership was found to be an important determinant of knowledge sharing (Srivastava *et al.*, 2006; Liu and DeFrank, 2012; Lee *et al.*, 2018).

Regarding the leadership-knowledge sharing literature, positive leadership, such as empowering leadership and transformational leadership, has been proved to have a positive influence on knowledge sharing. For example, empowering leadership is positively related to knowledge sharing, at both the group and cross levels (Srivastava *et al.*, 2006; Wu and Lee, 2017). Transformational leadership also has a positive cross-level influence on knowledge sharing (Liu and Phillips, 2011; Liu and DeFrank, 2012). On the other hand, with regard to negative leadership, researchers have shown that the abusive supervision of a leader is negatively related to the knowledge sharing of employees (Kim *et al.*, 2015; Wu and Lee, 2016; Lee *et al.*, 2018). It is obvious that leadership is a key determinant for knowledge sharing. However, Bavik *et al.* (2018) point out that knowledge sharing is also a moral challenge, because if most employees within an organization do not willingly engage in knowledge sharing, it will result in poor competition for the organization and a possible shutdown (Lin, 2007; Bavik *et al.*, 2018). Thus, researchers have argued that it is necessary to discuss the impact of leadership on knowledge sharing under a moral lens, and that ethical leadership is the appropriate leadership style with which to present moral leadership (Bavik *et al.*, 2018; Lei *et al.*, 2019). Drawing on SIT, this study explores the identity mechanism that underlies the relationship between ethical leadership and knowledge sharing.

Ethical leadership

With more and more corporate scandals occurring, scholars have shown an increasing concern for the moral side of a leader (Bedi *et al.*, 2016). As a result, ethical leadership is presented and attracts much of the researchers' attention (Brown *et al.*, 2005; Brown and Mitchell, 2010; Ko *et al.*, 2018). Ethical leadership is defined as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way

communication, reinforcement, and decision-making” (Brown *et al.*, 2005, p. 120). In essence, ethical leadership could be described well by using two dimensions, namely, the moral person and the moral manager (Treviño *et al.*, 2000; Treviño *et al.*, 2003; Brown and Mitchell, 2010). The moral person dimension refers to the qualities of the ethical leader as a person. Strong moral persons are considered to be honest, principled, trustworthy, and approachable; they show a concern for their followers and treat them fairly. In addition, strong moral persons are moral in both their personal and professional lives. The moral manager dimension describes how ethical leaders use their power to create a moral environment in the workplace. Ethical leaders are moral role models in organizations; they set and communicate clear ethical standards to their followers. Furthermore, they implement both rewards and punishments, in order to ensure that followers really take the ethical standards to heart. The emphasis on moral management is also key for making ethical leadership different from other types of leadership, such as authentic, spiritual, and transformational leadership (Brown and Treviño, 2006; Bedi *et al.*, 2016).

According to the moral characteristics of ethical leadership, we predict that ethical leaders will have a positive influence on the employees’ knowledge sharing within a group for the following two reasons: Firstly, since knowledge sharing is an ethical issue (Lin, 2007; Lin and Joe, 2012), the ethical leader of a group is supposed to share knowledge with his or her followers because he/she should act as a moral person and share knowledge with others, because it is the right and ethical thing to do. Previous studies have shown that ethical leaders can act as role models for their followers; thus, their followers tend to engage less in unethical behavior (Arel *et al.*, 2012; Demirtas, 2015; Mayer *et al.*, 2012) and embrace ethical behavior (Mayer *et al.*, 2013; Lee *et al.*, 2017). Following this logic, we assume that when ethical leaders communicate their attitudes, values and knowledge sharing behavior to the group members, this can effectively prevent group members from hoarding their knowledge (unethical behavior) and it can also encourage members to share their knowledge (ethical behavior). Secondly, since the ethical leader of a group is honest, principled and trustworthy, followers will tend to trust him or her in the work environment. Previous studies have shown that ethical leadership can foster the followers’ perception of trust (Newman *et al.*, 2014) and psychological safety (Walumbwa and Schaubroeck, 2009), while it can also decrease the employees’ fear of retaliation (Mayer *et al.*, 2013). In this situation, members will be more likely to share their knowledge with their co-workers because they are not be worried about losing their job once they have shared their unique and valuable knowledge with others. Ethical leaders should also implement both rewards and punishments, in order to ensure ethical standards are set in the workplace (Brown

et al., 2005; Brown and Mitchell, 2010). As mentioned above, ethical leaders should honestly reward knowledge sharers and punish knowledge hoarders. Thus, employees tend to be less afraid of free riders who only receive knowledge, without contributing. In summary, the ethical leader of a group can establish a friendly and fair group environment to solve the social dilemma of knowledge sharing, and can thus encourage members to share their knowledge. Therefore, we predict the following:

Hypothesis 1: Ethical leadership is positively related to the employees' knowledge sharing.

Ethical leadership and group identification

As depicted in Figure 1, according to SIT, this study further proposes that the effect of ethical leadership on the knowledge sharing of employees is mediated by group identification. Group identification is one kind of social identification (Zhang *et al.*, 2014), which refers to the feeling of psychological attachment and belonging that members exhibit towards their group (Tajfel and Turner, 1986; Hogg and Hains, 1998; Huettermann *et al.*, 2014). Scholars have claimed that group leadership is the main factor in shaping the group identification of members (van Knippenberg *et al.*, 2004; Huettermann *et al.*, 2014). In fact, abundant research has proven that leadership, such as transformational leadership, has a significant impact on group identification (Kark *et al.*, 2003; Walumbwa *et al.*, 2008; Wu *et al.*, 2010). Although no study has thus far explored the relationship between ethical leadership and group identification, as drawn from SIT, we argue that ethical leadership is expected to be positively related to group identification.

According to SIT, individuals would like to identify with a group that has distinct positive values (Ashforth and Mael, 1989); in seeking to establish positive differences between other groups and themselves, they try to enhance their self-esteem (Tajfel, 1982; Tajfel and Turner, 1986). Since ethical leaders instill and implement ethical standards and values in the group (Brown *et al.*, 2005; Brown and Treviño, 2006), the groups display positive characteristics and values, such as justice, fairness, honesty, etc. These positive characteristics and values will foster the group identification of the members because they enhance their self-esteem. Group members are proud to identify with this kind of workgroup and they thus develop a high degree of identification. A leader's clear ethical guidance fosters the perception of shared beliefs and norms (Zheng *et al.*, 2015) and may also decrease the interpersonal conflicts among members (Mayer *et al.*, 2012). According to SIT, the perception of shared beliefs and norms, or

decreasing interpersonal conflicts, can be positively related to group formation and it can then promote group identification (Ashforth and Mael, 1989).

Drawing on SIT, this study expects that group identification is positively related to knowledge sharing, for the following three reasons: Firstly, when individuals identify with their group, they commit their efforts to supporting the group (Ashforth and Mael, 1989). In other words, as individuals with high collective identification, they will consider the collective interest as self-interest, and will intrinsically contribute to the collective good (Dutton *et al.*, 1994; van Knippenberg *et al.*, 2004). Thus, when members within a group have a high degree of group identification, they will engage in knowledge sharing, since this kind of behavior is beneficial for the group. Secondly, SIT argues that social identification is helpful for forming intragroup cohesion, cooperation, and altruism (Turner, 1984; Ashforth and Mael, 1989). Therefore, members who identify with the group tend to engage in cooperative behavior, such as knowledge sharing. In addition, since the members evaluate the other group members with an altruistic and positive attitude, they will face less of a social dilemma about sharing their knowledge. Previous research has shown that developing an identification with a group is a useful way of dealing with social dilemmas (Zhang *et al.*, 2014). Thus, they will be less likely to fear free riders and will be more willing to share their knowledge with others. Finally, according to SIT, identification also helps individuals to internalize the group values and norms, which then influence their attitudes and behavior (Turner, 1984; Ashforth and Mael, 1989). The groups that we explore in this study are supposed to possess ethical values and norms, since ethical leaders establish the groups in this way (Brown and Mitchell, 2010; Huang and Paterson, 2017). As a result, when members identify with the groups, they also internalize their ethical values and norms, and knowledge sharing is considered to be an ethical behavior. Therefore, this study assumes that when members have a high degree of group identification, they will internalize ethical values and norms, and engage in knowledge sharing, and it also argues that group identification is positively related to knowledge sharing.

To sum up, the above explanations are consistent with SIT and the social identity model of leadership, which argue that leaders can motivate their followers to perform positive behavior by shaping the identification of their followers (Hogg, 2001; van Knippenberg and Hogg, 2003; Epitropaki *et al.*, 2017). Therefore, it is reasonable to expect that ethical leaders will foster the group identification of their followers and, in turn, increase their knowledge-sharing behavior; therefore, we posit the following:

Hypothesis 2: Group identification mediates the positive relationship between ethical

leadership and knowledge sharing.

Ethical leadership, relational identification and organizational identification

In this section, we first explain how ethical leadership develops relational identification and, in turn, how it fosters organizational identification. The positive relationship between organizational identification and knowledge sharing is then illustrated. Finally, the series mediators, namely relational and organizational identification, are proposed to support the relationship between ethical leadership and knowledge sharing.

Although identification is considered as an important psychological mechanism and self-concept in organization research, most previous studies focus on individuals identifying with social groups (e.g., work groups or organizations) much more than work relationships (Slater *et al.*, 2018). However, the work relationship plays an important role in the employees' work environment; they rely heavily on good role relationships at work (e.g., subordinate-manager, coworker-coworker, buyer-customer) to accomplish their daily tasks and to achieve a better work performance (Sluss and Ashforth, 2007). The role relationship of employees with their immediate supervisors is the most salient, because these supervisors in the workplace provide their employees with resources, or they punish them (Sluss and Ashforth, 2008). It is important to discuss the employee's identification with the subordinate-manager role relationship; hence, the relationship identification that we refer to in this study is that an individual identifies with the subordinate-manager role relationship in a workgroup. Based on the definition of Sluss and Ashforth (2007), this study defines relational identification as the extent to which one defines oneself in terms of a given subordinate-manager relationship. Previous studies have shown that positive leadership is positively related to relational identification (Zhang and Chen, 2013; Qu *et al.*, 2015; Zhu *et al.*, 2015). This study also assumes that ethical leadership has a positive influence on relational identification.

According to the relational identification theory (Sluss and Ashforth, 2007, 2008), as individuals enter a role relationship, the greater the perception of attractiveness or desirability of a relational identity, and the greater the development of relational identification. We believe that some of the characteristics of ethical leadership benefit the establishment of a positive subordinate-manager role relationship. Since ethical leaders are considerate, honest and trustworthy (Brown and Mitchell, 2010), when they get along with their followers, their followers usually generate positive attitudes, such as satisfaction with their leaders and jobs (Ko *et al.*, 2018), life satisfaction and family

satisfaction (Yang, 2014; Liao *et al.*, 2014). Therefore, this kind of role relationship is desirable for the followers. In addition, because ethical leaders are moral, fair, and principled in their personal and professional lives (Brown *et al.*, 2005; Brown and Treviño, 2006), it is easy for employees to interact with their ethical leaders. Previous studies have shown that, under the guidance of ethical leaders, followers tend to perceive trust, task significance, and increased psychological capital and self-efficacy (Ko *et al.*, 2018). In other words, followers can gain positive resources from the role relationship with an ethical leader. In summary, an ethical leader can make the subordinate-manager role relationship attractive and desirable to the followers, by associating it with the followers' increased positive attitudes in the workplace and in their personal lives, and expanding their positive psychological resources. In a group, due to the salient and importance of this role relationship, members will tend to exhibit greater relational identification. Therefore, this study expects that ethical leadership is positively related to relational identification.

Following on the logic of the identification convergence perspective (Sluss and Ashforth, 2008), we predict that relational identification is positively related to organizational identification, which refers to the employees' perception of unity with, and belonging to, their organization (Ashforth and Mael, 1989). The convergence of one's different levels of self is explained by the notion of generalization, which occurs when an individual's referent targets signify a resemblance (Sluss and Ashforth, 2008). In this study, it refers to two identifying referents simultaneously. Since role relationships and organizations, which are stimuli for relational identification and organizational identification, respectively, are structurally-nested entities, they are logically considered as resembling each other. The convergence of relational identification and organizational identification occurs mainly via three mechanisms (Sluss and Ashforth, 2008; Sluss *et al.*, 2012). Firstly, individuals with a high relational identification have a positive role relationship with their immediate supervisors (Sluss and Ashforth, 2007). Since role relationships with supervisors and organizations are easily linked together, the individuals will thus also have a positive effect on their organizations by forming organizational identifications. Secondly, individuals with a high relational identification tend to be easily influenced by their partners in the role relationship (Sluss and Ashforth, 2007). In this study, the relational partners of individuals are their supervisors, who are usually expected to speak positively about the organizations which, in turn, helps to increase the organizational identification. Thirdly, relational identification raises organizational identification through behavioral sense-making. Individuals identifying their role relationships with their supervisors will devote themselves to meeting the behavioral goals set by them. Since the goals of

supervisors and the expectations of the organization are usually similar and overlap, when individuals achieve the behavioral goals of their supervisors, they also accomplish the behavioral goals of the organizations. Due to the need for self-consistency (Swann, 1987), individuals identify with the organizations through their behavior. According to the above three mechanisms, relational identification is expected to increase organizational identification, and this convergence of identifications (from relational to organizational identification) is empirically proven by two previous studies (Carmeli *et al.*, 2011; Sluss *et al.*, 2012). In summary, since ethical leadership is positively related to relational identification, and relational identification forms organizational identification, we hypothesize the following:

Hypothesis 3: Relational identification mediates a positive relationship between ethical leadership and organizational identification.

Furthermore, this study assumes that the organizational identification of members is positively related to their knowledge-sharing behavior. Organizational identification is related to the collective level of self and is one kind of social identification. According to SIT (Ashforth and Mael, 1989), when individuals identify with their organizations (i.e., organizational identification), they tend to generate in-group favoritism, and support the organizations. Researchers have shown that organizational identification is related to the extra-role behavior of employees (Riketta, 2005), such as their organizational citizenship behavior (van Dick *et al.*, 2006; Cho and Treadway, 2011); therefore, when members identify with the organization, they are willing to conduct extra-role behavior, in order to benefit the organization. Basically, knowledge sharing is one kind of extra-role behavior (Wu and Lee, 2016), and therefore, organizational identification is supposed to increase knowledge sharing. In addition, when employees identify with the organization, they tend to put the collective interests (e.g., the organizational interest) before their own self-interest (van Knippenberg *et al.*, 2004). Thus, they value the benefits of sharing knowledge with others more than hoarding knowledge for themselves. In other words, members with high organizational identification tend to perform extra-role behavior and consider the organizational interest, rather than self-interest as their first priority. Since knowledge-sharing behavior benefits the organization, this study assumes that members with high organizational identification would like to perform knowledge sharing, even though it is not always necessary.

Based on Hypothesis 3 and the abovementioned hypothetical relationship between organizational identification and knowledge sharing, we propose that there is a positive

and indirect effect of ethical leadership on the members' knowledge sharing via their relational and organizational identification. Importantly, this proposed hypothesis integrates the arguments and logic of the social identity model of leadership (Hogg, 2001; van Knippenberg *et al.*, 2004) and the identification convergence perspective (Sluss and Ashforth, 2008; Sluss *et al.*, 2012). According to the social identity model of leadership, leaders shape the identification of their followers, which, in turn, increases their positive performance and their desired behavior. In this study, ethical leaders shape the identifications of members, in order to promote their knowledge-sharing behavior. In addition, the perspective of identification convergence argues that there might be interplay between the different identifications. We apply this perspective further to complement the social identity model of leadership, namely, that the different identifications of the followers could interplay during the process of developing identifications. As a result, we offer the following:

Hypothesis 4: Ethical leadership exhibits a positive, serial and indirect relationship with knowledge sharing via increased relational identification and, consequently, increased organizational identification.

Method

Sample and procedure

This study aims to explore the impact of ethical leaders on knowledge sharing. Thus, the moral issue of leaders is one of our concerns, as there have been some school scandals in Taiwan in recent years. For example, a school head stole school assets by making false claims. Such news shows that some leaders in Taiwanese schools have serious ethical problems. Basically, leaders in schools are supposed to be ethical leaders; however, in reality, this is not always the case. As a result, this study plans to use administrative groups in the schools as our research target.

The survey method was applied to this study by means of a questionnaire. Since this study explores the influence of ethical leadership on the knowledge sharing of followers, in the context of workgroups, the survey target in this study is the group members. The participants of this study are members of administrative groups of schools in Central and Northern Taiwan. Convenient sampling was used in this study. After the preliminary selection, the researchers contacted the schools via telephone to ask whether they were willing to participate in this study. Questionnaires were sent to the

schools via delivery services, or in person, after confirming the number of administrative group members that could participate in the study. In order to increase the response rate, the researchers also urged the schools to submit the questionnaires via telephone two weeks after delivery. To ensure that the participants answered the questionnaire honestly, without worrying about identity exposure, all of the questionnaires had no unique reference numbers for identification. Before the survey, the researchers introduced the contact persons to the purpose of the study and the approaches of the survey. After the survey, only the questionnaires that were fully completed were adopted as the data for the empirical analysis.

A total of 600 administrative group members from 54 schools were invited to participate in this survey. A total of 510 participants completed the questionnaires successfully (an 85% response rate). Of the 510 participants, 63.3% were female, 70.5% were married, the average age was 39.56 years ($SD= 8.03$), the average tenure was 13.36 years ($SD= 8.20$), and 98.2% of the participants had an associate's degree, or above.

Measures

All of the measurements in this study used a seven-point scale. The response options were from 1 = "strongly disagree" to 7 = "strongly agree." The back translation method was used to ensure that the meanings of items in the Chinese version were the same as the original items.

Knowledge sharing: The scale developed by Lin (2007) was used to measure the members' knowledge sharing, and it included four questions that were related to tacit knowledge sharing. The members were required to make assessments of their knowledge-sharing behavior. Samples of these items are as follows: "I share my job experience with my co-workers," and "I share my expertise at the request of my co-workers." The Cronbach's α for this scale was 0.95.

Ethical leadership: We used the measurement items developed by Brown *et al.* (2005) for this scale. In total, there were 10 measurement items that were addressed by the group members to evaluate their perception of ethical leadership, for example, "Sets an example of how to do things the right way, in terms of ethics," and "Defines success not just by the results, but also the way that they are obtained." The Cronbach's α for this scale was 0.95.

Organizational identification: The organizational identification adopted the scale by Mael and Ashforth (1992). Sample items like "When someone criticizes (name of school), it feels like a personal insult," and "I am very interested in what others think about (name of school)" were provided to the participants to evaluate their organizational identification. The Cronbach's α for this scale was 0.89.

Relational identification: The scale developed by *Sluss et al.* (2012) was applied to measure relational identification; it included four items that were offered to the group members, including: "My relationship with my immediate supervisor is an important part of who I am at work," and "If someone criticized my relationship with my immediate supervisor, it would feel like a personal insult." The Cronbach's α for this scale was 0.86.

Group identification: We measured the extent to which group members identified with the workgroup, by using the same root items of organizational identification (Mael and Ashforth, 1992). We adapted the identified referents from the organization to the workgroup. Sample items included: "When someone criticizes my workgroup, it feels like a personal insult," and "I am very interested in what others think about my workgroup." These were provided to the participants to evaluate their group identification. The Cronbach's α for this scale was 0.94.

Control variables: This study used the members' demographic variables, such as gender, education, and working tenure, as the control variables. In addition, in order to reduce the negative effect of common method variance (CMV) on the results, as suggested by Podsakoff *et al.* (2003), the employees' positive affect (Watson *et al.*, 1988) was added to this study as one of the control variables of knowledge sharing. The Cronbach's α for this scale was 0.96.

Results

This study conducted a five-factor confirmatory factor analysis (CFA) model for the above five main measures (i.e., knowledge sharing, ethical leadership, organizational identification, relational identification and group identification). Item parceling was used in the model for keeping a reasonable number of the degrees of freedom (Bandalos, 2002). The CFA results showed that this model achieved an acceptable fit, namely: GFI=0.92, IFI=0.97, CFI=0.97 and RMSEA=0.073. All of the measures had a composite reliability (CR) of above 0.82 and an average variance extracted (AVE) of above 0.70. The square roots of all the AVE scores were higher than any correlations

of the possible focal pair measures. Therefore, both the convergent and discriminant validities were supported. In addition, as the main variables were filled out by team members, the CMV might influence the results. This study had conducted a Harman's one-factor test to examine the CMV (Podsakoff *et al.*, 2003), and the results showed that there were no serious problems regarding CMV in this study.

The descriptive statistics are presented in Table 1. To test Hypothesis 1, we conducted a multiple regression model, as shown in Table 2. Hypothesis 1 predicts that ethical leadership has a positive effect on knowledge sharing. Model 1 of Table 2 shows that ethical leadership was positively and significantly related to knowledge sharing ($b=.29$, $p<0.001$), thus Hypothesis 1 was supported.

Insert Table 1 about here.

Insert Table 2 about here.

In order to test Hypotheses 2, 3, and 4, we first depicted the path analysis model in Figure 2. This study then used the bootstrapping method (with 10000 replications) in the Mplus program to test all of the indirect effect hypotheses. Regarding the control variables, because only positive affect had an impact on knowledge sharing ($b=.18$, $p<0.01$), the influences of the control variables were omitted in Figure 2, in order to simplify the figure.

Hypothesis 2 predicts that ethical leadership has a positive and indirect effect on knowledge sharing via group identification. As shown in Figure 2, ethical leadership was significantly and positively related to group identification ($b=.57$, $p<0.001$), and group identification was significantly and positively related to knowledge sharing ($b=.18$, $p<0.05$). The indirect effect of ethical leadership on knowledge sharing via group identification was .10 ($p<0.05$), and the bootstrapping analyses showed that the 95% confidence interval did not contain zero ($CI= [.021, .178]$). Thus, Hypothesis 2 was supported. Hypothesis 3 predicts that ethical leadership has a positive and indirect effect on organizational identification through relational identification. As shown in Figure 2, ethical leadership was significantly and positively related to relational identification ($b=.67$, $p<0.001$), and relational identification was significantly and positively related to organizational identification ($b=.44$, $p<0.001$). The indirect effect of ethical leadership on organizational identification via relational identification was .30 ($p<0.001$), and the bootstrapping analyses showed that the 95% confidence interval did not contain zero ($CI= [.237, .354]$). Thus, Hypothesis 3 was supported.

Hypothesis 4 predicts that ethical leadership has a positive influence on knowledge sharing through relational and organizational identification. As mentioned above, there was a positive and significant effect between ethical leadership and relational identification, and between relational and organizational identification. As shown in Figure 2, organizational identification was also significantly and positively related to knowledge sharing ($b=.29$, $p<0.001$). The indirect effect of ethical leadership on knowledge sharing via relational identification and organizational identification was $.09$ ($p<0.001$), and the bootstrapping analyses showed that the 95% confidence interval did not contain zero ($CI = [.047, .122]$). Thus, Hypothesis 4 was supported.

Insert Figure 2 about here.

Discussion and Conclusions

This study is one of the first to explore the influence of ethical leadership on knowledge sharing through various identification mechanisms. Based on SIT, this study showed how ethical leadership fosters the identification of its followers and then enhances their knowledge sharing. Specifically, this study demonstrated that ethical leadership has an indirect effect on knowledge sharing through increased group identification. Furthermore, ethical leadership exhibits a serial mediating effect on knowledge sharing via increased relational and organizational identification. This study has several important theoretical contributions. Firstly, it contributes to the knowledge-sharing literature by using a moral lens to examine the role of ethical leadership. Although knowledge sharing has been an important issue in the knowledge management field for many years, the influence of ethical leadership on knowledge sharing has just received the attention of scholars in recent years. The first paper to examine how leadership influences knowledge sharing, using a moral lens, was the work of Bavik *et al.* (2018), who showed that ethical leadership has a positive effect on knowledge sharing. Since then, ethical leadership has gradually gained the attention of scholars. The positive influence of ethical leadership on knowledge sharing has been found in enterprises in the high-tech industry, in manufacturing, or in the service sectors (Bavik *et al.*, 2018; Lei *et al.*, 2019; Liu *et al.*, 2020). The results of this study further showed that this ethical leadership-knowledge sharing relationship also exists in an educational context. This research provides a small contribution to the generalization of this newly-developed causality.

Secondly, based on SIT, this study reveals how ethical leadership affects knowledge sharing by means of different kinds of identification. In the extant literature, researchers

have proven that motivation, moral identity, trust, and culture are important mediators for the ethical leadership-knowledge sharing relationship (Bavik *et al.*, 2018; Le and Lei, 2018; Lei *et al.*, 2019). This study proves further that the employees' perceptions of identification could translate into the influence of ethical leadership on knowledge sharing. In the workplace, employees rarely perform tasks or jobs alone, as they usually work within a workgroup. Therefore, it is important for employees to identify with the workgroup. This study demonstrates that ethical leadership has not only a direct effect on knowledge sharing, but it also has an indirect effect through increased group identification. This result is consistent with previous studies that group identification is an important psychological mechanism that connects leadership with the followers' desired organizational behavior (Herman and Chiu, 2014; Liu and Li, 2018). Moreover, this study examines the impact of ethical leadership on knowledge sharing via relational and organizational identification. This serial mediation effect not only echoes the argument that different types of identification might converge (Sluss and Ashforth, 2008; Sluss *et al.*, 2012), but it also gives us a clearer understanding of the mechanism between ethical leadership and knowledge sharing. In other words, the results of this study depict a vivid picture of how different kinds of employee identification mediate the relationship between ethical leadership and knowledge sharing. It shows us that the identification of employees could be a promising psychological mechanism for the relationship between ethical leadership and knowledge sharing for future studies.

Finally, introducing SIT into this study has expanded the scope of its application. More importantly, depending on the abundant research results of SIT in previous studies, it could offer many useful insights for future knowledge-sharing studies. For example, this study indicates that organizational identification is significantly related to knowledge sharing. Previous studies on SIT have already shown that organizational identification could be promoted from different perspectives, such as perceived organizational prestige (Carmeli *et al.*, 2007), support (Zagenczyk *et al.*, 2011) or justice (Fuchs and Edwards, 2012), etc. We thus have a more theoretical ground for exploring how to increase the employees' organizational identification, which, in turn, promotes knowledge sharing. Similarly, the results of this study also contribute to the social identity model of leadership (Hogg, 2001; Epitropaki *et al.*, 2017). In this model, researchers argue that leaders could promote the followers' positive behavior, depending on the shape of their identification. This study contributes some evidence to support this model by showing that ethical leaders could motivate followers to perform knowledge sharing (positive behaviors) by shaping their group and organizational identification.

Practical implication

Our study has several important implications for managers. Firstly, the results indicate that ethical leadership has positive direct and indirect effects on knowledge sharing. It means that if managers could serve as ethical role models and ensure that their followers can work in a moral environment, it could effectively promote the followers' knowledge sharing behavior. Besides this, in order to improve the managers' moral awareness, companies could offer more ethical training programs for their managers. Secondly, the relationship between group identification and knowledge sharing is significant. Managers could create a more positive atmosphere within the workgroup, or a higher group reputation, which could both help group members to have a higher level of group identification. Finally, our research has found that the relational identification of employees with their supervisors is an important mediator that translates ethical leadership into organizational identification, which, in turn, leads to knowledge sharing. In general, when a subordinate-manager relationship is more attractive or desirable, employees are more willing to identify with the role relationship. Thus, managers should keep in mind that it is important to build a positive and high-quality relationship with their subordinates, in order to increase their relational identification.

Limitations

Some of the limitations of this study include the following: Firstly, the hypotheses of this study imply that there is a causal relationship in nature. However, the survey has a cross-sectional design. Future studies could use a longitudinal design for collecting data, in order to have a rigorous sampling method. Secondly, the knowledge-sharing scale is rated by participants, but people sometimes might over-evaluate their positive behavior, such as knowledge sharing. Future studies might ask the participants' coworkers or supervisors to fill out this scale. Thirdly, all of the measurement scales are self-reported. Although we have added some control variables (e.g., positive affect) and conducted Harman's one-factor test to ensure that there is no serious problem with the CMV, future studies could try to collect the data from multiple sources. Finally, according to SIT, there are different types of identification, but this study only includes three. Future studies could also include some other types of identification into their theoretical models, such as professional or personal identification. Furthermore, different types of identification may also interact or converge with one another, therefore future studies could further explore these rich and complex identity mechanisms between ethical leadership and knowledge sharing.

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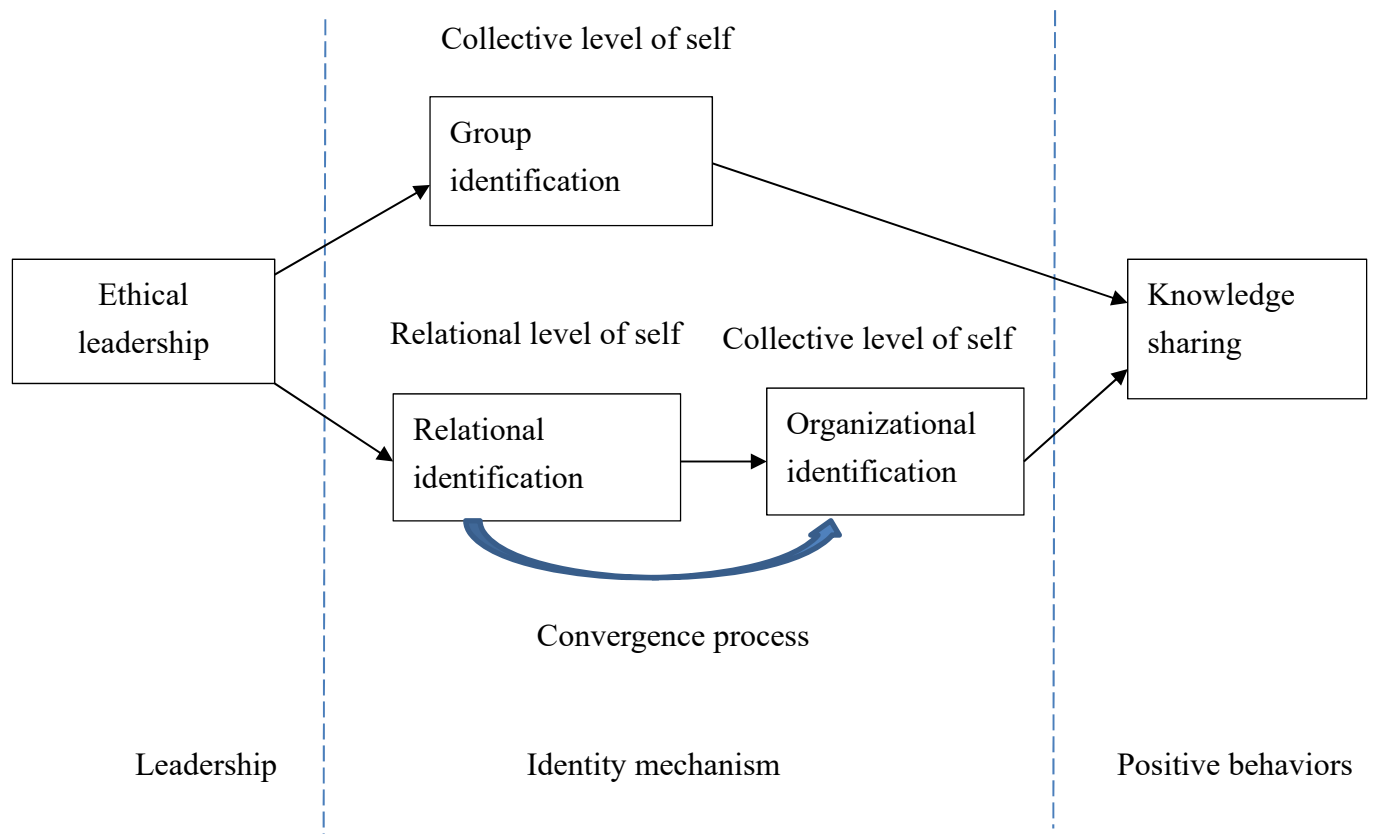


Figure 1. Research framework

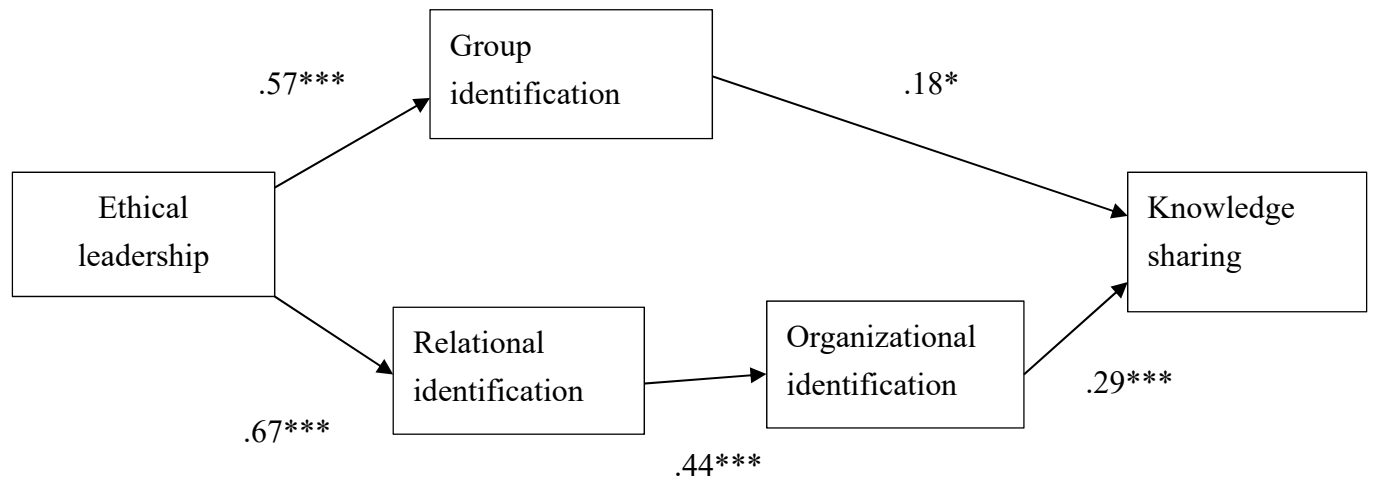


Figure 2. Results of path analysis.

Table 1. Means, standard deviations, and correlations.

Variables	Mean	s.d.	1	2	3	4	5	6	7	8
1. Gender ^a	.37	.48								
2. Education ^b	2.05	.70	.14*							
		8.2								
3. Working tenure	13.36	0	-.06	-.19***						
		1.0			.21**					
4. Positive affect	4.89	1	-.01	-.04	*					
		1.0				.52**				
5. Ethical leadership	5.06	8	.08	-.03	.06	*				
		1.1				.57**	.57**			
6. Group identification	5.21	2	.01	.04	.13**	*	*			
		1.1						.41**	.67**	.55**
7. Relational identification	4.69	5	.03	.01	.03	*	*	*	*	*
		1.0			.20**	.52**	.54**	.72**	.44**	
8. Organizational identification	5.19	6	-.03	-.05	*	*	*	*	*	
		1.0				.48**	.45**	.53**	.36**	.55**
9. Knowledge sharing	5.60	9	-.04	-.06	.15**	*	*	*	*	*

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

^a1= male, 0= female

^b 0= senior high school, 1= associate's degree, 2= bachelor's degree, 3= master's degree and above.

Table 2 Result of regression analysis

		Knowledge sharing
		Model 1
Variables		
Gender		-.06
Education		-.02
Working tenure		.06
Positive affect		.31***
Ethical leadership		.29***
R²		.29
F		41.83***

*p < 0.05 **p < 0.01 ***p < 0.001