



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

## ARCHIVIO ISTITUZIONALE DELLA RICERCA

### Alma Mater Studiorum Università di Bologna Archivio istituzionale della ricerca

An alternative way to predict knowledge hiding: The lens of transformational leadership

This is the final peer-reviewed author's accepted manuscript (postprint) of the following publication:

*Published Version:*

Scuotto, V., Nespoli, C., Tran, P.T., Cappiello, G. (2022). An alternative way to predict knowledge hiding: The lens of transformational leadership. JOURNAL OF BUSINESS RESEARCH, 140, 76-84 [10.1016/j.jbusres.2021.11.045].

*Availability:*

This version is available at: <https://hdl.handle.net/11585/881835> since: 2022-04-11

*Published:*

DOI: <http://doi.org/10.1016/j.jbusres.2021.11.045>

*Terms of use:*

Some rights reserved. The terms and conditions for the reuse of this version of the manuscript are specified in the publishing policy. For all terms of use and more information see the publisher's website.

This item was downloaded from IRIS Università di Bologna (<https://cris.unibo.it/>).  
When citing, please refer to the published version.

(Article begins on next page)

This is the final peer-reviewed accepted manuscript of:

**Scuotto, V., Nespoli, C., Tran, P. T., & Cappiello, G. (2022). An alternative way to predict knowledge hiding: The lens of transformational leadership. *Journal of Business Research*, 140, 76-84.**

The final published version is available online at:

<https://doi.org/10.1016/j.jbusres.2021.11.045>

Terms of use:

Some rights reserved. The terms and conditions for the reuse of this version of the manuscript are specified in the publishing policy. For all terms of use and more information see the publisher's website.

*This item was downloaded from IRIS Università di Bologna (<https://cris.unibo.it/>)*

***When citing, please refer to the published version.***

# **An alternative way to predict knowledge hiding: The lens of transformational leadership**

## **Abstract**

*The present study explores one of the biggest causes of the lack of organizational knowledge creation: knowledge hiding (KH). KH can be provoked by the deviant and detached behaviours of leaders and/or the motivations of employees. In this context, leaders assume a key role in reducing the effect of KH. Through the lens of transformational leadership (TL), a sample of 758 European SMEs with a total number of 2,232 employees operating in a knowledge-intensive sector is investigated. The scope is to evaluate the correlation between the three main characteristics of transformational leadership (i.e., trust, a collaborative environment, and the involvement of employees) and the phenomenon of KH through a logistic regression analysis. It emerges that TL can influence the organizational context and redefine the behaviours related to KH. In addition, empathic leadership can provide added value for companies since a collaborative environment and common objectives reduce the level of KH.*

**Keywords:** *knowledge hiding, transformational leadership, trust, collaborative environment, logistic regression model*

## **1. Introduction**

In a hypercompetitive environment characterized by dynamism and change, it is essential for companies to gain a lasting competitive advantage. In this context, knowledge is considered to be one of the most important strategic resources for organizations, and its management is critical to organizational success (Carayannis et al., 2017; Colemann, 1999; King, 2011). The management of knowledge and the ability to generate and spread it within the organization represent a substantial strategic asset. Companies that are able to manage their collective expertise and knowledge effectively are more likely to gain a competitive edge by being more innovative, efficient, and effective in the marketplace (Levin & Cross, 2004). However, when this does not occur and knowledge is concealed, the phenomenon of knowledge hiding (KH) is induced.

KH is distinguished by a lack of activity toward and interest in knowledge sharing. Connelly et al. (2012) suggested that KH can stem from instrumental or antisocial motivations. These refer to the willingness to hide knowledge within an organizational

environment, or the tendency to hinder formative learning (Huo et al., 2016). It is crucial for organizations to understand how and to what extent knowledge can be transferred and shared and which policies and strategies incentivize this behaviour. Many managers expect their employees to share their knowledge freely with each other, which enables the organization to function more efficiently and effectively. However, organizations do not “own” the intellectual assets of employees (Kelloway & Barling, 2000), and many employees prefer to keep their knowledge to themselves. Organizations today want to ensure that they have an effective flow of knowledge to derive maximum value from their knowledge assets. KH has been distinguished from a number of related, but distinct, behaviours, such as deception, social undermining, incivility, and territoriality (Webster et al., 2008). KH implies that an individual will contribute less information to organizational knowledge (Tang et al., 2015). Furthermore, it may cause harm to collaboration within an organization, the development of new ideas, or the implementation of policies and procedures. Recently, scholars have also analysed the influence of territoriality (Singh, 2019), the psychological ownership of knowledge (Peng, 2013), and transformational leadership (Ladan, 2017) on KH. Although KH is as old as the field of KM itself (Davenport, 1997; Davenport & Prusak, 1998), it remains unexplored. In addition, there is currently no univocal definition of KH, nor are there in-depth studies on related variables. There is a dramatic overlap in the names and conceptual definitions of counterproductive knowledge behaviours (Dalal, 2005; Robinson & Bennett, 1995, 2000; Spector et al., 2006).

Research on the antecedents of KH is in its infancy, while a small number of empirical studies have investigated the consequences of KH for work attitudes and behaviours (Anand et al., 2019; Peng, 2013). More research is needed to understand the factors that truly contribute to an individual’s decision to hide knowledge, the degree to which context plays a role, and how much the level of KH is the consequence of deviant and detached leadership behaviour. In this scenario, the role of leadership appears to be essential mainly when there is a high level of competitiveness; it is crucial to define common objectives while promoting collaborative behaviours. In this context, transformational leadership (TL) is considered the most appropriate approach to reduce employees’ willingness to hide knowledge (Ahand, 2010). Steward (2006) wrote extensively on the concept of TL, taking note of Maslow’s theory of human needs. This theory identifies a range of needs, and the extent to which people perform effectively in the workplace will be determined by the extent to which these needs are satisfied. TL fits into the higher levels of human needs, as being a successful

authentic transformational leader requires a high level of self-esteem and self-actualization (Siganga, 2019, p. 146).

Since the influence of transformational leadership on KH has not been fully investigated, the present research offers an empirical analysis on a sample of 758 European SMEs with a total number of 2,232 employees to bridge this gap. This study aims to highlight how certain factors that characterise TL, such as trust, collaboration, and employee involvement, can influence an individual's tendency to conceal or share their knowledge. In particular, this empirical analysis was developed to address the research question concerning whether the key three antecedents of the TL approach can prevent KH behaviours.

More specifically, we view TL and its three main antecedents through the lens of the leader-follower/manager-employee relationship to investigate its impact on KH (Ladan, 2017). At the organizational level, we focus on two dimensions. First, we look at the level of trust that is established between managers and employees. Second, we focus on the collaborative environment that leads to working in a peaceful and participatory mode. At the individual level, we consider the degree to which employees are involved in their job.

This study highlights how TL can influence the context and redefine the behaviours relating to KH. As a result, collaborative, empathic leadership can add value to the company. In fact, it has been shown that communicative exchanges, constant contact, and common objectives reduce the level of KH (Singh, 2019). The original idea of this article is to investigate the particular dimension through which the influence of TL is assessed in relation to KH, involving the leader–follower/manager–employee relationship. Furthermore, this study extends the recent research by Ladan (2017), who investigated TL through the psychological component of emotional property, whereas the present work focuses on the organizational–managerial dimension. In doing so, the present study analyses the key antecedents of the TL approach based on trust between leaders and employees, organizational collaboration, and employees' involvement in the organizational environment.

The article is structured as follows. In the following section, the theoretical background and the development of the hypotheses are presented. Then, the research context along with the methodology for data collection and analysis are described. We proceed to summarize and analyse our results in depth and provide new and interesting insights. Although our research has some limitations, we conclude by suggesting avenues for future research emphasizing the original contributions of the present study.

## **2. Theoretical Background**

### *2.1 Knowledge Hiding*

In many companies, a highly competitive environment has induced a change in the organizational mindset and culture and incentivized “knowledge hoarding” (keeping knowledge hidden or private) over “knowledge-sharing” (Malhotra, 2000). In this vein, the scholarly debate has focused on how and why knowledge could remain hidden in organizations (Singh, 2019; Xiong et al., 2019). KH is primarily defined as a lack of willingness to reveal knowledge to one or more people (Connelly et al., 2012). It also involves different levels of employee deception that are triggered when an individual requests concealed knowledge.

KH is not simply the absence of sharing—it is an intentional attempt to withhold or conceal knowledge that has been requested by another individual. Although a comparison of KH and knowledge sharing might suggest that individuals either share or hide their knowledge, these variables are not opposites of each other but rather two conceptually distinct constructs. Behaviourally, the two might appear to be quite similar, but the motivations behind KH and a simple failure to share knowledge are different (Connelly et al., 2012; Gagnè et al., 2019). KH could be induced by several issues—a lack of trust, the complexity of information, or an uncollaborative environment—and it is important to understand whether the hiding of knowledge is truly intentional. Meanwhile, knowledge sharing is the “act of making knowledge available to others within the organization” and “involves some conscious action on the part of the individual who possesses the knowledge” (Ipe, 2003, p. 341). Individuals are motivated to share knowledge for enjoyment, to improve the quality of work, and for other autonomous motivations (Gagnè et al., 2019).

In other words, to understand this difference, it is necessary to specify that there are two different types of knowledge withholding in organizations: knowledge hoarding and KH. Hoarding refers to the accumulation of knowledge, and hiding represents intentionally concealing knowledge requested by another (Connelly et al., 2008). Knowledge hoarding is the act of accumulating knowledge that may or may not be shared in the future (Hislop, 2003); this knowledge has not been requested by another individual. In contrast, KH is an intentional attempt to withhold or conceal knowledge that has been specifically requested. Serenko and Botis (2016) affirmed that intraorganizational KH is considered a deliberate attempt to withhold or conceal knowledge when it is requested. In summary, KH stems from a clear request for information by a colleague when the knowledge holder makes an intentional attempt to avoid sharing it.

Černe et al. (2014) claimed that KH is damaging to organizations because it creates negative spirals of retaliation, and a number of other studies have identified several antecedents and consequences of intraorganizational knowledge hiding (Qureshi and Evans, 2015; Witherspoon et al., 2013), such as a loss of creativity, unproductive competition, arbitrary behaviours, and poor team spirit. Furthermore, KH may threaten collaboration within organizations, the development of new ideas, or the implementation of policies and procedures, and create a negative perspective on individuals' knowledge contribution in most workplaces (Gkoulalas-Divanis & Verykios, 2009; Nerstad et al., 2018; Zhao et al., 2016).

## *2.2 Theoretical Framework: TL Approach*

There is evidence that prosocial motivation and cultural values interact to predict KH and that its related behaviours may be affected by subjective norms regarding collaboration (Wang et al., 2019). Another salient trait on which scholars have focused their attention is the connection between employees' behaviour, the character of leadership, company managers, and the degree of KH observed in an organization (Singh, 2008). In this sense, the lens of TL is suitable to understand how a leader can prevent KH behaviours in the workplace. Several authors have identified the positive effects of TL in fostering creativity and innovation within an organization (Akpotu & Tamunosiki-Amadi, 2013; Bryant, 2003; Lin & Hsiao, 2014). This prerogative can be seen as the substantial basis for limiting KH (Landan, 2017). The TL approach explores a complex perspective in which numerous studies intersect. As Offergelt et al. (2019) suggested, KH is connected to leaders' attitudes towards the management, exploration, and practice of knowledge sharing. He also maintains that if there is suspicion toward leadership, employees are encouraged to hide knowledge as well. In addition, this approach is based on social learning theory and role modelling and embraces organizational behavioural variables and studies the behaviour of employees in organizations. Scholars have observed the association between leaders' approaches to sharing or hiding knowledge and several employee outcomes. They found that evasive hiding and "playing dumb" are associated with reduced job satisfaction, increased turnover intentions, and diminished psychological empowerment (Connelly et al., 2019). TL offers an interesting perspective on KH issues since it is difficult to scientifically and comprehensively reflect upon the process of generating and changing KH among employees by using a static framework (Fan et al., 2021). In fact, Zhao et al. (2019) examined employees' interactions with their leaders to understand how KH occurs. The results showed

that leader–member exchange (LMX) is an antecedent to KH. Paradoxically, it has been noticed that KH also occurs in contexts in which the TL approach is employed (Ladan, 2017). The TL style is attributed to innovating new ideas, encouraging teamwork, sharing opinions, and tackling crises effectively. Compared with the pragmatic leadership style, TL is flexible, motivational, and supportive of employees’ opinions (Moradi Korejan & Shahbazi, 2016). Burns (1978) argued that transformational leadership raises employees’ awareness of the value of desired results and the methods used to achieve them. Its ultimate goal is to lead employees to take an interest in the benefit of the organization as a whole. The author also identified four types of transformational leaders—in particular, “individualized consideration”, by which the leader promotes opportunities for mutual support between employees to increase the exchange of knowledge and skills. This decreases the risk of KH. This study intends to adopt an innovative perspective, whereby TL proves to be a substantial variable that influences the organizational context, favours the creation of dynamic and collaborative organizational environments, and promotes the management and exchange of knowledge.

Similarly, it has been highlighted that an authoritarian and rigid leadership attitude creates a climate of tension and closure (Goleman, 2000) in which everyone pursues individualistic objectives and actively avoids sharing.

### *2.3. Development of hypotheses*

Since 2012, the phenomenon of KH has attracted the interest of several scholars and practitioners, who have individuated the key antecedents and consequences of this behaviour. For instance, individual, organizational, job-related, and environmental factors influence KH behaviour (Connelly & Zweig, 2015; Connelly et al., 2012; Demirkasimoglu, 2015; Webster et al., 2008). In particular, individual factors can be categorized into personality, demographic characteristics (e.g., age, gender, and marital status), and values that induce employees to hide knowledge (Demirkasimoglu, 2015; Tang et al., 2015). Organizational factors can be categorized as organizational culture, organizational justice, organizational politics, and organizational trust, which are related to KH behaviour (Connelly et al., 2012; Peng, 2013). Job-related factors include job satisfaction, job security, job description, and job stress, which can provoke KH behaviour (Lam & Bavik, 2015). Additionally, KH can be characterized by knowledge complexity and ownership of knowledge. Knowledge complexity describes how complex the knowledge demanded is and the perception of distrust among employees. These factors may generate a lack of confidence and trust between individuals and drive the intention to withhold knowledge, whereas



ownership of knowledge induces a psychological level of possession of a specific piece of knowledge (Ladan et al., 2017).

The multifaceted aspects of KH have serious implications for organizations, relationships, and individuals. It has been pointed out that KH reduces creativity (Bogilović et al., 2017; Černe et al., 2014; Rhee & Choi, 2017) and innovative work behaviour (Černe et al., 2017) while decreasing individual performance (Wang et al., 2019). According to Connelly et al. (2012), KH comprises three elements: rationalized hiding, evasive hiding, and playing dumb. Evasive hiding is a situation in which the knowledge hider provides misleading or incorrect information and agrees to give an answer that he or she does not intend to provide. Rationalized hiding involves the knowledge hider providing justification for not sharing the knowledge requested by the coworker and transferring the blame to a third party. Playing dumb concerns the hider of the knowledge “pretending to be ignorant of the relevant knowledge requested by a subordinate.”

Some studies show that, in the long term, such behaviours lead to greater interpersonal distrust (Connelly et al., 2012) and deterioration of interpersonal relationships (Connelly & Zweig, 2015). Instead, some factors, such as a dynamic and collaborative context, informal interactions, and support for teamwork, develop an incentive policy (Butt & Ahmad, 2020) that could increase or reduce the KM levels in organizations. Wei and Ma (2018) used regression analysis to verify the positive influence of leaders’ territorial behaviour on subordinates’ KH behaviour. However, Fan et al. (2021) affirmed that positive leadership behaviour and style inhibit the occurrence of KH among employees, while negative leadership behaviour and style lead to the occurrence of KH.

In this vein, the TL approach introduces other key aspects, which include trust, a collaborative environment, and a high degree of involvement of employees. In this case, employees perceive mutual respect, which develops into interpersonal trust and leads to high psychological safety. This trust has great importance for creating a relaxing, collaborative climate that inhibits KH.

KH occurs between employees, and interpersonal trust among employees is likely to affect how an individual employee responds to a request for hidden knowledge from a coworker (Connelly et al., 2014). TL inspires employees to “commit to a shared vision and goals and encourages them to be an innovator, solve the problem and develop their followers to the leadership level through coaching, mentoring, and the provision of support” (Bass, 1995, p. 465). Lin et al. (2020) examined the relationship between TL and removing employees’ work-related uncertainties and ambiguities using a descriptive quantitative

method. The results showed a significant relationship between TL and insecurity reduction among employees. They also indicated that supervisor involvement is necessary to improve employee morale and trust as a contributing factor in reducing ambiguity and uncertainty. Since trust is one of the crucial aspects of the TL approach, we consider the following:

*H1. A higher degree of trust between managers and employees reduces KH intentions.*

However, trust needs to be reinforced by a positive organizational environment characterized by healthy competitiveness because a lack of collaboration and team spirit are significant influencers of KH (Hernaes et al., 2018). In contrast, companies that are characterized by a favourable climate of exchange feature interaction and encouragement in terms of interpersonal and social growth (Černe et al., 2014). Hence, a collaborative environment assumes a key role in diminishing KH intentions. For example, task interdependence in teams has been shown to mitigate the negative association between KH and team creativity (Fong et al., 2018); in addition, job-based psychological ownership has been suggested to predict KH in the presence of high avoidance motivation (Wang et al., 2019). Connelly et al. (2015) suggest that management support and a positive culture of social interaction are conducive to promoting knowledge sharing among employees.

Nevertheless, the TL approach calls for a positive team spirit and the achievement of common goals to foster complicity and sociality (Bass, 1985). Leaders can intellectually stimulate and help employees through coaching, personal attention, problem solving, and mentoring (Bass, 1999). Since the context in which employees work and carry out their activities, including their social life, has a substantial role in understanding whether there is fertile ground for an increase in KH, we state the following:

*H2. A positive, collaborative environment reduces KH intentions.*

TL induces a process by which leaders motivate their employees to outperform an initially expected level and to transcend their individual interests to accomplish a collective goal (Bass, 1990; Howell & Avolio, 1993). The ability of managers to involve employees, to increase their team spirit and to strengthen corporate values counteracts KH. Many studies have shown that leadership influences employees' behaviour and even job performance (Bass & Riggio, 2006); in particular, TL stimulates individuals intellectually through personal attention, coaching, and mentoring to facilitate problem solving and rational thinking. It also encourages followers to consider the goals and objectives of the organization before their own (Shamir et al., 1993). However, empirical studies investigating the relationship between transformational leadership and KH are limited, but a review of the literature revealed a positive impact of transformational leaders, who encourage knowledge

sharing among their followers within the organization, which improves performance and creativity (Akpotu & Tamunosiki-Amadi, 2013; Lin & Hsiao, 2014).

TL also influences employees to be creative and innovative, which improves the performance of the organization (Bryant, 2003). The effectiveness of the TL style lies in the leader's ability to retain employees and customers. A transformational leader fully engages with people and seeks to satisfy their needs while also achieving the organization's needs without compromising or taking any of these needs for granted (Burns, 1978).

Additionally, researchers on transformational leadership's effect on employees' behavioural outcomes have agreed that leaders can influence employee behaviour such that it has a positive impact on the organization (Birasnav, 2014; Piccolo & Colquitt, 2006; Tang et al., 2015). Despite the influence of transformational leadership on various knowledge management factors, it has also been established that there is a prevalence of KH among employees in organizations (Connelly & Zweig, 2015; Connelly et al., 2012; Peng, 2013). Since KH leads to a lack of creativity and innovation and has a negative impact on the performance-oriented climate, including in interpersonal relationships (Connelly & Zweig, 2015; Nerstad, 2014), it can then be logically argued that a transformational leader will not encourage followers to engage in any dysfunctional behaviour, such as KH, that may be detrimental to the organization. Again, the TL approach emphasizes the involvement of employees in an organizational environment through inspiration, intellectual stimulation, or individual considerations. In doing so, "transformational leaders help their followers consider the goals and values of the organization beyond their own interests" (Landan, 2017, p 63). Following these studies, it is possible to argue that TL influences the environment and employee involvement because leaders can affect employees' behaviour; hence, we state the following:

*H3. The greater the involvement of employees in the organization is, the lower the KH will be.*

### **3. Methodology**

#### *3.1. Research Context and Sample*

The present research offers an empirical analysis of a sample of 758 SMEs in Ireland, Finland, Sweden, and Estonia operating in a knowledge-intensive sector with a total number of 2,232 employees. In terms of percentage, there are 32% from Ireland, 26% from Finland, 24% from Sweden, and 18% from Estonia. SMEs were selected according to their number of employees and annual turnover, as stated by the European Commission (2013).

The research context is high-tech knowledge-intensive services, which have gained greater relevance in the last decade because SMEs have become more innovative (Scuotto et al., 2020a, 2020b). Recent research by Eurostat (2020) found 3.0% annualized employment rate growth in this sector. This report showed that such growth has increased mostly in some European countries, such as Ireland (5.3%), Finland and Sweden (4.7%), and Estonia (4.3%), while the lowest values were observed in Greece and Romania (2.2%) (p. 1). We focused our research on countries with a high employment rate in this high-tech knowledge-intensive service sector to ensure a homogeneous sample. Additionally, we focused on SMEs because they are innovative and represent 99% of all companies across all European countries (Lopez-Nicolas & Soto-Acosta, 2010).

Of the total number of 2,232 employees, there was a higher number of men (79%) than women. They were in the range of 32–45 years old. There was a high percentage of trust between leaders and employees (81%) along with close collaboration (76%), although there was a discretely high level of unproductive competition between employees (57%).

The research scope is to evaluate the correlation between the three main antecedents of transformational leadership (i.e., trust, a collaborative environment, and the involvement of employees) and the phenomenon of KH through logistic regression analysis. This methodology was considered to be appropriate, as it has been widely used in the knowledge management field and is the most widely used in the subject of KH (Abubakar et al., 2019; Babič et al., 2019; Cerne et al., 2017, 2014; Wang et al., 2019). Additionally, it is a predictive model relying on the aim of addressing the question “what is likely to happen?” in the relationship between supervisors and employees when a TL approach is employed. The three independent variables—that is, trust, a collaborative environment, and employee involvement—are predictors of the dependent variable, KH.

### *3.2. Data Collection*

A questionnaire was developed and administered in English to employees of SMEs based in Ireland, Finland, Sweden, and Estonia. The data were collected from January 2019 to January 2020.

In the first instance, each participant was contacted by email and then by phone if we did not receive any response by email. The questionnaire, consisting of twelve closed-ended questions, was compiled on an online platform. According to Bryman (1988), questionnaires should start with ancillary questions that request information on gender, age, job position, and education, among others, and in our case, these were followed by the questions shown in

Table 1 (categorized as items). This table also contains the measures that are associated with each item: the three main characteristics of TL—that is, trust, a collaborative environment, and the involvement of employees. A seven-point Likert scale was used to evaluate each question to obtain more consistent answers (Likert, 1932).

--- Table 1 is about here ---

Additionally, to prevent any common method bias (CMB), we employed five methods: 1. Understandable research scope and instructions; 2. Clear questions; 3. Avoid common scale features; 4. Alternative use of negative and positive word items; 5. A small number of participants (Jordan and Troth, 2019).

1. Understandable research scope and instructions involves delivering an accurate coversheet and instructions that detail all necessary information to understand the research scope and the benefits that the organization can receive (Hair et al., 2015; Podsakoff et al. 2003, 2012). In this sense, the questionnaire was accompanied with a detailed coversheet and instructions to increase the level of participants' motivation.
2. Clear questions regard the use of simple language to formulate the questions; in doing so, the understanding of the questions was simplified.
3. Eliminating common scale properties means, for instance, involving a Likert scale that can include the different items “strongly agreed ... strongly disagreed” and “strongly reliable .... Not strongly reliable”. We did so by using the 7-point Likert scale (Griffiths et al., 2019)
4. Alternative use of negative and positive word items is intended to prevent CMB requesting more attention from the participants (Jordan and Troth, 2019). Accordingly, we have offered different words by using negative and positive words.
5. Involving a small number of participants is useful to evaluate the reliability and comprehension of the questionnaire (Kong et al., 2018). In this case, five SMEs in each country received the questionnaire in advance. In each of those SMEs, five employees and three leaders were involved in this first step (O'Regan et al., 2006). The pilot test did not highlight any issues. The participants were able to understand each question and completed the questionnaire in 10 minutes.

On this basis, the research model is drawn and shown in Figure 1. In particular, the three main characteristics of TL—trust, a collaborative environment, and the involvement of

employees—were correlated with KH. The latter was the Y variable or the dependent variable, whereas the former three variables were considered predictors or independent variables (Montgomery et al., 2012).

--- *Figure 1 is about here* ---

#### **4. Summary of the Results**

According to Dayton (1992), the logistic regression model is used to examine the relationship between a dependent variable and one or more independent variables. The internal consistency between dependent and independent variables was assessed to avoid any bias (Table 2).

--- *Table 2 is about here* ---

The three hypotheses were tested using the Wald chi-statistic approach (see Table 3 and Figure 2), as stressed by Peduzzi et al. (1996), Peng et al. (2002), and Steyerberg et al. (2001).

--- *Table 3 is about here* ---

--- *Figure 2 is about here* ---

This analysis offers an evaluation of the significance or otherwise of the correlation of the independent and dependent variables. Consequently, it supports or does not support the three hypotheses as follows:

*H1. A higher degree of trust between managers and employees reduces KH intentions:* supported.

*H2. A positive, collaborative environment reduces KH intentions:* supported.

*H3. The greater the involvement of employees in the organization is, the lower the KH will be:* not supported.

#### **5. Discussion and Theoretical Contributions**

Since the beginning, KH has been investigated through the lens of the knowledge-based view (KBV) to understand how firms move from building and extending resources to placing more emphasis on how they create, acquire, protect, transfer, and use knowledge (Grant, 1996; Nonaka, 1994; Nonaka & Toyama, 2015). The KBV perceives knowledge as the most significant strategic organizational resource in terms of market value. Nonaka (1994) noted that the core purpose of an organization is to create and apply knowledge. From the perspective of the KBV, a competitive advantage is achieved through a firm's ability to use and develop its knowledge assets (Cabrera-Suárez et al., 2001).

The present research offers a different perspective. We follow Pereira and Mohiya (2021) in distinguishing the effect of employees' intention—that is, the individual level—and organizational support—that is, the organizational level—on KH. More specifically, we take the lens of TL and its three main characteristics involving the leader-follower/manager-employee relationship to investigate its impact on KH (Ladan, 2017). At the organizational level, we focus on two dimensions. First, we look at the level of trust that is established between managers and employees. Second, we focus on the collaborative environment, which leads to a peaceful and participatory mode of working. At the individual level, we consider the involvement of employees in their job. Our prediction is that there is a positive relationship between TL and its three main characteristics in reducing KH behaviour. However, our findings show that the key factors in reducing KH behaviour stay at the organizational level, with a significant positive impact of trust (H1) and a collaborative environment (H2) on reducing KH. In contrast, at the individual level, employee involvement (H3) is not significant in reducing KH.

At the organizational level, a strong impact of trust and the collective environment in reducing KH can be explained by their effectiveness in creating an efficient knowledge transfer (Currall and Judge 1995). Indeed, as posited in Černe et al. (2014), when we apply social exchange theory (Blau, 1964), the norm of reciprocity (Gouldner, 1960), and the importance of interpersonal dynamics for KH (Connelly & Kelloway, 2003), KH behaviour can create a distrust loop between the knowledge hider and the knowledge seeker. When Employee A intentionally hides knowledge from Employee B (who has requested it and is hence aware of the fact that hiding has occurred), this act backfires on employee A. Due to the distrust it has created, Employee B wants to retaliate and hides knowledge from Employee A. This, in turn, inhibits the creativity of the initial knowledge hider (Employee A). The outcomes are costly for both employees and, in turn, for the organization. If we look at the two variables separately, we can identify a stronger effect of trust in reducing KH than a collective environment. We can argue that a collective environment is created by the leader, but trust is interpersonal. Asking for information or advice can make a person vulnerable to another employee. Trust can allow one to query a colleague in depth without fear of damaging one's self-esteem or reputation (Abrams et al. 2003). This explains our findings about a stronger effect of trust on KH than a collective environment.

Regarding the insignificant effect of employee involvement on KH, while the literature on the engagement behaviour of employees often links engagement to job

performance with a mediating role (Tang et al., 2015), KH is a type of behaviour in an organization rather than a direct component of job performance. Therefore, several alternative explanations for our findings can be addressed. First, conservation of resource theory (Hobfoll, 1989) asserts that employees' effort is normally focused on maintaining their existing resources. Knowledge is considered a competitive advantage, and employees might behave as knowledge hidiers when their resources appear threatened. Second, the knowledge-sharing process in an organization is often either missing or excessively complex. In this context, even if knowledge is essential for the completion of jobs, employees' involvement in knowledge sharing might be affected (Hackman & Oldham, 1976). Third, we observe a common belief in the explanatory studies that employees in different organizational contexts consider knowledgeable people to be busy and to not have time to share (Pereira & Mohiya, 2021), which prevents knowledge seekers from requesting knowledge. These explanations show that KH behaviour is often linked to organizational-level antecedents, such as a lack of job security, a safe environment, and a clear and simple process.

Given these explanations about possible individual motivations for KH, we find that the organizational context and climate can influence behaviour (Connelly et al., 2012). Indeed, transformational leaders engage employees through their passion. They exemplify and embody cultural values. Most importantly, they are able to give people a very clear picture of the future. Therefore, TL is able to create trust and a collaborative environment, both of which prevent KH behaviour. This is in line with leader–member exchange (LMX) theory (Graen & UhlBien, 1995), which states that teamwork is essential for performance. In such a framework, supervisors need to exchange knowledge with subordinates with respect, care, and trust, and subordinates are expected to reciprocate. In a safe environment with a mutual exchange of information and knowledge, employees do not need to protect their existing resources to survive, which reduces KH behaviour.

Our findings contribute to the emergent literature on KH by analysing the antecedents of this behaviour through the lens of TL. Indeed, the existing research associating KH and leadership style has focused mostly on ethical leadership (Anser et al., 2020; Men et al., 2018) and an abusive supervision style (Feng & Wang, 2019; Jahanzeb et al., 2019; Khalid et al., 2018; Pradhan et al., 2019). TL, whose main objective is to build employee success, is supposed to have a more important impact on reducing KH. We also corroborate the recent findings of Pereira and Mohiya (2021) by highlighting the importance of organizational



support, which aims to foster trust and a collaborative environment in our case, to prevent KH behaviour.

### *5.1 Practical implications*

The knowledge management process is known to be vital to well-functioning organizations and contributes to their performance. While modern information and telecommunication technology can help broaden the information exchange among employees across time and distance barriers, the present research, in line with the literature, shows that the vital condition that allows knowledge sharing to happen or prevents KH behaviour concerns the leadership style and the way in which it affects employees' behaviour. We believe that our positive findings on the role of TL in reducing KH will contribute to its wider application in organizations in the future.

We also emphasize the importance of organizational support in reducing KH. In this regard, organizations should allocate sufficient means to implement a comprehensive knowledge-sharing policy and develop different methods to reduce individual KH behaviours. A collaborative and safe environment among employees and supervisors, combined with a pay-off mechanism through which to offer rewards and praise, can help to exercise efficient transformational leadership that increases knowledge sharing.

Moreover, the absence of an appropriate structure might affect employees' contribution to knowledge sharing. For instance, knowledgeable people require the organization to set up clear and simple processes to streamline their knowledge sharing initiatives. Knowledge seekers, on the other hand, need the tools to identify and retrieve the knowledge shared. Indeed, any leadership culture transformation that increases the potential knowledge offered needs to be reinforced by a framework of processes and tools.

In the meantime, organizational leaders implementing a comprehensive knowledge-sharing policy may consider the challenges of knowledge classification and dissemination. Involuntary KH can result from an unseen impact on others' job realization or simply from irrelevant classification. A comprehensive sharing policy may therefore include the storage, classification, and continuous updating of knowledge to positively affect the organization's performance.

## **6. Conclusion**

Our study has several limitations. First, it would be interesting for further study to control for several personal characteristics of respondents that might have an effect on KH

behaviour, such as their intrinsic and extrinsic motivations. Second, we apply the lens of TL to analyse the impact of its main characteristics on KH. While we argue that this leadership style has a positive effect on different antecedents of knowledge management, the application of another leadership style might lead to different results and findings and therefore different recommendations. Another limitation concerns our research setting in the context of SMEs, in which knowledge sharing is crucial for performance. Another context, such as large corporations or global organizations in which cross-cultural and cross-functional management is important, would be an interesting context in which to investigate the role of leadership style in KH behaviour. Finally, given the development of working from home, further research on how to foster knowledge sharing in such an organizational design would be of great interest to practitioners.

However, the present research contributes to the literature on the management of knowledge, more specifically the impact of transformational leadership characteristics in reducing KH. Both the individual-level and the organizational-level antecedents of KH are discussed. While employee involvement does not seem to have a significant impact on reducing KH, organizational support, such as trust among employees and supervisors and a collaborative environment, does have a positive impact.

**Table 1. Measures and Items**

<b>Measures</b>	<b>Items</b>	<b>References</b>
Trust	There is a high level of trust between leaders and employees Prosocial motivation is crucial for your team Cultural values are important for your team	Ladan (2017); Wang et al (2019)
Collaborative environment	Leaders have the ability to instill team spirit and motivation for the achievement of common goals Tasks are shared within a team Collaborative creativity is encouraged	Bass (1985); Fong et al. (2018); Ladan (2017)
Involvement of employees	Thinking and behaving collegially and collaboratively is highly relevant High relevance of coaching and mentoring to solve problems You feel highly committed to achieving the company's goals	Ladan (2017); Shamir et al. (1993); Tang et al. (2015)
KH	You trust your supervisor Your supervisor has asked you to withhold or conceal	Connelly et al. (2012); Wang et al. (2019)

knowledge You work in an uncollaborative environment
--

**Table 2. Internal consistence coefficients and correlations between measures and items**

		<i>Cronbach's</i>	(1)	(2)	(3)	(4)	(5)
		<i>Alpha</i>					
(1)	Trust	0.82	1				
(2)	CollEnvir	0.76	0.436*	1			
(3)	InvEmp	0.74	0.671*	0.450	1		
(4)	KH	0.88	0.179*	0.239*	0.543*	1	

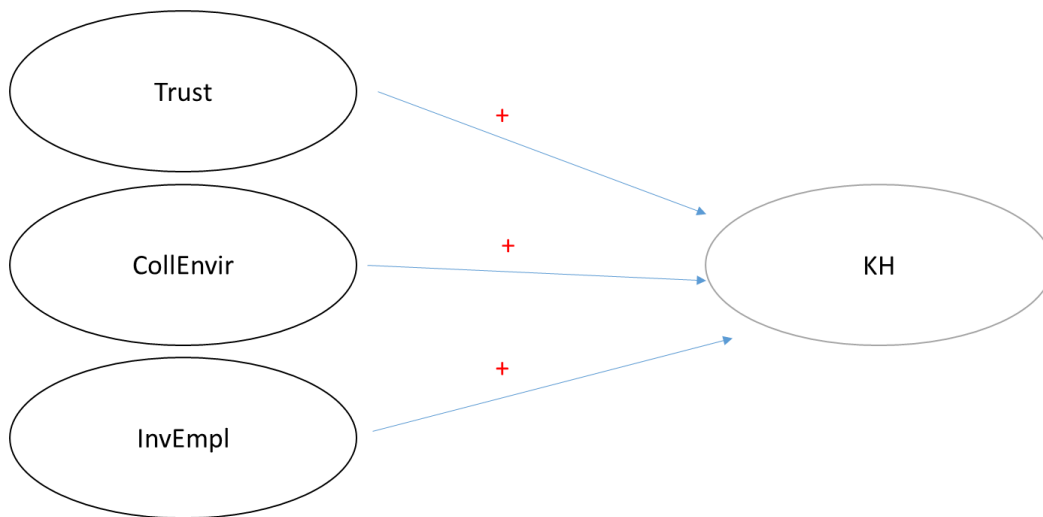
\*\* Significant at 0.01.

To three hypotheses were tested by the Wald chi -statistic approach (see table 3 and figure 2) as stressed by Peng et al., (2002), Steyerberg et al., (2001), Peduzzi et al. (1996).

**Table 3. Wald chi -square results**

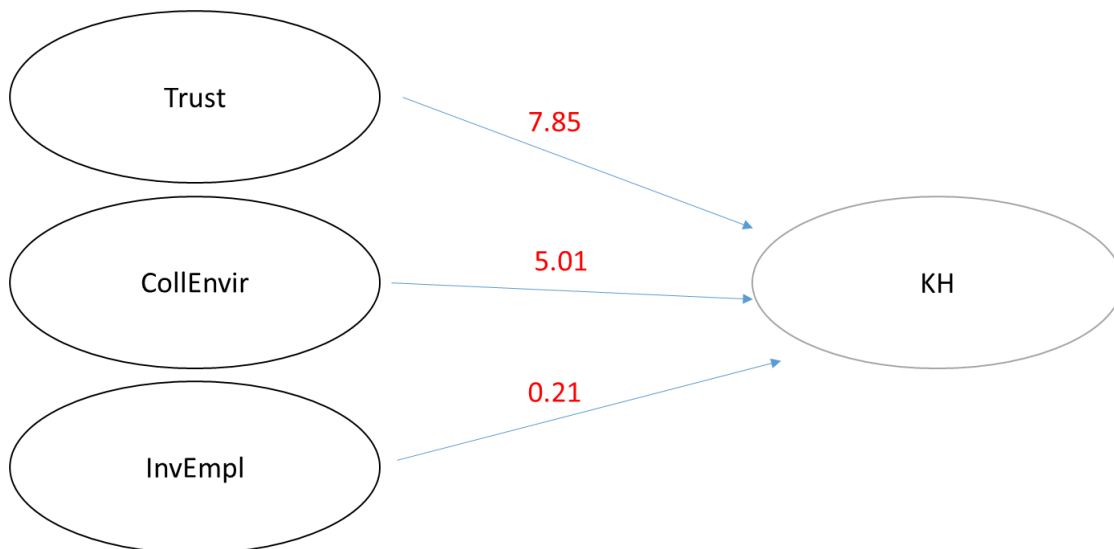
<i>Predictors</i>	<i>In presence of</i>	<i>Wald</i>	<i>Contribution of</i>
	<i>"response"</i>	<i>X<sup>2</sup></i>	<i>Variable(s)</i>
<i>Trust</i>	KH	7.85	Significant
<i>CollEnvir</i>	KH	5.01	Significant
<i>InvEmp</i>	KH	0.21	Non-significant

**Figure 1. Research Model**



Source: Authors' elaboration

**Figure 2. Wald chi -square results**



**Acknowledgement:** *The article is based on the study funded by the Basic Research Program of the National Research University Higher School of Economics.*

## **References**

- Abrams, L. C., Cross, R., Lesser, E., & Levin, D. Z. (2003). Nurturing interpersonal trust in knowledge-sharing networks. *Academy of Management Perspectives*, 17(4), 64-77.
- Abubakar, A. M., Behravesh, E., Rezapouraghdam, H., & Yildiz, S. B. (2019). Applying artificial intelligence technique to predict knowledge hiding behavior. *International Journal of Information Management*, 49, 45-57.
- Ahmad, Z.A. (2010). Relationship between perceived organizational support, leadership behavior, and job satisfaction: An empirical study in Iran. *Intangible Capital*, 6(2), 162–184.
- Akpotu, C., & Tamunosiki-Amadi, J. (2013). Transformational Leadership and Knowledge Sharing in ICT Based Organizations in Nigeria. *International Journal of Business and Social Science*, 4(12), 100–107.
- Anand, P., & Hassan, Y. (2019). Knowledge hiding in organizations: everything that managers need to know. *Development and Learning in Organizations*, 33 (6), 12-15.
- Anser, M. K., Ali, M., Usman, M., Rana, M. L. T., & Yousaf, Z. (2021). Ethical leadership and knowledge hiding: an intervening and interactional analysis. *The Service Industries Journal*, 41(5-6), 307-329.
- Arain, A.G., Bhatti, Z.A., Ashraf, N., Fang, Y.H. (2018). Top-Down Knowledge Hiding in Organizations: An Empirical Study of the Consequences of Supervisor Knowledge Hiding Among Local and Foreign Workers in the Middle East. *Journal of Business Ethics*, 164, 611–625.
- 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.
- Banagou, M., Batistič, S., Do, H., & Poell, R. F. (2021). Relational climates moderate the effect of openness to experience on knowledge hiding: A two-country multi-level study. *Journal of Knowledge Management*. <https://doi.org/10.1108/JKM-11-2019-0613>
- Bandura, A. (1978). Social Learning Theory of Aggression. *Journal of communication*, 28 (3), 12-29.

- Bass, B.M. (1990). From Transactional to transformational Leadership : Learning to Share the Vision. *Organizational Dynamics*, 18(3), 19–32.
- Bass, B.M. (1995). Theory of transformational leadership redux. *Leadership Quarterly*, 6(4), 463–478.
- Bass, B.M., & Riggio, R.E. (2006). *Transformational leadership*. Lawrence Erlbaum Associated, Publishers, London.
- Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology*, 85(3), 349–360.
- Bereznoy, A., Meissner, D., & Scuotto, V. (2021). The intertwining of knowledge sharing and creation in the digital platform based ecosystem. A conceptual study on the lens of the open innovation approach. *Journal of Knowledge Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JKM-10-2020-0769>.
- Birasnav, M. (2014). Knowledge management and organizational performance in the service industry: The role of transformational leadership beyond the effects of transactional leadership. *Journal of Business Research*, 67(8), 1622–1629.
- Blau, P.M. (1964). *Exchange and Power in Social Life*. New York: Transaction Publisher.
- Bogilović, S., Černe, M., & Škerlavaj, M. (2017). Hiding behind a mask? Cultural intelligence, knowledge hiding, and individual and team creativity. *European Journal of Work and Organizational Psychology*, 26 (5), 710-723.
- Burn, M.J. (1978). *Leadership*. Harper and Row, New York.
- Butt, A.S. and Ahmad, A.B. (2020). Strategies to mitigate knowledge hiding behavior: building theories from multiple case studies. *Management Decision*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/MD-01-2020-0038>
- Cabrera, A., & Cabrera, F. (2002). Knowledge-sharing dilemmas. *Organization Studies*, 23, 687–710.
- Cabrera Suárez, K., De Saá Pérez, P., García Almeida, D. (2001), The Succession Process from a Resource and Knowledge Based View of the Family Firm. *Family Business Review*, 14 (1), 37-48.
- Carayannis, E.G., Grigoroudis, E., Del Giudice, M., Della Peruta, M.R. and Sindakis, S. (2017), An exploration of contemporary organizational artifacts and routines in a sustainable excellence context, *Journal of Knowledge Management*, 21(1), 35-56.

- Černe, M., Nerstad, C. G. L., Dysvik, A., & Škerlavaj, M. (2014). What goes around comes around: Knowledge hiding, perceived motivational climate, and creativity. *Academy of Management Journal*, 57(1), 172–192.
- Černe, M., Hernaus, T., Dysvik, A., Škerlavaj, M. (2017). The role of multilevel synergistic interplay among team mastery climate, knowledge hiding, and job characteristics in stimulating innovative work behavior. *Human Resource Management Journal*, 27 (2), 281-299.
- Chatterjee, S., Chaudhuri, R., Thrassou, A., & Vrontis, D. (2021). Antecedents and consequences of knowledge hiding: The moderating role of knowledge hidiers and knowledge seekers in organizations. *Journal of Business Research*, 128, 303-313.
- Connelly, C. E., & Kelloway, E. K. 2003. Predictors of employees' perceptions of knowledge sharing cultures. *Leadership & Organization Development Journal*, 24(5): 294-301.
- Connelly, C.E., Zweig, D., Webster, J., & Trougakos, J.P. (2012). Knowledge hiding in organizations. *Journal of Organizational Behavior*, 33, 64–88.
- Connelly, C.E., & Zweig, D. (2015). How perpetrators and targets construe knowledge hiding in organizations. *European Journal of Work and Organizational Psychology*, 24 (3), 479-489.
- Cummings, J. (2003). *Knowledge sharing: a literature review*. The world Bank, Washington, D.C.
- Crupi, A., Del Sarto, N., Di Minin, A., Phaal, R., & Piccaluga, A. (2020). Open innovation environments as knowledge sharing enablers: the case of strategic technology and innovative management consortium. *Journal of Knowledge Management*, DOI:10.1108/JKM-06-2020-0419.
- Currall, S., Judge, T. (1995). Measuring trust between organizational boundary role persons. *Organizational Behavior and Human Decision Processes*, 64: 151–170;
- Dalal, R. S. (2005). A Meta-Analysis of the Relationship Between Organizational Citizenship Behavior and Counterproductive Work Behavior. *Journal of Applied Psychology*, 90(6), 1241–125.
- Davenport, T.H., De Long, D. W., Beers, M.C., (1998). Successful Knowledge Management Projects. *Sloan Management Review*, 39 (2), ABI/INFORM Global p 43.



- Davenport, T.H., Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Harvard Business School Press.
- Demirkasimoglu, N. (2015). Knowledge hiding in academia: Is personality a key factor? *International Journal of Higher Education*, 5(1), 128–140.
- Del Giudice, M & Maggioni, V. (2014). Managerial practices and operative directions of knowledge management within inter-firm networks: a global view. *Journal of Knowledge Management*, 18 (5), 841-846.
- Del Giudice, M., Della Peruta, M. R., & Maggioni, V. (2015). A model for the diffusion of knowledge sharing technologies inside private transport companies. *Journal of Knowledge Management*, 19(3), 611–625.
- Del Giudice, M., & Gangestad, S. W. (2021). A traveler's guide to the multiverse: Promises, pitfalls, and a framework for the evaluation of analytic decisions. *Advances in Methods and Practices. Psychological Science*, 4(1), 2515245920954925.
- Feng, J., & Wang, C. (2019). Does abusive supervision always promote employees to hide knowledge? From both reactance and COR perspectives. *Journal of Knowledge Management*, 23(7), 1455-1474.
- Gagné, M., Tian, A. W., Soo, C., Zhang, B., Ho, K. S. B., & Hosszu, K. (2019). Different motivations for knowledge sharing and hiding: The role of motivating work design. *Journal of Organizational Behavior*, 40(7), 783-799.
- Gerstner, C.R. and Day, D. V. (1997). Meta-Analytic review of leader–member exchange theory: Correlates and construct issues. *Journal of Applied Psychology*, 82(6), 827-844.
- Gkoulalas-Divanis, A., & Verykios, V.S. (2009). Hiding sensitive knowledge without side effects. *Knowledge and Information Systems*, 20, 263–299.
- Gold, A.H., Malhotra, A., Segars, A.H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of management information systems*, 18(1), 185-214.
- Goleman, D. (2000). *Leadership that gets results*. Harvard Business Review.
- Gouldner, A. W. 1960. The norm of reciprocity. *American Sociological Review*, 25(2): 161-178.
- Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The leadership quarterly*, 6(2), 219-247.
- Grant, M.R. (1996). Toward a knowledge based theory of the firm. *Strategic Management Journal*, 17 (S2), 109-122.

- Halisah, A., Jayasingam, S., Ramayah, T., & Popa, S. (2021). Social dilemmas in knowledge sharing: an examination of the interplay between knowledge sharing culture and performance climate. *Journal of Knowledge Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JKM-08-2020-0631>.
- Hobfoll, S. E. (1989). Conservation of resources: a new attempt at conceptualizing stress. *American psychologist*, *44*(3), 513.
- Howell, J. M., & Avolio, B. J. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of Applied Psychology*, *78*(6), 891–902
- Huo, W., Cai, Z., Luo, J., Men, C., & Jia, R. (2016). Antecedents and intervention mechanisms: A multi-level study of R&D team's knowledge hiding behavior. *Journal of Knowledge Management*, *20*(5), 880–897.
- Ipe, M. (2003). Knowledge sharing in organizations: A conceptual framework. *HRM Development Review*, *2*, 337–359
- Jahanzeb, S., Fatima, T., Bouckennooghe, D., & Bashir, F. (2019). The knowledge hiding link: a moderated mediation model of how abusive supervision affects employee creativity. *European Journal of Work and Organizational Psychology*, *28*(6), 810-819.
- Kelloway, E.K. & Barling J., (2000). Knowledge work as organizational behavior. *International Journal of management review*, *2*(3), 287-304.
- Khalid, M., Bashir, S., Khan, A. K., & Abbas, N. (2018). When and how abusive supervision leads to knowledge hiding behaviors. *Leadership & Organization Development Journal*.
- Ladan, S., Nordin, N.B. & Belal, H.M. (2017). Does knowledge based psychological ownership matter? Transformational leadership and knowledge hiding: A proposed framework. *Journal of Business and Retail Management Research*, *11* (4), 60-67.
- Levin, D.Z. & Cross, R. (2004). The Strength of Weak Ties You Can Trust: The Mediating Role of Trust in Effective Knowledge Transfer. *Management Science*, *50* (11), 1463-1613.
- Lin, C. pei, Xian, J., Li, B., & Huang, H. (2020). Transformational leadership and employees' thriving at work: The mediating roles of challenge-hindrane stressors. *Frontiers in Psychology*, *11*(June), 1–19.
- Lin, R. S., & Hsiao, J. (2014). The Relationships between transformational leadership, knowledge sharing, trust and organizational citizenship behavior. *International Journal of Innovation, Management and Technology*, *5*(3), 3–6.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of psychology*.

- Lopez-Nicolas, C., & Soto-Acosta, P. (2010). Analyzing ICT adoption and use effects on knowledge creation: An empirical investigation in SMEs. *International Journal of Information Management*, 30(6), 521-528.
- Malhotra, A. & Majchrzak, A. (2019). Greater associative knowledge variety in crowdsourcing platforms leads to generation of novel solutions by crowds. *Journal of Knowledge Management*, 23(8), 1628-1651.
- Malhotra, Y. (2000). Knowledge Management and New Organization Forms: A Framework for Business Model Innovation. *Information Resources Management Journal*, 13(1), 5–14.
- Malhotra, Y. (2001), *Knowledge Management and Business Model Innovation*, Hershey, PA: Idea Group Publishing.
- Men, C., Fong, P. S., Huo, W., Zhong, J., Jia, R., & Luo, J. (2018). Ethical leadership and knowledge hiding: a moderated mediation model of psychological safety and mastery climate. *Journal of Business Ethics*, 1-12.
- Montgomery, D. C., Peck, E. A., & Vining, G. G. (2021). *Introduction to linear regression analysis*. John Wiley & Sons.
- Korejan, M. M., & Shahbazi, H. (2016). An analysis of the transformational leadership theory. *Journal of fundamental and applied sciences*, 8(3), 452-461.
- Nerstad, C. G.L., Searle, R., Černe, M., Dysvik A., Škerlavaj, M., Scherer, R. (2018) Perceived mastery climate, felt trust, and knowledge sharing. *Journal of Organizational Behavior*, 39 (4), 429-447.
- Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation. *Organization Science*, 5 (1).
- Nonaka, I., Toyama, R. (2015). The Knowledge-creating Theory Revisited: Knowledge Creation as a Synthesizing Process. *The Essentials of Knowledge Management*, 95-110.
- Offergelt, F., Spörrle, M., Moser, K., & Shaw, J. D. (2019). Leader- signaled knowledge hiding: Effects on employees' job attitudes and empowerment. *Journal of Organizational Behavior*, 40(7), 819– 833.
- O'Regan, N., Ghobadian, A., and Sims, M. (2006). Fast tracking innovation in manufacturing SMEs, *Technovation*, 26 (2), 251-261.
- Peng, H. (2013). Why and when do people hide knowledge? *Journal of Knowledge Management*. 17 (3), 398-415.

- Pereira, V., & Mohiya, M. (2021). Share or hide? Investigating positive and negative employee intentions and organizational support in the context of knowledge sharing and hiding. *Journal of Business Research*, *129*, 368-381.
- Piccolo, R.F., and Colquitt, J.A. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal*, *49*(2), 327–340.
- Pradhan, S., Srivastava, A., & Mishra, D. K. (2019). Abusive supervision and knowledge hiding: the mediating role of psychological contract violation and supervisor directed aggression. *Journal of Knowledge Management*.
- Qureshi, A.M.A., & Evans, N. (2015). Deterrents to knowledge-sharing in the pharmaceutical industry: a case study. *Journal of Knowledge Management*, *19* (2), 296-314.
- Rhee, W.Y., & Choi, J.N. (2017). Knowledge management behavior and individual creativity: Goal orientations as antecedents and in group social status as moderating contingency. *Journal of Organizational Behavior*, *38* (6), 813-832.
- Rivera, A. E., Rodríguez-Aceves, L., & Mojarro-Duran, B. I. (2020). Enabling knowledge sharing through psychological safety in inter-organisational arrangements. *Journal of Knowledge Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JKM-04-2020-0241>
- Ryu, S., Ho, S. H., and Han, I. (2003). Knowledge sharing behavior of physicians in hospitals. *Expert Systems with Applications*, *25*(1), 113122.
- Robinson, S.L, & Bennett, R.J. (2017). A Typology of Deviant Workplace Behaviors: A Multidimensional Scaling Study. *Academy of Management Journal*, *38* (2).
- Sahnun, L., Norani, B.N., Belal, H.M. (2017) Influence of transformational leadership on knowledge hiding: mediating role for organizational psychological ownership: proposed, *Studia UBB Negotia*, *62* (4), 97-117.
- Singh, S. K., Mazzucchelli, A., Vessal, S. R., & Solidoro, A. (2021). Knowledge-based HRM practices and innovation performance: Role of social capital and knowledge sharing. *Journal of International Management*, *27*(1), 100830.
- Scuotto, V., Beatrice, O., Valentina, C., Nicotra, M., Di Gioia, L., & Briamonte, M. F. (2020). Uncovering the micro-foundations of knowledge sharing in open innovation partnerships: An intention-based perspective of technology transfer. *Technological forecasting and social change*, *152*, 119906.

- Scuotto, V., Garcia-Perez, A., Nespoli, C., & Petruzzelli, A. M. (2020a). A repositioning organizational knowledge dynamics by functional upgrading and downgrading strategy in global value chain. *Journal of International Management*, 26(4), 100795.
- Scuotto, V., Garcia- Perez, A., Cillo, V., Giocosa, E. (2020b). Do stakeholder capabilities promote sustainable business innovation in small and medium-sized enterprises? Evidence from Italy. *Journal of Business Research*. 119, 131-141.
- Scuotto, V., Del Giudice, M., Bresciani, S., & Meissner, D. (2017). Knowledge-driven preferences in informal inbound open innovation modes. An explorative view on small to medium enterprises. *Journal of Knowledge Management*, 21(3), 640-655.
- Serenko, A, & Botis, N. (2016). Understanding counterproductive knowledge behavior: antecedents and consequences of intra-organizational knowledge hiding. *Journal of Knowledge Management*, 20 (6), 1199-1224.
- Shamir, B., House, R.J., and Arthur, M. B. (1993). The motivational effects of charismatic leadership: A Self-Concept based theory. *Organization Science*, 4(4), 577–594.
- Siganga, S. (2019). Developing a transformational leadership style to fit the 21st century. *Journal of Management & Administration*, 2019 (2), 141-159.
- Singh, S.K. (2008). Role of leadership in knowledge management: a study. *Journal of Knowledge Management*, 12 (4), 3-15.
- Singh, S.K. (2019). Territoriality, task performance, and workplace deviance: Empirical evidence on role of knowledge hiding. *Journal of Business Research*, 97, 10-19.
- Solima, L., Della Peruta, M. R., & Del Giudice, M. (2016). Object-generated content and knowledge sharing: the forthcoming impact of the internet of things. *Journal of the Knowledge Economy*, 7(3), 738-752.
- Soto-Acosta, P., Del Giudice, M., Scuotto, V., (2018) Emerging issues on business innovation ecosystems: the role of information and communication technologies (ICTs) for knowledge management (KM) and innovation within and among enterprises. *Baltic Journal of Management*, 13 (3), 298-302.
- Spector, P. E., Fox, S., Penney, L. M., Bruursema K., Goh, A., Kessler, S. (2006). The dimensionality of counterproductivity: Are all counterproductive behaviors created equal? *Journal of Vocational Behavior*, 68 (3), 446-460.
- Steward, J. (2006). Transformational leadership an evolving concept examined through the works of Burns, Bass, Avolio & Leithwood. *Canadian Journal of Educational Administration and Policy*, 54, 29-55.

- Tang, P.M., Bavik, Y.L., Chen, Y., and Tjosvold, D. (2015). Linking ethical leadership to knowledge sharing and knowledge hiding: The mediating pole of psychological engagement. *International Proceedings of Management and Economy*, 84, 71–76.
- Xiong, C., Chang, V., Scuotto, V., Shi, Y., Paoloni, N. (2019). The social-psychological approach in understanding knowledge hiding within international R&D teams: An inductive analysis. *Journal of business Research*.
- Vrontis, D., Christofi, M., Battisti, E., & Graziano, E. A. (2020). Intellectual capital, knowledge sharing and equity crowdfunding. *Journal of Intellectual Capital*, DOI: 10.1108/JIC-11-2019-0258.
- Wang, Y., Han, M.S., Xiang, D., & Hampson, D.P. (2019). The double-edged effects of perceived knowledge hiding: empirical evidence from the sales context. *Journal of Knowledge Management*, 23 (2), 279-29.
- Wang, C., Mei, J., & Feng, J. (2020). Exploring influencing factors of offline knowledge service transactions on an online-to-offline knowledge-sharing economy platform. *Journal of Knowledge Management*, 24 (8), 1777-1795.
- Webster, J., Brown, G., Zweig, D., Connelly, C.E., Brodt, S., & Sitkin, S. (2008). Beyond knowledge sharing: Withholding knowledge at work. In J. Martocchio (Ed.), *Research in personnel and human resources management*, 27, 1–37. Bingley: Emerald Group.
- Wei, F., Ma, Y. (2018), Supervisor's territorial behavior and employee s knowledge hiding behavior: a moderated mediation model, *Industrial Engineering and Management*, 23 (4), 179–185.
- Witherspoon, C.L., Bergner, J., Cockrell, C. & Stone, D.N. (2013), Antecedents of organizational knowledge sharing: a meta-analysis and critique. *Journal of Knowledge Management*, 17 (2), 250-277.
- Zhao, H., Qing Xia, He, P., Sheard, G. and Wan, P. (2016). Workplace ostracism and knowledge hiding in service organizations. *International Journal of Hospitality Management*, 59, 84-94.
- Zhao, H., Liu, W., Li, J., & Yu, X. (2019). Leader–member exchange, organizational identification, and knowledge hiding: The moderating role of relative leader–member exchange. *Journal of Organizational Behavior*, 40(7), 834– 848.