

*Leader signalled knowledge hiding and erosion of co-created value: micro-foundational evidence from the test preparation industry*

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**Leader Signalled Knowledge Hiding and  
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Preparation Industry**

**Abstract** - This study is an initial step towards theorizing erosion of co-created value in knowledge-intensive workplaces. In doing so, our research examines how knowledge hiding behaviour instigated and promoted by organizational leaders can adversely impact the micro-foundations of the organization. The current study explores knowledge hiding in the Indian test preparation industry. To conduct our research inquiry, we applied a qualitative inductive approach. We interviewed 25 employees working in the test preparation industry, and the responses were analysed using the Gioia method, a variant of grounded theory. The findings of our study reveal how leader-signaled knowledge hiding (LSKH) in this industry hinders value co-creation for stakeholders through outcomes such as reduced organizational commitment, moral decoupling, team stratification, information asymmetry, and leader induced trust deficit. The current study synthesises findings of the explorative research complemented by a literature review to propose a conceptual framework.

**Index Terms** - Knowledge-Based View, Knowledge Management, Leader-signalled Knowledge Hiding, Micro foundation, Test Preparation Industry

## I. INTRODUCTION

“All men by nature desire to know.”

-Aristotle

Like humans, organizations are legal entities that race with rivals searching for knowledge of staying ahead of the competition and achieving success. Barney [1] suggested that knowledge is an intangible strategic asset to an organization that can be a source of competitive advantage. This competitive advantage can further be strengthened if organizations apply knowledge not only in a select few areas of decision making; instead, it should be all-pervasive in decision-making [2], [3]. Despite acknowledging the criticality of knowledge, many organizations still face challenges in reaping benefits from this valuable intangible resource [4], [5]. The current highly volatile, uncertain, complex, and ambiguous business environment complicates this already tricky process of effective utilization of knowledge assets. Researchers have attempted to provide comprehensive insights regarding this conundrum [6]–[8]. For example, [9] suggests that an organization’s competitive advantage rests on its repository of current knowledge, its use, and its capability to acquire new knowledge sooner than others. Similarly, Nonaka and Takeuchi [8] argued that in contemporary times, organizations must consider themselves a ‘knowledge-creating company’ in which each organizational member is essentially a knowledge worker and contributes towards building the organization's competitive advantage. This shift in thought process draws our attention towards an essential concern of knowledge management (KM) that knowledge is not only captured in knowledge management systems (KMS) in the form of reports or analysis, but also by individuals through years of experience, observations, countless cycles of successes and failures. This lifeline of knowledge in organizations must flow freely but there are instances where this knowledge flow is hampered deliberately. An important question therefore is that why the knowledge possessed by members of the organization across hierarchies that offers competitive advantages to the organization not allowed to be shared freely within organization? This study aims to dig deeper into this complex nature of knowledge hiding and attempts to further our current understanding of how this hiding is facilitated by leaders within organizational settings. In the subsequent section we gradually move from introducing knowledge management to knowledge hiding.

It is sufficient to say that knowledge is a key resource in any organization’s vision to success. Like every other organizational key resource, knowledge needs management. Hence, the firms must consistently develop competencies to manage them efficiently [10], [11]. Academic scholars have regularly suggested ways to manage the ‘knowledge resources.’ This set the initial grounding for knowledge management research. Hence, it should not surprise us to know that knowledge management research has captured some serious attention of researchers and practitioners today.

Knowledge management (KM) as a term and strategy has been defined in several ways. A widely accepted definition of KM refers to creating, storing, transferring, and applying knowledge [12]. However, it is not easily manageable. Every step of this management process brings its own set of challenges. On the one hand, organizations demand their individuals to protect their knowledge from outsiders to maintain core competency; on the other hand, they demand their individuals to freely share their knowledge with colleagues to facilitate overall development [13], [14]. Although prior studies have attempted to better understand these dichotomous

demands concerning knowledge, there are still few issues pertaining to the creation, dissemination, sharing, hoarding, and hiding of knowledge that need to be unearthed. The current study is also an attempt to develop a comprehensive understanding of knowledge-based resource view for organizations. In doing so, we delve deep into the idea of knowledge management and its essential components, i.e., knowledge sharing, knowledge hiding, and knowledge hoarding, among others.

Our discussion on KM is incomplete without elaborating on the knowledge-based view, i.e., perspective on knowledge as the primary strategic resource that can be exploited to create value for individuals and organizations [15]. A knowledge-based view of the firm is essentially an extension of a firm's resource-based view, which states that organizational success depends on their ability to use diverse resources innovatively and strategically [16], [17]. Knowledge is one of those resources that can predict organizational performance in the long run [18]. KBV suggests that knowledge contains all the valuable resource characteristics [19]. Knowledge adds value to the organization; knowledge gathered over the years is rare, rivals cannot easily imitate it, and it can be organized into a process. Considering the modern economy that demands organizations to act as knowledge-creating entities, we believe that KBV explains a firm's performance by considering how they use knowledge-based resources [20]. Organizations in the modern economy heavily rely on individuals to learn and gather knowledge as they continue to lead the path of growth. The application of KBV is vital since it provides a closer look at how organizations manage the most critical resource, i.e., knowledge. Under the lens of KBV, organizations are believed to exist based on how well they manage and use the knowledge [21]. KBV suggests that organizations exist because of their ability to use available knowledge and create new knowledge [22]. KBV highlights the significance of knowledge creation and storage and includes knowledge transfer between individuals. Understanding KBV is also important because relevant literature on KBV has emphasized developing an understanding of knowledge as an important element of micro-foundations of an organization. As an essential competitive resource, knowledge shapes how an organization's task and human integration process occurs. This, in turn, determines the nature and characteristics of critical organizational outcomes such as innovative capabilities, among others [23].

Having discussed the importance of KM and the knowledge-based view, it is important to highlight the gaps in the current understanding of KM and how our study addresses those gaps. First, though few studies have focused on knowledge-based views under different organizational and social contexts [23]–[26], studies on knowledge-intensive work settings have been inadequately covered in this literature. A knowledge-intensive work setting refers to an organizational context where the firm's performance is highly dependent on the degree to which knowledge is efficiently managed, including its sharing among the workforces. A few examples of knowledge-intensive industries are education, health, finance, telecommunication, and insurance [27].

Second, understanding KM practices across different organizational hierarchies requires further research [28], [29]. For instance, the majority of the studies on knowledge sharing (KS) predominantly highlighted KS taking place amongst employees and its consequences [30]–[33]. How organizational leaders and supervisors impact KS impacts or/has not received much attention. More importantly, studies on leader-induced KM practices focus on the antecedents. There are few notable studies [28], [34] on leader-induced hiding practices within organizations.

Similarly, many studies on knowledge hiding and knowledge hoarding have been done keeping the same level for analysis [35]–[39]. Our study delves deeper into understanding the micro-level interactions across different stakeholders within and outside the organization. It is essential to highlight that different levels of the organization function differently, even though they are part of the same system. The behaviors and functions of an organization's top management team (TMT) are often clearly distinct from their middle or lower management. It is important to investigate how the top management or middle management can promote or restrict KM practices at the lower level of the organizational hierarchy and vice versa. In a modern knowledge-based economy, the impact of such micro-level interactions and mechanisms cannot be ignored [40]. Such interactions can be considered fundamental elements of knowledge creation and thus responsible for individual and organizational outcomes (e.g., innovation, creativity, etc.). A more comprehensive story on KM and its components, especially the one focusing on the outcomes of KM induced by organizational leaders (which is currently missing), is worth examining.

Third, existing literature on knowledge management has failed to highlight how KM impacts the nature of co-created values for the stakeholders. Current literature does not offer deeper insights into the varying nature of customers/clients and their value co creation. However, there is little empirical evidence, e.g., [41] suggesting that knowledge management can result in value creation (through knowledge sharing) and erosion (through knowledge hiding); such works are scarce and limited to the field like healthcare or domains such as marketing. Marketing literature suggests that value co-creation occurs when consumers actively use multiple available connective tools to share any relevant information with organizations, leading to collaboration for creating value [42]. Here, co-

created value can be understood as a tool to exploit the knowledge stored in the consumer, not about the consumer [43]. Organizations should facilitate value co-creation since it helps the organization understand consumers' actual needs and assess the organization's current methods of capturing consumers' needs [44]. In addition, what happens when knowledge in the form of information has a restricted sharing? What if knowledge is not shared at all? Does it erode value co-creation for stakeholders? In essence, though the focus of prior studies has been promising in recognizing KM's positive side, the dark side of KM is yet to be unearthed.

Fourth, the role and importance of context in KM practices for organizations have not gained much attention from KM researchers. This is even though organizations do not operate in isolation. They always function under the influence of social, political, and cultural environments [45]. For instance, sharing product responsibility data illustrates the importance of KM in corporate governance [46]. The whistle-blower case of Facebook recently resulted in Marc Zuckerberg losing USD 6 billion in a few hours, which illustrates how the business operates in consensus with society and politics.

Based on the context in which organizations operate, the nature and efficiency of KM also varies. The current research focuses on emerging markets, This is because studies focusing on KM and KBV in organizations from emerging markets/economies are missing [23]. Another example is that of Maggi Noodles losing 80% of its market share after being backlashed for hiding information on lead content in its product, which are gentle reminders for us.

Based on the gaps discussed above, the current study has the following main research objectives,

1. *To develop a micro foundational understanding of KM in a knowledge-intensive industry.*
2. *To highlight KM practices at micro foundational levels shaped by organizational leaders in knowledge-intensive industries.*
3. *To identify the outcomes of KM practices shaped by organizational leaders in knowledge-intensive industries through a micro foundational focus.*
4. *To develop a micro foundational understanding of value co-creation through KM in knowledge-intensive industries.*

This study contributes toward the current scholarship on knowledge management in several ways. First, it uses a knowledge-based view (KBV) to examine knowledge management and its components in a knowledge-intensive environment. There have been numerous studies under resource-based view (RBV) that consider knowledge as a resource similar to other resources such as inventory, technology, etc. [7], [47]. However, we would like to examine the complex nature of knowledge-based resources in an industrial context where knowledge is the primary tool to achieve organizational benefits. Hence, through the study, we contribute to our current understanding of the role of KM in a knowledge-based economy.

Second, our study looks at value co-creation in the test preparation industry, which has not been examined in the past. By examining value co-creation from a KBV, this study leaves important implications for knowledge-intensive workplaces, including healthcare, the education industry, and research & development.

Third, we examine the role of leaders in knowledge-based economies and contribute to the literature on leadership and KM. There have been very few studies that have explored the relationship between leaders and KM [28], [48]. KM as a management practice affects all hierarchical levels in an organization. Hence, this study contributes to the current understanding of how a leader can strengthen or weaken KM strategies and their implementation for organizations.

Fourth, the current study focuses on the context of emerging economies that have gained KM scholars' attention in recent years. Organizational studies have begun to highlight the importance of unique context [41], [46], [49] since it provides researchers with an opportunity to observe peculiarities that would have been absent in other contexts [50]. The distinction between global and local versions of challenges and their proposed solutions is getting researchers' much-required attention. It is important to examine knowledge created by whom is being used for the whose benefit [45].

The paper is structured as follows: In the next section, we have provided a literature review of knowledge management and different components of KM in organizations. The following section presents the research

questions followed by theoretical anchors, where we have briefly discussed the theoretical pillars of this research inquiry. The subsequent section aims to set the research context in industry and sampling. The following section discusses the methodology applied by the authors, followed by an analysis of the data collected. Post analysis, we present the data findings suggested by our analysis. In the end, we discuss the significance of the findings along with research limitations and future research direction.

### *A. Theoretical Anchors*

Since our study focuses on understanding behaviors in knowledge-intensive environments, we deemed it appropriate to apply a knowledge-based view (KBV) as a theoretical framework to examine our research questions. KBV extends the traditional resource-based view (RBV), which scholars widely discussed in strategic and operations management literature. RBV suggests that organizational success can be attributed to their utilization of resources with competence [16], [17], [51]. However, critics claim RBV gives too much attention to the firm and the internal aspects rather than the resources and assets [52]. For instance, knowledge has emerged as a significant strategic resource explaining an organization's competence and requires attention. This approach of looking at knowledge as a differentiating resource is called the knowledge-based view [53]. The core difference between RBV and KBV is that RBV considers knowledge as a general resource similar to other resources available.

In contrast, KBV considers knowledge the most crucial resource of the organization [54]. Therefore, in KBV, knowledge either possessed or controlled by the firm and the learning of dynamic nature are the basic elements of the analysis [55]. KBV suggests that an organization creates value and competitive advantage by utilizing knowledge as the primary resource [1], [53], and recently there has been an increase in studies emphasizing knowledge-based views [23]. KBV aims to explain and interpret organizations and their knowledge management practices by considering the core nature of knowledge that would not be available to us if we see knowledge as 'just another resource' [56]. KBV presents knowledge as a controllable, exploitable, and tradable resource, similar to the traditional tangible assets [57]. However, KBV also incorporates the distinction of knowledge from a definitive resource in how it is held. This 'knowledge' resource is often possessed by humans, i.e., employees, in a tacit form that the organizations need to manage strategically [58]. Knowledge when utilised effectively, can also contribute to the innovation capabilities of the organization [59]. The emergence of KBV is also justified considering the changes that are observed in the global economy. More and more of organizations' success can now be attributed to how they collect and apply information and knowledge rather than depending heavily on manufacturing or production [60].

Applications of KBV can be widely noticed in research focusing on knowledge and intellectual capital in organizations [23]. Apart from knowledge management practices and processes, individuals are of key importance here. For example, the importance of individuals in creating new knowledge and value under the assumption of KBV cannot be ignored [25]. These individuals' role is pivotal since they are the knowledge-carrying agents. Indeed, it is of prime importance for an organization to encourage and motivate individuals to share knowledge with their colleagues. Having said so, the story is not as smooth as it appears to be. In reality, individuals often engage themselves in exhibiting counter-productive knowledge behaviours to protect their knowledge. This is where, the current study extends discussion on KBV. Our study applies micro foundational approach to understand the knowledge-related interactions that take place between organizational members. In an ideal case, knowledge should be transferred from one member to another. However, individuals are known to withhold knowledge from each other [35]. These interactions happen at the micro-level, which may go unnoticed. Applying the micro-foundational approach helps dive deeper into knowledge-related activities and their role in explaining specific organizational macro-level outcomes. Here we would like to introduce the test preparation (or coaching) industry in one of India's emerging markets as we examine our hypothesis from the lens of the knowledge-based view.

## II. LITERATURE BACKGROUND

### *A. Knowledge Management*

Knowledge has been recognized as a significant resource available to organizations in the modern era [61]. Creating knowledge is important because it can provide an edge over competition [62]. To harness the benefits of knowledge as a resource, effective management is essential. Managing Knowledge or Knowledge Management (KM) has been defined as the "strategies and practices intend to understand, focus on, and manage systematic, explicit, and deliberate knowledge building, renewal, and application – that is, manage effective knowledge processes" [60, p.3]. To further understand the literature on KM, we begin with the definition offered by Gupta

and his colleagues as “a process that helps organizations find, select, organize, disseminate, and transfer important information and expertise necessary for activities such as problem-solving, dynamic learning, strategic planning, and decision-making” [61, p.1]. The organizations that comprehend the significance of KM practice identify themselves as a learning organization and, therefore, can show growth in an ever-changing environment by continuously improving their knowledge assets [65]. On the other hand, failing to give adequate attention to knowledge assets leads such organizations to fail [66] even without knowing the root cause of the failure [67].

The knowledge management literature has been developed in multiple phases. In a recently published research work, the authors emphasize the importance of KM by highlighting how KM has turned into a mainstream organizational practice due to a vast majority of research conducted in this field [68]. After realizing the potential of knowledge, many remarkable studies have attempted to provide a model for knowledge management to capture maximum output from knowledge. A few of these models are the knowledge management model [62], a model of knowledge management [69], knowledge category model [70], intellectual capital model of knowledge management [71], and knowledge management model [72]. These models define knowledge as a resource considering its multidimensional nature and provide an action plan to organizations to facilitate knowledge management practices.

From the organizational and practical point of view, KM as a management initiative is quite complex and much broader than similar management initiatives such as total quality management or downsizing [73]. In comparison, knowledge management can be applied within possibly each context of an organization. With each success or failure, the organization must know the antecedents and consequences so that this ‘knowledge’ can be collected, stored, and utilized in future decision-making situations. Knowledge management fundamentally serves two purposes: First, to help the organization become as intelligent as possible in making better decisions that lead to success, and second, to identify the actual value of knowledge assets held by the organization currently. To achieve these objectives, organizations must establish systems that focus on knowledge assets and manage them. These systems are generally termed knowledge management systems (KMS). To ensure that knowledge is managed systematically, researchers and practitioners have focused on integrating knowledge management and information technology (IT). Knowledge management systems are IT-based infrastructure that facilitates creating, storing, retrieving, transferring, and applying knowledge to help organizations make better decisions [74]. Since the emergence of KMS, much-deserved attention has been given to knowledge management, and researchers have introduced KM applicability through different perspectives. [75] suggests that organizations that manage knowledge effectively successfully align their capabilities and resources with knowledge strategy to facilitate integration and interaction. [74] highlight the importance of developing multiple approaches to knowledge management considering the knowledge lifecycle. Regarding KM, similar perspectives have been provided regarding the spectrum of knowledge management [76] architecture required for knowledge management [77]. A study on small and medium enterprises found it extremely important for SMEs to align their KM tools and practices with the desired business outcomes [78].

The role of effective KM has gone beyond financial performance and turnover. The applicability of KM has seen an enthusiastic increment in recent times. For example, [79] suggests that complementing knowledge management systems with core competencies of the firm is even key to achieving product and process innovation. KM has also been found to mediate the relationship between organizational culture, structure and strategies with overall organizational effectiveness [80]. Studies have also considered the role of leadership while implementing knowledge management. In technology-enabled firms, knowledge-oriented leadership behaviour has been found to be essential for future innovations [48]. Notably, a few studies have explored the role of knowledge management in entrepreneurship and social entrepreneurship [81], [82]. An adequate amount of academic interest has also been given to understanding how KM impacts sustainable development [83]–[85].

Apart from managing knowledge of products, services, competition, and the external environment, the knowledge and learnings from previously completed projects should also be an integrated part of the KM system [86]. Hence, only focusing on the knowledge of customers and competitors may not lead the firm to the path of success. The firms should also pay attention to how their own internal processes are engineered into the firm's vision. Gathering new knowledge and maximizing the utility of existing knowledge is essential for improving firm performance [87]. Since it has been a common agreement that knowledge management is one of the most crucial practices for success in the business world, recent research focuses on how knowledge is treated in organizations and, more interestingly, how individuals behave concerning knowledge. If stored in one place, knowledge will not do organizations any good hence, they must also focus on how to transfer this knowledge from those who have it in abundance to those who need it to perform their job [88]. The following section explains each of those knowledge-related behaviors observed in modern organizations.



### *B. Knowledge sharing*

Organizations cannot achieve knowledge management fully without active participation from the significant stakeholders-the employees. The employees can directly contribute to knowledge application and innovation by sharing their knowledge with other organizational members [89]. Organizations can utilize the knowledge-based resources to the maximum degree when individuals exhibit knowledge sharing [30]. Studies focusing on knowledge sharing identify it as a positive knowledge management practice that leads to desirable outcomes such as reduction in cost, increase in revenue, improved performance of teams and groups, and increased scope of innovation [90]–[93]. In addition to the impact on the general performance of the organizations, a study suggests that knowledge sharing by new ventures opens a window of opportunity for fundraising [94]. Although knowledge sharing is an important aspect of organizational expectations from individuals, research suggests that KMS has failed in establishing a common practice of knowledge sharing amongst individuals. The same is the interpersonal factors and personal attributes influencing individual behavior [95].

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**Insert Figure 1 about here**

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### *C. Knowledge Hoarding*

Why don't individuals share knowledge? Many researchers have studied the answer to this question. Studies suggest that sharing knowledge might be perceived as losing power or status. Knowing can present advantages, and losing it may create a sense of resource loss; hence, individuals may not share knowledge even if they are motivated and rewarded for doing so [96], [97]. This perceived loss may give birth to certain negative behaviors concerning knowledge management. Knowledge hoarding is one of the many negative behaviors that means storing and withholding knowledge from other organizational members [98]. It is of prime importance for organizations to understand this behavior since it involves knowledge that might not be explicitly or commonly available [39]. While studies suggest that knowledge hoarding may not necessarily be counter-productive, it certainly has negative consequences such as deteriorated team communication and decreased team performance [39].

### *D. Knowledge Hiding (KH)*

The organizations must ensure the consistent and smooth flow of knowledge across multiple levels. Organizations understand the importance of knowledge sharing, yet they cannot make it absolutely mandatory for employees to share the knowledge with other organization members [99]. Knowledge hiding is defined as “an attempt to withhold or conceal the knowledge that has been requested by another person even though it is available to the person being asked” [35, p.2]. It is imperative to understand the difference between knowledge hiding and other constructs. For instance, the absence of knowledge sharing may exist because of lack of knowledge requested, implying that knowledge is not hidden; it is not in possession. Knowledge hiding is also different from knowledge hoarding, which represents holding knowledge [96]. The knowledge hoarder may or may not share the knowledge in the future. A difference between knowledge hoarding and knowledge hiding is the demand for knowledge. Knowledge hoarding does not necessarily have a relationship with the demand of the knowledge, whereas knowledge hiding can occur only after there is a demand for the knowledge. Knowledge hiding exists in organizations in three ways: playing dumb, evasive hiding and rationalized hiding [35]. Each of these dimensions play an important role in promoting or preventing KH within organizations.

Although knowledge is withheld in knowledge hoarding and knowledge hiding, the table (table 1) below presents a clear distinction between these two knowledge-related behaviors.

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**Insert Table 1 about here**

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In the subsequent section, we have introduced our research context: the emerging market and test preparation industry.

### *E. Micro foundations and Knowledge Management*

How micro factors can be linked with the macro environment continues to attract the attention of organizational and strategic management scholars, e.g., [100]–[102]. The central idea of micro-foundations refers to understanding how collective or macro-level organizational outcomes are impacted by individual or micro-level factors [103]. Micro foundations are micro-level explanations of macro-level consequences. Micro foundations aim to explain how micro-actions mediate the relationship between macro variables. Micro foundations are a movement that facilitates a way of understanding macro theories [104]. This school of thought suggests that the explanation of higher-level variables should incorporate an explanation of lower-level variables [105]. Micro foundations should not be understood as reducing everything to an individual level. They draw our attention to the need to understand the unique and interactional effects of micro factors that are both emergent and additive [106].

Micro foundations have started gaining the attention of researchers regarding their implications in organizational context [107], [108]. [109] have attempted to examine how individual-level interaction, i.e., micro-foundations, impact macro-level organizational outcomes such as capabilities and organizational routine. In addition to organizational capabilities, how individuals interact at ground levels, believe, adhere to rules, prepare and follow plans help determine the overall characteristics of the firm [110]. Linder and Foss [105] have suggested that organizational goals generally considered a macro-level construct do prevail at the micro-level. [111] take the support of micro-foundations to help understand how individuals engage in organizational social networks.

In the modern knowledge-based economy, the impact of such micro-level interactions and mechanisms cannot be ignored [40]. Such interactions can be considered fundamental elements of knowledge creation. Hence, [40] suggest that understanding micro-foundations is a critical aspect of an understanding knowledge-based economy. A review of micro-foundations research highlights that macro-level outcomes that involve knowledge-based assets seem to be impacted by micro foundational movement [104]. Recent studies have attempted to examine the knowledge-related micro-foundations and organizational level outcomes. One such study suggests that micro foundational interactions and interdependencies in knowledge management practices do contribute to firm-level performance and innovations [112]. Another study suggests that knowledge sharing by individuals has been studied and identified as micro-foundations that play a significant role in firm-level outcomes such as strategic innovation [113]. Organizations are forced to manage the knowledge created and held effectively in a knowledge-intensive environment. A study indicates that organizations can create atmospheres of knowledge capturing and sharing with the help of micro-foundations of organizational learning [114]. The findings of these studies motivated us to examine the micro foundational knowledge management practices such as knowledge sharing, knowledge hiding, and leader-signaled knowledge hiding and identify their macro-level consequences. Since knowledge management practices involve individuals as knowledge agents, it is important to apply micro foundations approach to investigate how individual level interactions and their contextual mechanisms impact firm-level outcomes [115]. Moreover, research suggests that knowledge management practices influence micro-foundations of innovative capabilities of an organization in a complex and dynamic manner [112].

In knowledge-intensive industries such as education, the micro foundational lens provides a ground-level reality. A recent study on knowledge-intensive small and medium enterprises in 14 countries revealed that the role of micro foundations is quite relevant for organizational outcomes such as innovation and individual outcomes such as technology absorptive capacity [116]. While assessing knowledge management systems as a whole, the role of individuals as knowledge agents and their behavior may get neglected. However, how these knowledge agents interact with one another significantly influences organizational routines and processes [100]. A recent study supported the idea that communication skills as micro foundational capability of individuals have the potential to impact the organization's growth [117]. Knowledge behaviors as micro-foundations help explain the relationship between corporate entrepreneurship and firm-level strategic actions [118]. Another study provided micro foundational evidence of how leaders interact with customers, suppliers, employees, and society, in general, impacts the organization's goal achievement and value creation [119]. These studies provide a strong reason for research on micro-foundations of knowledge management.

### *F. Knowledge Management and Co-created Value*

To develop a competitive advantage, organizations keep looking for relevant sources of knowledge and information. One such source, i.e., the consumers, has long been underutilized by organizations. As discussed in the introduction, Value co-creation occurs when consumers actively use multiple available connective tools to share relevant information with organizations, leading to a collaboration for creating value [42]. Value co-creation can be understood as a tool to exploit the knowledge stored in the consumer, not about the consumer [43].

Organizations should facilitate value co-creation since it helps the organization understand consumers' actual needs and assess the organization's current methods of capturing consumers' needs [44]. Facilitation of value co-creation can be achieved by modifying the organization's knowledge management practices. While designing a knowledge management system, the focus should be the opportunities for value co-creation and not the technological compatibility. The knowledge management system must be designed to identify value co-creation processes and encapsulate the same in implementation. These value co-creation processes are the set of interactive activities and mechanisms that bring the service provider and the consumer on the same platform to result in mutual learning that helps in developing competitive advantage [120].

Under the umbrella of the knowledge management system, knowledge sharing has been identified as the most important component for value co-creation. It provides a platform for consumers to share their ideas, experience, creative suggestions, and knowledge [121]. When consumers share their real-life experiences and information gathered through years of using products and services, it helps the organizations in co-creating value and building competence [122]. Knowledge sharing also results in the integration of skills that helps in solving emotional issues via value co-creation [123]. By allowing consumers to share their knowledge, they are empowered to become active partners of the organization who will pave the path for future value [124]. Recent studies have focused on the relationship between knowledge sharing and value co-creation and possible organizational factors that impact this relationship. [124] suggest that customer expertise, employee adaptiveness, and strong organizational orientation positively impact knowledge sharing amongst consumers. [125] suggest that individualization, empowerment, and developmental motives positively impact the willingness to share knowledge for consumers, leading to value co-creation. In addition to the knowledge being shared, it is also significant to address how this shared knowledge is processed. Research suggests that converting tacit knowledge into explicit knowledge enables organizations to cultivate value co-creation [126].

Literature on value co-creation has emphasized factors that promote value creation for individuals and organizations. Research on factors hindering such value creation or erosion of co-created values has been limited. Few studies which have explored value erosion have looked at it from perspectives such as stakeholders' engagement. Understanding value co-creation through KM in general and hindrance to value creation through the components of KM (i.e., knowledge sharing/knowledge hiding, etc.) is inadequate. This is important because preliminary research on KM in knowledge-intensive industries has offered exciting observations, including that KM does not always result in value co-creation for stakeholders. To illustrate, [41] studied KM in the context of rural healthcare workers in India. Their findings provided evidence for the downward spiral effect in the form of value erosion in the case of healthcare workers. The downward spiral had resulted from knowledge hiding behaviour among the healthcare professionals, and its negative impact was visible not just at the micro (individual) level but also at the meso (village) and macro-level (society and policy). The current study considers co-workers as active partners in value co-creation within knowledge-intensive organizations. It attempts to understand further how leader signaled knowledge hiding could hinder value co-creation in knowledge-intensive workplaces.

### III. RESEARCH CONTEXT

#### A. *Micro-foundation, test preparation industry, and Indian market*

The Test Preparation industry is one of those globally present industries yet is less explored by research scholars. The Test Preparation industry entails school, high school, and university examinations, graduation and post-graduation entrance tests, higher studies, certification examinations, and peripheral educational services. Entrance examinations for higher studies such as SAT (Scholastic Assessment Test) and ACT (American College Testing) for college, GMAT (Graduate Management Admission Test), CAT (Common Admission Test), GRE (Graduate Record Examinations) for management and technology, CLAT (Common Law Admissions Test) and LSAT (Law School Admission Test) for law schools are only a few amongst many popular examinations in different markets. According to a report published in May 2020 by Technavio - a leading market research firm, the test preparation industry market size was estimated to be \$24.57 billion in 2016 and is expected to grow to \$32.13 billion by 2021. The major contributors in this segment are North America, Europe, Asia Pacific, South America, the Middle East, and Africa [127].

The global education industry has seen incredible growth in the last couple of decades, and it is expected to show higher growth in the future as well. This increased growth could result from multiple factors such as an increase in disposable income, demand for higher education and a better lifestyle, competitive markets, and increased awareness of diverse careers, to list a few. With such a promising future, this industry is no exception to severe challenges. Despite being such a large industry, small-scale, regional, and unorganized players capture most of this market size. The emergence and increasing demand for e-learning have thrown multitudes of hurdles

towards the companies. The cut-throat competition for acquiring a larger market share leads to price wars which are not sustainable. Last but not least, the industry is facing human resource management challenges. A higher attrition rate, less scope of career growth, and knowledge-based competition lead employees, especially the teachers, to feel disheartened and unmotivated.

Knowledge plays a vital role in test preparation firms. The very USP, i.e., unique selling proposition of these firms, is “knowledge.” To evolve and develop themselves as a brand, they identify and hire knowledge workers-subject matter experts. Examples of subject matter experts include experts on quantitative techniques, interview preparations, TOEFL preparation, etc. The market perception of these companies as a reputed brand depends on how well their teachers or faculty ‘know’ the subject. Hence dealing with knowledge, let alone managing it, becomes quite a difficult task for the management of these organizations. Quite surprising, research on these firms' KM practices has not drawn researchers' attention. Irrespective of the fact that the fundamentals of the test preparation industry rest upon knowledge-based resources. This was one of the important factors that motivated us to choose the preparation industry for our research. We also believe that this industry's rapid growth and economic contributions have made it necessary to highlight important workplace behaviors, including KH and KS, which have strong implications for organizational practices such as talent management and others.

Keeping in mind the knowledge-based view, we selected a research setting that allowed us to examine knowledge management even in a relatively new context [128]. The significance of knowledge sharing and hiding can be observed in organizations quite easily, which depend heavily on employees sharing knowledge and the consumers. How Indian organizations manage human capital stored in terms of knowledge has recently gained scholarly attention. A study on knowledge management enablers identifies knowledge creation resources as an important factor in the operational performance of Indian firms [129]. Another recent study shows that human capital is positively related to the organization's performance [130]. Human capital management can be observed extensively in the test preparation industry. The organizations in the test preparation industry achieve success or face failure because of how much knowledge of different subjects, tests, and examinations their academic team members possess and share. The academic team members, i.e., teachers and trainers, feel immense pressure to gain an edge or competitive advantage in terms of knowledge. Hence, we have chosen the test preparation industry of India, where we can observe knowledge-transfer-related phenomena.

Knowledge management holds a significant position in the test preparation industry because the core operation of the firms in this industry is “knowledge.” One way of looking at KM in industries such as the test preparation industry is to examine it as an element of micro-foundations of the organization. Micro foundations impact macro-level organizational outcomes such as capabilities and organizational routine. The same is also expected to hold for test preparation companies. Examining micro-foundation elements in the case of these industries holds paramount importance because, here, organizations strongly rely on their skilled trainers and knowledge disseminators (faculties) to carry out their business. The same product or service they create is ‘knowledge.’ Knowledge as a service or product is highly volatile and susceptible to change. Hence, any change made at the macro level, i.e., the organizational level, is expected to get reflected at the micro level, i.e., faculties/instructors and other stakeholders. This can instigate a spiral of desirable or undesirable outcomes (depending upon the decisions of the top management). While knowledge is one of the competitive resources for other industries, the test preparation industry depends on knowledge to gain a competitive advantage. Particularly, micro foundation elements such as knowledge management effectiveness can shape how an organization would evolve, grow and mature in a highly dynamic business environment [99]. Micro-level interactions between organizational leaders and the subordinates, or among employees or their clients (students in the case of test preparation firms) generate signals that shape the attitude and behavior of others (including outsiders). Interactions that signal organizational wrongdoing or unethical practices can damage the organization's brand image and thus cause loss of business [100]. Similarly, a positive signal of the organizational ethical embeddedness or supportive work environment may attract prospective employees and clients to associate with the focal firm [100].

India has the second-largest population globally and a distinct culture that makes her a country with great potential [131]. With the latest new education policy (NEP) launched in 2020, India is on the way to completely revolutionizing the education sector to develop a global competitive advantage [132]. This new policy brings numerous possibilities for the Indian education sector. One of the laudable aspects of this policy is doubling the public investment to 6% of the nation's GDP, implying more opportunities for students to be able to get into colleges for graduation even if they do not have the economic resources at their disposal. This policy aspect will have a huge impact on the test preparation industry in India as well. According to the Technavio report, the Indian test preparation industry is estimated to grow to \$7.22 billion USD during 2021-2025 [127]. Another report of Data Labs published by Inc42 reveals that the online education industry in India is expected to grow to \$1.96 billion. The Data Labs report suggests that this growth is due to increased smartphone users, low-priced internet,

and the ever-increasing demand for skill development [133]. Like the global scenario, the Indian test preparation industry includes a blend of organized or large, semi and small unorganized entities. The market segments include K-12 education, graduation and post-graduation entrance examinations, Banking and government selection examinations, Civil services preparation, Defence selection preparation, professional certifications (CFA etc), education abroad (GMAT, GRE, IELTS) and more than 100 other national level tests.

Most of the organizations in this industry do not have a standard organizational structure, are run by a handful of employees, and follow a franchise-based market presence. A few amongst the national level firms in the industry are Byjus, Unacademy, Vedantu, TIME, Career Launcher etc. However, a large share of the market is owned by small-scale companies. In 2020 a report published by the ministry of education, the government of India, revealed that private coaching services account for 13% of the total education spent by Indian families [134]. This is not surprising, especially when the latest NSO (National Statistical Organization) report suggests that one out of every five Indian students supplement his/her education with private coaching [135]. KPMG report on online education in India indicated that the Indian test preparation industry's online segment is expected to achieve a CAGR growth rate of 64% at a current market size of 515 million USD [136]. The Indian test preparation industry (including the online segment) is expected to achieve 13% by the end of 2021 and 16% by 2022 [137].

#### IV. RESEARCH DESIGN

Qualitative and quantitative research play an important role in formulating, idealizing, framing, and interpreting research problems. The nature of research questions and context motivated us to follow an inductive research design over a quantitative deductive one. The advantage of adopting an inductive qualitative approach is that the findings of such studies are not restrained by prior theoretical underpinnings [138], [139]. The purpose of the current study is theory building instead of generalizability of findings. Theory development can then be complemented by quantitative research designs such as survey approaches which are ideally meant to increase the generalizability of the developed theory in relevant contexts. However, the merit of using qualitative research is that it can add new meanings to existing quantitative studies through subjective connotations [140]. Such designs are helpful and often necessary in exploring local meanings of phenomena and the interactions that create different meanings for individuals involved. As stated in literature, “qualitative approaches attempt to increase understanding of local perceptions, to 'explicate the ways people in particular settings come to understand, account for, take action, and otherwise’ [138, p.3]. Qualitative explorations offer the possibility of stimulating the development of newer understandings about the variety and depth with which organizational members experience behaviors, attitudes, and perceptions at their workplace [140].

For data analysis, the study uses the Gioia Method, a variant of grounded theory and widely used in qualitative research for its robustness [141]. In the past, the Gioia method has been used in management research, including research in strategic management, marketing, information system management, human resource management, and operations management too [41], [142]–[145]. The advantage of using the Gioia method over classical grounded theory is that the former leaves scope for co-creation of theory by considering both the researcher and informant as knowledgeable agents [146]. Data collection and analysis are done at three levels. The data collection and analysis have to go hand in hand, i.e., simultaneously using the constant comparison technique. The researcher can develop a basic understanding of the literature through the theoretical sensitivity technique. In this, the researcher creates an initial theme for his/her researcher based on a preliminary round of data collection, followed by further refinement of these themes through subsequent data collection. The data collection process continues until enough information is available to fill all the categories of the themes and no new piece of information is retrieved in any subsequent interviews/data collection attempts. This approach is called theoretical saturation, and it is a well-established and rigorous approach recommended in grounded theory studies [147], [138], [148]. Theoretical sampling does not focus on the sample but on the information from the sample, which helps in theory building [149]. It is very influential in shaping the data collection further because the researcher is involved in pursuing a conceptual model or idea instead of general information about the context or subject matter [150].

Once the theoretical saturation has been reached, the refinement of themes begins. The theme creation takes place at three levels. The first level represents the actual voices or narratives of the informants. This is where the informant is considered a knowledge agent, i.e., the informants are fully aware of their conditions, perceptions, attitude, and behavior. The researcher analyzes these voices, and based on his/her experience and expertise in the refinement of themes; the researcher creates the second-order constructs. At this level, the researcher is believed to be a knowledgeable agent capable of understanding the voice and reinterpreting it based on his/her knowledge and expertise. Finally, the second-order constructs are developed into higher-order (third-order) broader categories [151]. These categories are grounded in theory and literature. Prior experiences of using the technique come in

handy in developing such constructs. Since the authors have in-hand experience developing and publishing work on the Gioia method, they could rely on their ability to develop the themes for the current study.

We collected data through semi-structured in-person interviews that began in February of 2020. The data collection was delayed due to pandemics, and the rest of the interviews were conducted via virtual platforms [138]. Our sample included 25 employees working in the Indian test preparation industry. Out of the 25 informants, 15 were male, and 10 were female instructors and managers of test preparation firms. The mean age of these individuals was 31 years.

Moreover, the mean work experience in the industry was observed to be six years. As per the standard norm, the theoretical saturation approach determined the sample size [148]. Repetition of themes during the constant comparison process found a saturation by the 23<sup>rd</sup> interview. We conducted two additional interviews to ensure a thick description of the findings [146]. An initial sample of 23 and a final sample of 25 is also consistent with prior studies on similar areas. For example, [152] used a sample of 20 informants.

Similarly, studies on radical innovation [153], Career Development [154], Workplace Behaviour [155], Career Progression Challenges [156], and others too have used a sample of 20 or less in their inductive research designs. The duration of interviews ranged from 39 minutes to 65 minutes. The average duration of the interview was 42 minutes. In addition, we also interviewed 12 students to understand their points of view.

The sample selection was based on two-step inclusion and exclusion criteria. During the first stage, the respondents were chosen via personal contacts and referrals and asked to share their experiences in the test prep industry. Based on the suitability of the sample, interviewees were invited for the second round, i.e., the primary interview. The first round worked as a pilot study to refine our questions and prepare interview guidelines for the final round. The interviewees were provided with the freedom to choose the date and time for the interaction at their convenience. All the interviews began with ice-breaking questions and then proceeded towards the research questions. Some of the preliminary questions asked to the respondents were: “Describe your journey as a faculty/mentor/student in the test preparation industry.”, “How information was shared or passed on in your organization?” and “Have you been in situations where you had to hide or withhold some information sought by your colleague or students?”. Those respondents who had indulged in knowledge hiding behavior were probed further. During in-depth probing, respondents were asked about various factors that promote or restrict leader-signaled knowledge hiding and potential implications. The questions in the second stage of the interview were primarily driven by the responses received initially and modifications made in the interview questions in due course [157]. The ethical guidelines of informed consent, voluntary participation, and anonymity were followed throughout the research. All the interviews were recorded and transcribed after receiving the consent of all the respondents [138], [146].

## V. DATA COLLECTION AND ANALYSIS

### A. *Trustworthiness of findings*

Many precautions were taken in order to ensure the trustworthiness of the findings. We followed the guidelines provided by prior studies [158]–[160]. We were familiar with the geography and the social dynamics of the region from where the data was collected. The data collection process started in early (end of February) 2020. By August 2020, we had 17 interviews conducted. However, a surge in Covid cases restricted our mobility, and hence rest of the interviews were conducted virtually over digital platforms, including Skype and Google meet. Prolonged engagement with the participants helped close interactions and a higher degree of trust in the researchers. Some of the participants were later shared with the transcripts of their interviews so that they had an opportunity to add to or modify the details that could have been otherwise left out. It also ensured greater transparency in the interview process. The timings and locations/dates for the in-person interview/virtual interview were decided based on their convenience to make the process more comforting and suitable for them. Each participant was given sufficient time to share the information. Clarifications were provided to the participants in case of any confusion. This further enhanced the credibility of the data [161]. Throughout the data collection and analysis processes, the identities of the participants were kept confidential. A thick description of the expression of understanding the participants' perspective over the issues and their interpretation of reality ensured the transferability of the results [162].

We also checked for inter-coder reliability. All authors separately transcribed the interviews in the first round. In the second round, the authors exchanged transcripts, and each of them re-coded the transcripts, which other authors previously coded. This approach is consistent with inductive research designs and specially grounded

theory approach. As suggested in previous studies, the Kappa-coefficient was above the prescribed value of 0.7 [163]. We also consulted a subject matter expert (third person) who was not involved in the study for the purpose of peer briefing and audit of the results [158].

## VI. FINDINGS

Our findings revealed exciting facets of a darker side of leader-signaled knowledge hiding prevalent in the test preparation industry. Overall, we came across five different outcomes (See Figures 2, 3, 4, 5, and 6) of LSKH specific to this industry. Interestingly, these outcomes have not been studied or discussed elaborately in the past literature.

### A. LSKH and Information Asymmetry

Information asymmetry has been identified as one of the adverse outcomes of leader-signaled knowledge hiding in this study. Information asymmetry is defined as the difference in awareness levels of organizational members regarding a particular situation, policy, strategy, or any organizational context [168]. When leaders ask subordinates to hide specific knowledge from others even if they are asked to share the same, the information gap between the seekers and the hidiers increases, leader-signaled knowledge hiding behavior can be observed in multiple institutional practices across the test preparation industry. One such example is illustrated below. An informant on institutional practices shared-

*Management makes it a point that we (faculty members) never know if a person is leaving, and we might have to fill in for him.*

Another dimension of information asymmetry identified by the authors was informal practices. There were a few practices that took place informally, i.e., not as part of the organization's official policy. These practices are generally initiated by the leader or manager and are promoted as normal behavior by the leader. These practices include giving faculties a false sense of decision-making power yet not involving their say in any decisions or allowing team members to develop close relationships. These practices are evident from one such account of an informant who shared-

*They have not documented it, but they will not allow any close ties among faculties to avoid information flow. In essence, it is they who make faculties restrain from sharing anything.*

Knowledge-intensive industries focus significantly on individuals' knowledge enhancement. However, individuals hide knowledge from their colleagues for creating superior influence [39]. If the knowledge is hidden from the seeker, it only increases their dependence on the hidiers [39] and further increases the information gap, known as information asymmetry. The authors suggest that through institutional and informal practices, leader-signaled knowledge hiding leads to information asymmetry in organizations.

### B. LSKH and Reduced Commitment

The findings of our study suggested reduced affective and continuous commitment among faculties working for test preparation institutes. The reduced commitment resulted from LSKH that had trickled down from the top management of the institute to the faculty groups and even students. Figure 1 illustrates how informants expressed this loss of commitments resulting from LSKH. To illustrate, one of the faculty members expressed the following when narrating how his colleague was not allowed to help him-

*I am not satisfied with the way coaching institutes operate here. They are greedy about money and do not care about the pressure faculties face while working with these institutes. I do not think we have a life in these organizations. I do not find teaching fun anymore; if given a chance, I would have left this organization, but what to do?*

The above quote indicates a loss of affective commitment among the faculties. These losses have been caused due to consistent pressure and lack of support from the top management of the organizations. It is consistent with the literature on commitment, which suggests that perceived organizational support is positively associated with the employees' affective commitment. When employees perceive that their organization is concerned for their well-being and seeks to meet their (employees) needs, they are likely to feel indebted to the organization and show higher commitment [164]. An example of reduced continuous commitment can be illustrated through the following quote by one of the informants,

*There are very few options [coaching institute offering higher compensation] to choose from. It is not so easy to quit one institute and join another one.*

The informants expressed their inability to join other test preparation institutes even though they were willing to make a switch. The reasons they cited range from pay-parity issues, lobbying among the institute to not entertain applicants from their competitors, etc. The difficulty of switching from one organization to another fosters continuous commitment among these tutors.

### *C. LSKH and Moral Decoupling*

Another theme that emerged from the discussion was moral decoupling. Two contrary approaches towards imparting education and earning money were observed in the industry. Some informants shared about the leaders' focus on the end goal only when running their institutions. These leaders were mainly concerned about their institute's performance in the competitive examinations. Issues about the organizational culture and ethical concerns were largely ignored. The above discussion can be illustrated from the following narrative,

*How he [another faculty] teaches [about the curriculum] is not what matters to our boss; how many students end up cracking the exam matters. This has made people hide what they are good at and use it as a currency to bargain.*

Emphasizing the ethical part, informants also expressed how their leaders encourage morally incorrect activities. Informants complained about disseminating wrong information in the form of misrepresenting details to the students. For example, pointing towards the wrong information displayed over hoarding, one informant shared-

*Academic counselors at these institutes used to misrepresent the profile of the faculties to fit their agenda of convincing the students.*

Prior research has examined moral decoupling as a significant antecedent and outcome of unethical pro-organization behaviors. Individuals engage in moral decoupling and can simultaneously condemn the behavior of others while still recognizing them as high performers [165]. In the case of test preparation institutes, leaders were observed to encourage moral decoupling among their employees to achieve higher performance in the form of better exam results.

### *D. LSKH and Team Stratification*

The authors observed clear stratification of the workforce within the test preparation industry. Stratification refers to inequality amongst the organizational members generated by the distribution of wages, skills, resources, or workplaces [166]. The authors found out that while some of the faculties were well informed about the decisions taken by top management, others used to come to know about it only later. The restricted flow of information created two groups, i.e., in-group and out-group members. The in-groups consisted of organizational leaders and some faculties. Explaining the stratification, one of the faculty explained-

*Some faculties seem to be part of a close group, and they know how to teach. They are often informed in advance about any major changes in and around our coaching institute and intentionally hide this from us.*

The above statement indicates that the in-group organizational members enjoy being a part of decision-making and receiving information regarding any organizational changes. In industries such as test preparation, having access to certain information regarding the products, markets, or strategies distinguishes an individual from others. On the other hand, the out-group members are generally excluded from decision-making. Due to this, these individuals often find themselves in dilemma and confusion. They are also discriminated against with respect to teaching strategies and material. The out-group members are also given responsibilities of low-profit or low-potential products which leads to out-group members always running behind the in-group members. This is evident from the out-group example illustrated below. One such informant shared-

*He ensures that some faculty members are unaware of the decision taken at the top management level.*

Past studies have focused on the negative consequences of knowledge hiding. [167] has suggested that individuals sometimes see knowledge as their territory, and this territorial attitude may encourage them to hide



knowledge from the seekers. This knowledge hiding behaviour further increases the inequality amongst the seekers and hiders, strengthening stratification amongst individuals. Our study has found out that leader-signaled knowledge hiding leads to team stratification. We suggest that organizations that exhibit signs of leader-signalled knowledge hiding may increase team stratification.

#### *E. LSKH and Leader Induced Trust Deficit*

Trust has been identified as an extremely important organizational factor that increases an individual's commitment and performance [169]. When individuals feel a loss of trust due to a colleague's actions, this feeling has been defined as a trust deficit [170]. The authors identify leader-induced trust deficit as one of the significant adverse outcomes of leader-signaled knowledge hiding. The leaders in the test preparation industry often, directly or indirectly, ask their subordinates to hide important knowledge from their colleagues. There were instances described in which a leader shared contrasting versions of information with the subordinates. This is evident from the account shared by one of the informants-

*I told something (by top management), and another thing was told to my colleague. I neither trust my colleague nor the management now.*

Another dimension of leader-induced trust deficit identified by authors is knowledge hiding with students. The leaders in the test preparation industry often ask their subordinate faculty members to hide or deny specific knowledge from the students. This knowledge could be about fees, actual admission statistics, or the leader's qualifications. Such behavior is evident from the example illustrated below. One informant (a student) shared:

*Sometimes what they are trying to hide or lie about is very explicit, yet they are always in denial mode.*

Past studies on knowledge hiding suggest that hiding knowledge from colleagues or organizational partners reduces interpersonal trust [171], creating trust deficits. The authors suggest that leader-signaled knowledge hiding also leads to distrust among the individuals induced by the leader. Hence the authors identify leader-induced trust deficit as one of the negative consequences of leader-signaled knowledge hiding.

.....  
**Insert Figure 2, 3, 4, 5, 6 about here**  
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#### *F. Emergent model – LSKH as micro-foundations of erosion of co-created value*

The utility of the knowledge-based view motivated us to examine the ground-level interactions and knowledge exchange between individuals, i.e., knowledge agents. Designing a knowledge management system is a macro-level activity. However, knowledge management goals can be achieved when there is a culture that fosters knowledge sharing among organizational members [172]. When individuals share knowledge, the knowledge management activities accelerate [173]. Hence, we focused on how individuals impede knowledge transfer from the three fundamental activities within a knowledge management system, i.e., knowledge creation, retention, and transfer. Inarguably, individuals play a huge role in the success of knowledge transfer since considerable amount of knowledge is stored in the form of tacit knowledge within the individual. Thus, individuals may harmfully impact knowledge transfer goals by engaging in counter-productive knowledge behaviours such as knowledge hoarding, knowledge hiding or leader-signalled knowledge hiding.

Our study aims to provide a micro foundational explanation of erosion of co-created value by investigating micro-level events such as LSKH. Value co-creation occurs when there is a smooth exchange of knowledge between the stakeholders and the organization. In LSKH, leaders may ask their subordinates to hide knowledge from external stakeholders such as consumers or suppliers. This event usually occurs at lower strata within the organizational hierarchy, involving only the leader, the knowledge requestor, i.e., the consumer, and the knowledge hider, i.e., the employee. As per our proposed model, value co-creation is adversely affected in the specific incidents when the leaders ask their subordinates to hide knowledge from each other and the consumers (students). Our study has identified outcomes of LSKH, i.e., information asymmetry, reduced commitment, moral decoupling, team stratification, and trust deficit. These outcomes hinder value co-creation since the knowledge transfer between employee and consumer is impacted. Hence, our model proposes that LSKH and its outcomes act as micro-foundations of erosion of co-created value.

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**Insert Figure 7 about here**  
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## VII. DISCUSSION

As the global economy is witnessing a shift towards knowledge-based competition, organizations must treat knowledge and management with focused attention. With the exponential advancements in technology and cut-throat competitions, organizations have begun to identify knowledge and intellectual capital as a source of competitive advantage [174], as advocated in the knowledge-based view of the organization. However, to deliver desired performance and achieve innovation backed by competitive advantage, an organization must successfully learn how to store and share the knowledge and apply it in various organizational contexts [175].

This paper aims to investigate knowledge hiding and its outcomes in a knowledge-intensive work environment, i.e., test preparation industry using the knowledge-based view framework. It also tries to develop an understanding of knowledge as an essential element of micro-foundations of a knowledge-intensive firm and its role in shaping various micro and macro-level outcomes for the organization. Findings suggest that organizations must face several challenges between storage and application of knowledge assets. These challenges, such as knowledge hiding or, to be more precise, the ‘leader-signaled knowledge hiding,’ can prove to be a significant hindrance that can fail an entire knowledge management system. Our study posits LSKH as an important moderating variable that determines the strength of the relationship between knowledge transfer and co-created values with organizational setting (See Figure).

Extending our discussion further, the current study also delved further to understand value co-creation for test preparation firms. In this context, we have defined value co-creation as creating and refining knowledge among different stakeholders at different levels. Literature has identified value co-creation as the future of knowledge management [176]. An important contribution of the current study is that it offers an initial effort to theorize value creation through knowledge and offers implications for the larger micro-foundations for firms. It has been observed that the firms that prevent knowledge hoarding and encourage knowledge sharing practices successfully manage the knowledge and, subsequently, value co-creation [177]. The value co-creation of knowledge directly depends on how individuals share knowledge and skills throughout the organization [178]. In the test preparation industry context, value is co-created at three levels: micro, meso, and macro. At the micro-level, value is co-created through knowledge refinement resulting from faculties’ classroom engagement with their students. During a classroom session, when a student interacts with a faculty and presents a new problem or a new argument to solve an existing problem, the faculty learns through the students. Hence, knowledge refinement occurs during the discussion with the students. Second level of knowledge refinement and value co-creation is through interaction with colleagues and peers. In the test preparation industry, faculties frequently interact regarding new problems, approaches, and methods to solve problems. This interaction helps faculties learn more about the teaching content and techniques, thus, leading to knowledge refinement. Finally, the macro or third level of value co-creation occurs through knowledge refinement due to faculties and students’ interaction with the supervisors or organizational leaders. When a supervisor or a leader interacts with the faculties, this interaction results in the transfer of knowledge and information, leading to knowledge refinement. Hence, we can observe value co-creation across different levels in the test preparation industry. The current study is an initial attempt to highlight how value is co-created in the knowledge-intensive workspace. Further, it also suggests how value co-creation can be hindered by knowledge hiding behaviors, especially when such behaviors are promoted or encouraged by organizational leaders. Under the assumption of a knowledge-based view, such counter-productive knowledge behaviors create highly undesirable consequences for the firm.

Our study provides exciting observations regarding factors that hinder or impede value co-creation. These observations hold significance for research in counter-productive knowledge behaviour, i.e., leader-signaled knowledge hiding (LSKH). This was one of the limitations of prior research on KM, which had primarily focused on KS aspects of the workplace. Being a nascent research area, LSKH as an organizational phenomenon warrants deeper understanding. We believe that our paper will begin a much-needed discussion on how LSKH can originate in organizations and what consequences it could bear. Adding to the discussion and current understanding of LSKH, our study suggests five specific organizational factors that could be consequences of LSKH. These five outcomes of LSKH are the significant factors that restrict value co-creation by hindering the knowledge refinement process at different levels of test preparation firms.

The first outcome suggested by our study is reduced commitment which refers to the decreased willingness of an individual to invest resources in the relationship with the employer or the organization [179]. Our study suggests that LSKH results in lower organizational commitment levels amongst the individuals. The second outcome suggested by our study is moral decoupling. Moral decoupling refers to an individual's different perceptions of performance and morality [180]. Moral decoupling can be understood as behavior when an individual criticizes a colleague's immoral actions yet admires their high performance. Hence, LSKH may lead subordinates to condemn their supervisor's behavior yet continue to acknowledge their higher performance regardless of the means for achieving it. The third outcome of LSKH suggested by our study is team stratification. Team stratification occurs when there is a great extent of difference amongst the individuals in the same team [166]. Our study suggests that LSKH creates barriers to access knowledge that create differences among team members. The fourth outcome of LSKH suggested by our study is information asymmetry; since specific knowledge and information are hidden for some individuals, different awareness levels can be observed amongst the team members regarding the same situation, known as information asymmetry [168]. The last outcome of LSKH suggested by our study is a leader-induced trust deficit. In the organizational context, leaders' actions may generate a loss of trust amongst the subordinates. This feeling of trust loss can be termed leader-induced trust deficit [170]. This trust deficit occurs amongst subordinates because their leader has, directly or indirectly, asked them to hide knowledge from their colleagues. If leaders themselves ask subordinates to exhibit counter-productive behavior, they may lose their trust in leaders since supervisors are seen as role models and sources of feedback [181]. Considering the negative nature of all the outcomes of LSKH as suggested by our study, we believe our study will present more significant practical implications for not only organizations but also for leaders and managers. Figure 7 synthesises our findings. As shown in the figure, by applying knowledge-based view, we could identify five outcomes of LSKH. While some of the outcomes may have overlapping characteristics, it was possible to find frequent instances of some outcomes more at the individual level than at the team or organizational level and vice-versa.

## VIII. IMPLICATIONS

### A. *Theoretical implications*

This study offers several theoretical and practical implications. Theoretically, our study extends the discussion on the knowledge-based view [182] and microfoundational behavioral perspective by highlighting the various outcomes of knowledge management in a knowledge-intensive industry. Our study embeds KH in a nomological network of less-explored consequences of leader-signaled knowledge hiding in the context of the test preparation industry in India. The findings of our study provide evidence to view LSKH as a critical moderating variable that can heavily undermine the value co-creation process when knowledge transfer is initiated. In other words, we now understand how organizational leaders can establish boundary conditions for the effectiveness of a knowledge-based economy in addition to direct effects. In examining the knowledge-based view, our study highlights how the nature of interactions among leaders and members in a knowledge-intensive workplace is dominated by moral norms of reciprocity and interdependent transactional reciprocity [183]. Members of the organizations learn and are encouraged to engage in counter-productive work behaviour by their leaders. Our insights further established an understanding of LSKH as a destructive workplace behavior that can have repercussions at different levels, including individuals, teams, and organizational levels.

Another theoretical contribution of this study is to provide initial attempts to theorize value co-creation and value erosion using KM in the test preparation industry. Our study highlights how knowledge hiding behaviour can hinder value co-creation at three different levels, i.e., micro-level (students-faculty), meso level (faculty-faculty), and macro-level (faculty-organization). When norms of reciprocity in a social exchange are violated [183], it leaves implications not just for the two parties involved in social exchange but also for others. In our study, when the top management signals a set of their employees to hide knowledge from other employees or students, they violate the essential norm of maintaining transparency and fairness in communication. An imbalance in which one party (All the other employees) is transparent and proactive in sharing the information.

In contrast, the other side (organizational leaders) conceives or manipulates it, resulting in dissatisfaction and loss of commitment. In such situations, employees feel betrayed and may engage in counterproductive behavior [14]. Our study highlights how knowledge hiding as a barrier to value co-creation can result in workplace behaviors. Further, it signifies that such behaviors are more explicit in workplaces where the organizational leaders promote knowledge hiding.

Another implication of our study is the effect of LSKH on various dimensions of knowledge management. A holistic knowledge asset framework presented by a study suggests that KM has four dimensions: individual, team,

organization, and inter-organization knowledge management [184]. Among these four dimensions, most of our study's focus is on the organization dimension. In the discussion, our study also covers the remaining three dimensions. We primarily focus on organization knowledge management by discussing the 'top-down approach,' i.e., how leaders and supervisors create a knowledge sharing or hiding culture as a part of KM strategy. Knowledge is shared or hidden within individuals, and work units cover the personal and team KM dimension. By discussing how knowledge is shared or hidden with customers, we also cover the inter-organization dimension of KM.

### *B. Managerial Implications*

Our study has also presented significant practical implications for organizations' knowledge management practices and leadership. Organizations have to admit that despite encouraging individuals to share their knowledge with rewards, they might not do so [97]. Knowledge hiding behaviors have detrimental effects on the knowledge management system. In addition to recognizing the presence of knowledge hiding, organizations need to implement measures that can create an environment that discourages hiding knowledge. This can be achieved by focusing on HR practices such as modifying the recruitment process to check for markers of knowledge hiding. In addition, regular training programs and workshops on the advantages of knowledge sharing could also reduce knowledge hiding. Our study also suggests important implications for leadership. Generally, it is assumed that leaders ensure a smooth flow of knowledge and information throughout their teams. However, as our study suggests, leaders may encourage counter-productive knowledge hiding behaviour that can negatively affect employees and the whole team. Hence, organizations need to assess the past and current knowledge-orientation of the leaders. While promoting individuals to leadership profiles, the supervisors may check whether hiding or hoarding knowledge has contributed to the individual's success. The performance management department can include expected knowledge-sharing activities as part of the goals for the leaders and set up a feedback mechanism that can check whether the leader has practiced LSKH in question. Our study has significant practical implications for organizations in knowledge-intensive industries such as test preparation. Such organizations need to pay additional attention to how knowledge practices occur at the ground level. In such organizations, knowledge acts as organizational level competency; however, individuals also perceive knowledge as means to personal gains. Such perception motivates individuals to protect their knowledge at any cost. On the other front, if kept away from knowledge, competent individuals might consider leaving the organization due to negligence. To reduce the negative impacts of KH and LSKH, these organizations should create a culture of collaboration rather than competition. A greater amount of rewards for sharing the knowledge than for holding it will motivate the individuals to come forward and share their expertise. A higher amount of responsibility falls on the training and development department to create an atmosphere that fosters knowledge sharing. It would be imperative for small and medium enterprises to convert tacit knowledge into explicit knowledge, i.e., converting individual knowledge into organizational intellectual property. Since the global economy is shifting towards a knowledge-based economy, these implications are also applicable to several other industries such as e-commerce, FMCG, pharmaceutical, health care to name a few.

## IX. CONCLUSIONS, LIMITATIONS, AND FUTURE SCOPE OF THE STUDY

### *A. Limitations*

In addition to the contributions made by this study, a few limitations need to be discussed. Our study has followed a qualitative research design to examine KH and its components in organizations. While our approach effectively explored the concept and its outcomes, these variables can be further tested for their generalizability using a quantitative research design. Future research can test the moderating role of LSKH in determining the strength of the relationship between knowledge transfer initiatives and erosion of co-created values.

Another potential limitation of this study is the industry to which our informants belong. We have primarily focused on test preparation, i.e., the coaching industry. The test preparation industry can be understood as a subset of the education industry, considered one of the knowledge-intensive industries [27]. We encourage future research studies to examine the outcomes of LSKH in other industries as well.

Our study has identified several outcomes of LSKH that are primarily negative and generally undesirable to organizations. Acknowledging the existing practices of LSKH and negative outcomes, future studies should also focus on identifying the antecedents of LSKH, i.e., what triggers leaders to encourage employees to hide knowledge through signals. Future research on how LSKH originates in organizations will have significant managerial implications. Another limitation of our study is that we have focused on the context of the emerging market, i.e., developing economy. The context of a developing economy helped us examine LSKH in a dynamic

environment. We encourage future studies to examine LSKH and its consequences within the context of developed economies too.

Although KH has been introduced with three possible dimensions [35], researchers must see KH as a more complex phenomenon [28]. Hence, we encourage future studies to identify other possible dimensions of KH to further the understanding of counter-productive knowledge behavior. Future research may also focus on how different leadership styles impact knowledge hiding. A recent study suggests that ethical leadership is negatively associated with KH [185]. It would be interesting to assess various leadership styles and their relationship with KH behavior.

Methodologically, our study relied on a qualitative research design following the research questions. However, there is a possibility of researching KM and micro foundational elements using a quantitative research design such as the survey method. Research may also be done using a mixed design approach to provide stronger and validated findings.

### *B. Future Research Direction*

The authors believe that the current research is only an initial attempt to discuss KM practices in emerging businesses such as the test preparation industry. Having said so, future research avenues could fall into three major areas, namely, research on KM from different theoretical lenses. Looking at KM practices beyond the well-established theories may reveal interesting insights. Second, there is a strong need to develop cross-cultural and cross-industry research on KM practices and micro-foundational elements to understand context-based differentiations. Future research could also look at variables like psychological safety in such settings [186]. Finally, research on paradoxes of KM is still under-researched, and the same may be explored in future research works.

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