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Research Article

Linking Psychological Ownership to Innovative Behaviour in the Workplace: Empirical Evidence from Complex Management Systems in Pakistan

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This research work investigates the association between psychological ownership and innovative behaviour with knowledge hiding and knowledge sharing as mediators. The latter variables are presented as focal antecedents of preventive and promotive psychological ownership. To conduct the study, a theoretical framework was proposed, and data was collected from professionals working in complex management systems in Pakistan. The analysis revealed that knowledge hiding and knowledge sharing can exist simultaneously, and psychological ownership can evoke both positive and negative feelings in employees, which poses a challenge for the management. The results illustrate that psychological ownership has significant associations with knowledge hiding, knowledge sharing, and innovative behaviour. Consequent theoretical contributions and important managerial implications are discussed at the end.

1. Introduction

Research extensively illustrates that innovative behaviour is the most besought quality in employees for sustaining competitive advantage in today's dynamic workplace environment. Given increasingly turbulent conditions, intense competition, and rapid technological advancement, organizational leaders are acknowledging that they need to design frameworks that facilitate innovative behaviour in employees. With these notions, a theoretical model linking psychological ownership (PO) with innovative behaviour (IB) via knowledge sharing (KS) and knowledge hiding (KH) within complex management systems in Pakistan was built and tested. One of the most compelling means of producing PO is when one creates something [1], and employees that come up with new ideas and techniques may be thought of as having a greater sense of PO. Ownership was once only

talked about with respect to legality and shares, but recently, studies in management have observed the growth of the PO construct as a significant individual-level predictor of workplace behaviours. Theories for PO have been developed to a certain degree, but empirical research is inadequate.

Considering the innate necessity to own and the significance of claiming in organizations, it is interesting to explore the feelings of ownership (promotive and preventive) by examining its linkages with other important constructs such as knowledge sharing, knowledge hiding, and innovative behaviour. Prior studies have mostly researched the factors that lead to KS [2], but those leading to KH have not been investigated enough, creating a gap for research into the lack of knowledge transfer within organizations. Since knowledge transfer has been cited as the most important factor for inducing IB, it is imperative to understand why employees hide knowledge and what could drive them

to share knowledge. PO theory may provide a potential explanation for the way employees behave with respect to knowledge; preventive PO (territoriality) results in KH, and promotive PO (accountability, belongingness, self-efficacy, and self-identity) results in KS. We extend past research on PO, IB, and KS and endeavour to fill the research gaps in KH in the organizational context.

1.1. Theoretical Foundations. Prior research has investigated how people begin to assume themselves as owners of an object and how they assimilate that object within the self-domain. For PO development in employees, three sources have been identified [3]. The first is “control,” where one feels like the owner of the objects over which one has control. Next is “intimate knowledge,” where the more one knows something well, the more one feels tied to that object/task. The third source is “self-investment,” where one feels a sense of ownership because one has invested resources and/or time into an entity. PO has primarily been categorized into two types [4]. One is preventive, which is characterized as territoriality. Territoriality is the sense of being defensive or possessive, including not wanting to share and assuming oneself solely responsible for a certain entity (resource/idea). The second type is promotive, which is comprised of four elements (accountability, self-efficacy, belongingness, and self-identity). Preventive PO is the more defensive form, and promotive PO is the more constructive one [5]. PO theory implies that the form is driven by situational considerations; one’s perceived or cognitive ownership is driven to immensely impact expressed mannerism in cooperative settings [6]. A sense of ownership towards knowledge, ideas, and creativity could hence have a critical part in the transfer of knowledge and IB of employees in different work environments. Researchers have deliberated on how people functioning in differing circumstances with distinct possession aims carry unique motives to trigger the sense of ownership [7, 8]. Theorists claim that both positive and negative outcomes could be generated by PO. Positive outcomes comprise most of the organizational citizenship behaviours, including innovation and striving for competitive advantage, whereas the unfavourable outcomes comprise reluctance to accept advice, relational conflict, defiance to change, etc.

Preventive PO signifies that one wants to control the object of PO as their territory. One wants to control who may enter the territory or what kind of activities can happen in that territory. Territoriality or preventive PO leads to marking, signaling, and defending the object of ownership from others. In the organizational context, it can be the feeling of protecting the ideas and/or resources from others, or withholding them for oneself, thinking it is beneficial to limit the target of ownership (here, knowledge) to oneself by hiding it from others. Hence, in situations where one colleague needs certain information and the other conceals it, a KH action transpires [9]. Based on this logic, it may be argued that employees experiencing preventive PO are more likely to engage in KH to restrict the access of others to his/her ownership claim (knowledge in this case).

Therefore, we hypothesize the following:

H1a: “Preventive PO has a positive relationship with KH.”

The opportunity to access specialized knowledge is one key resource of negotiating power that employees have against organizations [10]. This means that having control over that specific information (knowledge) gives the employee the power to define what compensation and/or position that employee can have and can also manipulate other terms of employment to his/her benefit. The ability to own and control information/knowledge in the organization guarantees that employee’s power and status relationship. This leads to the argument that employees will build a deep preventive PO over knowledge, as it is so valuable for their survival in their employment domain. Sharing the entity one owns would mean letting go of control, leading to an unwillingness to share knowledge with others. This kind of attitude obstructs cooperation between people [11]. This could become the basis of a disagreement over the subject entity, forcing employees to retain control over the entity to prevent themselves from loss and uncomfortable emotions, thereby withholding the target. In this stream of thought, we believe a negative relationship exists between preventive PO and KS.

H1b: “Preventive PO has a negative relationship with KS.”

The sense of self-worth in any employee encapsulates the degree to which one sees oneself as offering value to the organization through different practices, one of which is KS. Here, the concept of self-worth could also refer to the scale of fondness for oneself, based on competence and efficacy. Some studies [12, 13] that have presented linkages between PO and KS with a positive relationship have suggested that sharing gives employees the feeling of being appreciated and needed in the organization, which is why they are likely to engage in KS. Respect, reputation, pride, personal identification with colleagues, and even stronger feelings of commitment originate from the same stream. Individuals who believe knowledge belongs to oneself are prone to transfer knowledge as per PO theory, which postulates that PO arises in a framework where one can identify with and where one believes that outcomes that matter to them can be attained [14]. PO is prone to arise if individuals feel they exert control over the entity, know the entity well, and can probe themselves relative to the same entity. Here, we assume the target to be knowledge and the promotive PO (accountability, belongingness, self-efficacy, and self-identity) to drive the individual to have positive feelings regarding the target and strive to achieve positive outcomes for the said target, which in this context would be KS. Drawing from these theories, it is hypothesized.

H2a: “Promotive PO has a positive relationship with KS.”

Prior research has recognized KS as a favourable consequence of assumed ownership [15, 16]. Organizational education captures the process from external knowledge attainment to bringing that knowledge inward and the application of the same to shape and integrate it into the social structure of the organization. PO has also been shown to increase KS and is instrumental in the enhanced value of contributions, letting one share values and knowledge [17]. The ability to identify oneself with a particular faction or organization is also considered a key component of knowledge transfer mannerism in cyber societies [6, 18]. Employees with a strong promotional PO consider themselves significant and invaluable to the workplace and thereby develop profound self-esteem [19]. Such employees invest their energies in actions that will add value and help their organizations in an attempt to augment their self-image. Such employees are not prone to commit actions that could possibly hamper the progress of their organizations. Spreading knowledge can benefit organizations in innovation and sustain their competitive advantage. On the other hand, KH is the intentional concealment of knowledge. This workplace behaviour falls into the category of counterproductive work attitudes. Employees with a strong sense of promotional PO will not practice KH in the best interest of their organizations.

These foundations support the following statement:

H2b: "Promotive PO has a negative relationship with KH."

A substantial number of theoretical and empirical inquiries have explored the constructs of creativity (idea generation) and innovation (idea exploitation), but the link between these two domains has been ignored: that is the employees' prerogative to share or restrict their new ideas with colleagues [20]. Innovation entails the continuous pursuit of novelty and rare knowledge. It follows an incessant course where limitations and restrictions originating from inadequate individual cognition are stretched and conquered by attaining a fresh dimension, a different view, or new knowledge [21]. By transferring knowledge to others, one may boost one's scope to understand a situation or problem and employ one's knowledge to provide a way out or a solution [22]. The knowledge management literature reveals that various means and processes of KS in different types of associations have constructive influences on organizational innovation capabilities, whether individual or collective [23], and that KS is necessary for crafting innovation and maiden knowledge [24].

Innovative behaviour involves three distinct tasks: idea generation (developing a new idea), idea promotion (gaining external backing), and idea application (making a model or prototype). Employees engaging in IB at work must manage knowledge continuously, in specific terms, distribute tacit knowledge [25]. Idea generation entails the creation of knowledge which

recombines both external and internal knowledge into new structures [26]. Innovative work behaviour is described as "behaviour that aims to achieve the initiation and intentional introduction (within a work role, group, or organization) of new and useful ideas, processes, products, or procedures" [27]. The condition of employees internalizing more knowledge and engaging in KS fosters IB in them. IB at work can be promoted effectively by incorporating knowledge directly into the organization's business plan and encouraging norms coherent with KS. Academic researchers have emphasized the role of KS in improving IB [28]. When knowledge resources are managed in a better way, organizations ensure their improved performance [29]. It propels them towards more knowledge creation, thereby increasing their intellectual assets [30]. Employees supportive of KS internalize more knowledge, which leads to IB. Individual innovation is influenced by character, knowledge, cognitive ability, motives, and social links [31]. It has been observed that KS facilitates the nurturing of creativity [32]. Researchers revealed that knowledge movement in all directions through the organization affect the IB in mid-level managers [33]. Thus, we proposed the third hypothesis:

H3: "KS positively affects IB in employees."

Legal ownership entails legal rights, whether it is a house, a bike, or an idea, and the implications of legal ownership influence one's beliefs and actions. At the workplace, the objects signified for an individual's use are generally not taken home for personal use. If any worker understood that he/she legally owned a certain object given to him/her at work, he/she may feel justified in taking it anywhere. It is unlikely to assert legal ownership of office objects, even though one may feel tied to those objects. However, all or some of the intellectual inventions of an individual's work, even ideas, generate ownership feelings, amounting to the stance of claiming legal ownership. Consequently, if this right of ownership allows them to protect and keep their ideas from others, organizations would be restricted from innovative production. We have theorized earlier that this belief in ownership, called preventive PO will lead to KH in employees. By keeping ideas and creativity to themselves, employees prevent their employers from producing new innovations, which makes it difficult for them to continue to compete effectively. Organizational knowledge is considered the major foundation of innovation [34, 35], even though a limitation of organizational capacity is suggested [36].

Despite steps taken by the management to encourage knowledge transfer in organizations and to ease the process, employees may be hesitant to engage in KS, resulting in hindrance to innovation. The literature suggests that KH has three classifications: playing dumb, evasive hiding, and rationalized hiding [37]. The unavailability of knowledge obstructs creative and

innovative processes, whereas creativity is related to explorative and exploitative actions [38]. Moreover, innovation involves the exploitation of existing knowledge in a useful way. Researchers have suggested that KH can weaken collaboration within a team and hamper idea generation, which could negatively impact team performance [39]. KH impacts the knowledge acquisition mannerisms of both, the one who hides and the one who seeks knowledge, the communication process being a two-way stream [40]. KH exhibits a negative linkage with individual creativity, whereas creativity and IB are considered dependent upon information and knowledge sharing, thereby being affected by KH [41, 42].

This leads to the following argument:

H4: "KH negatively affects IB in employees."

Integration of knowledge resources into substantial capabilities is a key function of the organizational innovation process. This phenomenon has been given some attention by researchers; however, the IB of employees has received less attention [43]. This emphasizes the need to explore its antecedents. In this connection, PO can be regarded as a model that includes the shared notion that all workers are part owners, having the authority and responsibility to act in ways that foster positive consequences for the organization. One of the core beliefs of PO is that employees are party to the long-term interests of the organization and take actions that are motivated by this sense. These employees exhibit behaviours such as good job performance, minimizing costs, and maximizing profit innovatively [44]. Employees having a strong sense of PO consider that they are responsible for behaving in the best interest of the organization and achieving goals through innovative activities. The feelings of pride and concern, which are associated with PO, may be positively related to IB in employees. While legal ownership establishes the right of strategic control, PO focuses on the motivation to engage in it [45, 46]. Integrating the two can give a comprehensive view of how PO can be linked to IB. Since the outcome of innovation springs from a continual search for better solutions, and employee actions in the organization's best interest are triggered by the sense of PO, it can possibly explain the linkage between PO and IB.

Following such reasoning, PO addresses the need to feel effective (self-efficacy) in bringing about improvement and change, a motive which is satisfied by solving problems at work. Furthermore, a workplace is considered an employee's place to dwell (belongingness) satisfying the longing to have a place, fulfilled by the sense of having a physical space and tasks with which one identifies (self-identity). Moreover, the three routes to PO involve a high level of psychological attachment to the ownership target. This results in individuals wanting to protect their organizations, taking care of them, and improving them. In addition, the inherent

motivation to safeguard what is psychologically owned forces individuals to align their actions [47]. A range of attitudes and behaviours have been indicated by Dawkins and colleagues [48], such as accomplishments and aspirations relating to the promotive form of PO and duties and obligations being concerned with the preventive form. The promotive characteristics of PO are associated with satisfying aspirations [4], encouraging one to seek new opportunities and further exploit current ones. Employees will bring about improvements and generate innovative outcomes by investing more time and energy at their workplace. Employees with a profound sense of ownership for the organization can align prospective opportunities with these anticipations, resulting in innovative outcomes [49]. In this line of thought, PO is considered an important factor for IB. The desire to engage with the ownership target and the sense of being answerable for the target will nurture IB. Such IB of employees stemming from their feelings of PO could be the antecedent for innovative outcomes in organizations. This leads us to believe that PO has a positive relationship with IB. We conclude the argument with the following hypothesis:

H5: Promotive PO positively affects an employee's IB.

Life at the workplace is territorial in nature. Every office displays nametags on the doors, personal items like photographs or mementos on desks, and arrangement of objects in a definite order, all signifying the employees' reserved regions. This kind of marking of items and spaces generates safety for the employees and makes them feel comfortable at work [11]. PO is linked with several organizational and personal effects which have a negative nature; for example, stress, resistance to change, information hoarding, and the burden of responsibility. The reasoning for the burden of responsibility and related stress here is that employees who have developed profound PO may be motivated to take on responsibility for the ownership target as a way of protecting and defending it. Depending upon the "weight" of the responsibility and/or the amount of time that one is exposed to it, taking on responsibility can cause a feeling of being overburdened. Accompanying the burden, there is likely to be a tiring effect which eventually gives way to feelings of anger and stress. This anger may not only originate in the responsibility burden, but it could be an emotional reaction arising from the invasion of marked territory. As a real-life example, those who assume responsibility for elderly parents or even children are frequently overwhelmed by the burden. Frustration and stress originating from a sense of personal loss could result when one faces the alteration of marked entities. Research suggests that stress and burnout are sure to have an unfavourable effect on creativity and innovativeness in an employee [50]. This feeling of being overwhelmed by responsibility could impede performance, making an employee unwilling and unable to innovate and go the

extra mile. Thus, we can infer that preventive PO by motivating responsibility and related stress will negatively affect IB in employees. In our previous hypotheses, we have reasoned that KS has a positive and KH has a negative relationship with IB. Continuing in this vein, if preventive PO (territoriality) causes employees to withhold knowledge and resist change, it would also have a negative effect on IB as KS is considered central to innovation.

Where employees are expected to be innovative, we anticipate “win-lose” competitive situations to arise, making the psychological owner act in self-interest against the colleagues with whom one is competing. Under such circumstances, strong territorial feelings will lead to an unwillingness to share, thereby inhibiting creativity, cooperation, quality work, and the hoarding of knowledge and information [51]. The territorial employees will possibly try to preserve their ideas and innovations to retain control and avoid risk and uncertainty. To defend ideas and innovations, one indulges in dysfunctional behaviours, such as KH, and resorts to preventive methods to beat a prospective conflict through hiding strategies, as explained in our preventive PO and KH argument. As per the evolutionary theory, innovation is endogenous, with constant and steady changes, and it is a complex process involving various players. Based on this approach, knowledge, know-how, ideas, and suggestions for problem-solving have to be shared within the organization and not “marked” and “defended” in fear of invasion. Foregoing in view, it is hypothesized:

H6: Preventive PO negatively affects an employee’s IB.

The nuanced effect of PO on IB can be much more complicated if we consider it being transferred through mediators such as KS and KH. The authors focus on PO resulting in an altruistic spirit with an understanding that KS and KH are not simple constructs.

2. Methodology

To assess and confirm the causal linkages between all our variables (preventive PO with KH, promotive PO with KS, KH and KS with IB, and PO with IB), we adopted an empirical research approach. To test the hypotheses, the data was gathered from organizations having complex management systems in Pakistan. This empirical study’s conduct and design followed the tenets of methodological triangulation and adept regulations for qualitative and quantitative methods [52].

2.1. Construct’s Operationalization. The questionnaire was formed with the help of established scales from related PO, knowledge management, and IB literature. Table 1 shows each construct’s measurement details, with scale range and measurable items used in the questionnaire. Questionnaire items were gauged employing the 5-point Likert scales,

ranging from 1 (strongly disagree) to 5 (strongly agree) for PO. For the other constructs, KH, KS, and IB, item responses were determined by incorporating the 5-point Likert scales anchored between 1 (never) and 5 (very frequently).

2.2. Measurements. Following Avey and colleagues [4], PO was operationalized as a construct rooted in individuals’ internal motives of territoriality (preventive PO), accountability, belongingness, self-efficacy, and self-identity (promotive PO). The scale comprises 16 items that account for employees’ feelings of possession. The measurement items for employees’ IB were operationalized with a scale of six questions [53], which were modified to a self-reported version. For example, “develops adequate plans and schedules for the implementation of new ideas” was rephrased to “I develop adequate plans and schedules for the implementation of new ideas.” For self-reported measures of innovation, empirical evidence endorses the concept that evaluating IB in terms of self-reported figures of new products or processes output is commonplace.

We were aware of the struggle of finely drawing the thin line between “innovativeness,” “innovation,” and “innovative behaviour.” In general terms, a portfolio of indicators could be employed to calculate innovative activity, which typically include the research and development budget, number of trademarks, patents or copyrights obtained, or other subjective measures of innovation. Creativity and innovation are frequently used synonymously in literature, and the difference between these constructs is more of emphasis than of substance [27]. Creativity is, in fact, one of the inputs for innovation. The participants responded on a five-point scale stretching from “never, rarely, occasionally, frequently and very frequently.”

The measurement scale for KS was developed with the help of the measurement scale of Bock and colleagues [54] that prepared items for “intention to share knowledge.” The six items were modified (intention to action) to suit our study in the following way: “I intend to share any articles from newspapers/magazines/journals that I find useful and related to our work with members of my organization” was rephrased as “I share any articles from newspapers/magazines/journals that I find useful and related to our work with members of my organization.” The items (three of each type) reflect whether implicit or explicit knowledge sharing occurs. For KH, the measurement scale developed by Connelly and colleagues was adopted [9]. The dimensions of KH selected for this study are playing dumb, rationalized hiding, and evasive hiding, each having four items and twelve in total. For this construct too, we rephrased the statements as follows: “agreed to help him/her but instead gave him/her information different from what s/he wanted” was modified to “I agree to help my colleagues but instead give them information different from what they want”.

2.3. Sample and Data Collection. Non-probability sampling with a purposive technique was used in this study. This is effective where individuals with specific characteristics are selected as the sample. We needed organizations that were

TABLE 1: Reliability and convergent validity of the measurement model.

Constructs and measures	Loadings
<i>Territoriality (T) (composite reliability = 0.87; AVE = 0.70; Cronbach's alpha = 0.78)</i>	
T1. I feel I need to protect my ideas from being used by others in my organization.	0.86***
T2. I feel that people I work with in my organization should not invade my workspace.	0.79***
T3. I feel I need to protect my property from being used by others in the organization.	0.86***
<i>Accountability (A) (composite reliability = 0.82; AVE = 0.61; Cronbach's alpha = 0.68)</i>	
A1. I would challenge anyone in my organization, if I thought something was done wrong.	0.78***
A2. I would not hesitate to tell my organization, if I saw something that was done wrong.	0.73***
A3. I would challenge the direction of my organization to assure it's correct.	0.83***
<i>Self-efficacy (SE) (composite reliability = 0.83; AVE = 0.62; Cronbach's alpha = 0.69)</i>	
E1. I am confident in my ability to contribute to my organization's success.	0.83***
E2. I am confident that I can make a positive difference in this organization.	0.80***
E3. I am confident setting high performance goals in my organization.	0.73***
<i>Self-identity (SI) (composite reliability = 0.86; AVE = 0.68; Cronbach's alpha = 0.76)</i>	
SI1. I feel this organization's success is my success.	0.88***
SI2. I feel being a member in this organization helps define who I am.	0.80***
SI3. I feel the need to defend my organization when it is criticized.	0.78***
<i>Belongingness (B) (composite reliability = 0.89; AVE = 0.73; Cronbach's Alpha = 0.81)</i>	
B1. I feel I belong in this organization.	0.85***
B2. This place is home for me.	0.84***
B3. I am totally comfortable being in this organization.	0.87***
<i>Evasive hiding (EH) (composite reliability = 0.95; AVE = 0.82; Cronbach's alpha = 0.93)</i>	
EH1. I agree to help my colleagues but do not really intend to.	0.86***
EH2. I agree to help my colleagues but instead give them information different from what they want.	0.93***
EH3. I offer them some other information instead of what they really want.	0.92***
EH4. I tell them that I shall help but I stall/delay as much as possible.	0.92***
<i>Playing dumb (PD) (composite reliability = 0.95; AVE = 0.84; cronbach's alpha = 0.94)</i>	
PD1. I say that I do not know even though I do.	0.90***
PD2. I say that I am not very knowledgeable about the topic.	0.90***
PD3. I pretend that I do not know the information.	0.94***
PD4. I pretend that I do not know what they are talking about.	0.91***
<i>Rationalized hiding (RH) (composite reliability = 0.93; AVE = 0.76; cronbach's alpha = 0.89)</i>	
RH1. I explain that I would like to help them but I am not supposed to.	0.83***
RH2. I explain that the information is confidential and only available to people on a particular project.	0.89***
RH3. I explain that my boss does not let anyone share this knowledge.	0.88***
RH4. I say that I will not answer their questions.	0.89***
<i>Explicit knowledge (EK) (composite reliability = 0.84; AVE = 0.64; cronbach's alpha = 0.70)</i>	
EK1. I share my work reports and official documents with members of my organization.	0.87***
EK2. I provide my manuals, methodologies, and models for members of my organization.	0.89***
EK3. I share articles from newspapers/magazines/journals that I find useful and related to work with my colleagues.	0.61***
<i>Implicit knowledge (IK) (composite reliability = 0.85; AVE = 0.65; cronbach's alpha = 0.73)</i>	
IK1. I share my experiences or know-how from work with my colleagues.	0.79***
IK2. I provide my know-where or know-whom at the request of my colleagues.	0.82***
IK3. I try to share my expertise from my education or training with my colleagues in a more effective way.	0.80***
<i>Innovative behaviour (composite reliability = 0.88; AVE = 0.55; cronbach's alpha = 0.84)</i>	
IB1. I search out new technologies, processes, techniques, and/or product ideas.	0.73***
IB2. I generate creative ideas.	0.73***
IB3. I promote and champion ideas to others.	0.77***
IB4. I investigate and secure funds needed to implement new ideas.	0.74***
IB5. I develop adequate plans and schedules for the implementation of new ideas.	0.73***
IB6. I am innovative.	0.74***

*** $p < 0.01$.

known to have complex management systems requiring employees to exhibit IB (an important variable in this study). To control biases, the questionnaires were distributed to all employees across the selected organizations, and we made sure to follow up on the non-responding ones. Despite Pakistan's native language being Urdu, English is the official

language and is commonly understood by the majority of the population. Hence, all the respondents had a good command over English, relieving us of the effort of having to translate the questionnaire. However, we did introduce the main constructs to them. The definitions were written below the constructed title in the questionnaires for ease of

understanding. The respondents were assured of anonymity and confidentiality of the sensitive firm information. Employing the gatekeeper approach to reach our target audience, a senior human resources executive from each organization was requested to circulate the questionnaires for the voluntary participation of employees [55]. Out of the 800 questionnaires distributed, 493 responses were obtained, yielding a response rate of 61.6%. Completed ones were mailed back to the authors with prepaid postage. After eliminating some low-quality samples, we finally retained data from 400 respondents for this study. Table 2 contains a summary of the demographic information.

2.4. Control Variables. Six demographic variables were controlled. These have been found to be significantly related to our study [56]. Organization type, that is, public or private, was measured as a dichotomous variable coded 0 for public and 1 for private. Gender was measured as a dichotomous variable coded as 0 for female and 1 for male, whereas age was measured in years. Tenure in the organization was measured as the number of years that an employee had been working for the specific company. Education was measured as 1, 2, and 3 for the levels corresponding to Bachelors, Masters, and PhD. Job area was assessed as a dichotomous dummy variable with code 0 for technical participants (e.g., engineering and the R&D work areas) and code 1 for non-technical participants (e.g., those from the administration and other functional departments). The information is presented in Table 2.

3. Results and Discussion

Analysis of the data was performed as a whole, employing the Partial Least Squares (PLS) coupled with the bootstrap resampling technique. PLS supports the concurrent application of formative and reflective measurements. It is also capable of modelling latent constructs under non-normality conditions, along with being useful for small and medium-sized samples [57]. Adopting the preferred two-phase analytical technique, structural associations were assessed after evaluating the measurement model [58]. Likewise, suitable safeguards were observed to curtail the likely common method bias as endorsed by researchers [59]. The Harman's single-factor analysis and the partial correlation analyses were also performed, with the findings indicating a low level of common method bias in this research effort.

3.1. Measurement Model Assessment. The measurement model for reflective constructs was evaluated by assessing reliability, convergent validity, and discriminant validity. Cronbach's alpha is the most extensively adopted measure for assessing reliability [60]. The convergent validity was reviewed by analyzing composite reliability and average variance extracted (AVE) from the scales. As Table 1 depicts, Cronbach's alpha was within the range of 0.68–0.94 for all constructs, suggesting high internal consistency. The reflective constructs' composite reliability surpasses the ceiling of 0.70, signifying that these instruments are good to go with

TABLE 2: Demographic information.

Demographic variables	Percent	Mean	S.D.
Organization		0.47	0.50
Public (0)	52.7		
Private (1)	47.3		
Gender		0.62	0.49
Male (1)	61.7		
Female (0)	38.3		
Education		1.88	0.76
Undergraduate (1)	35.4		
Postgraduate (2)	40.9		
Doctorate (3)	23.7		
Work area		0.43	0.50
Technical (0)	56.8		
Nontechnical (1)	43.2		
Respondents' mean age (years)	—	30.42	5.67
Tenure (years)	—	5.70	3.75

[61]. The range of AVE values is between 0.55 and 0.84, surpassing the advised point of 0.50. The path loadings of all reflective items to constructs are above 0.60, giving support for the convergent validity of measures.

For the formative measures, high loadings are not needed. The weight of each item is to be applied to assess the extent to which it contributes to the overall factor (see Figure 1). Discriminant validity was tested by contrasting the square roots of the AVE value of the concerned construct to the correlation between the respective construct and other constructs. Discriminant validity statistics are shown in Table 3. The square roots of the AVE scores are greater than the correlations among the constructs, proving their discriminant validity.

3.2. Structural Model Assessment. The PLS analysis results of the theoretical model are shown in Figure 1, comprising the following: overall explanatory power (R^2), weights (for formative measures) and path coefficients (for relationships between latent variables). It describes 28.4% of the variance in IB, with nearly every path coefficient result being substantially significant. This offers sufficient leverage for the research model. The linkages between preventive PO and IB in the full-model testing were not to an extent to be considered significant. In the future, the mediation effects of KH and KS can be further verified through a sequence of tests employing the Sobel-Test, with t -values in the range of 2.40 to 10.46 [62]. Such findings validate the complete mediation effect [63].

The aim of this study was to examine relationships among PO, IB, KS, and KH. As per analysis, the preventive PO (T) and promotive PO (SE, A, B, SI) show significant relationships with both KH and KS, confirming H1a, b, as well as H2a, b. KH and KS have significant links with IB to the magnitude of -0.09 ($p < 0.05$) and 0.41 ($p < 0.01$), respectively, which validates the H3 and H4 hypotheses of this study. Promotive PO has a significant impact on IB ($t = 4.39$, $p < 0.01$), thus verifying H5. H6 found meagre support in the results with a value of only -0.001 , which is not significant. Overall, the results support the research model and validate the theoretical foundations.

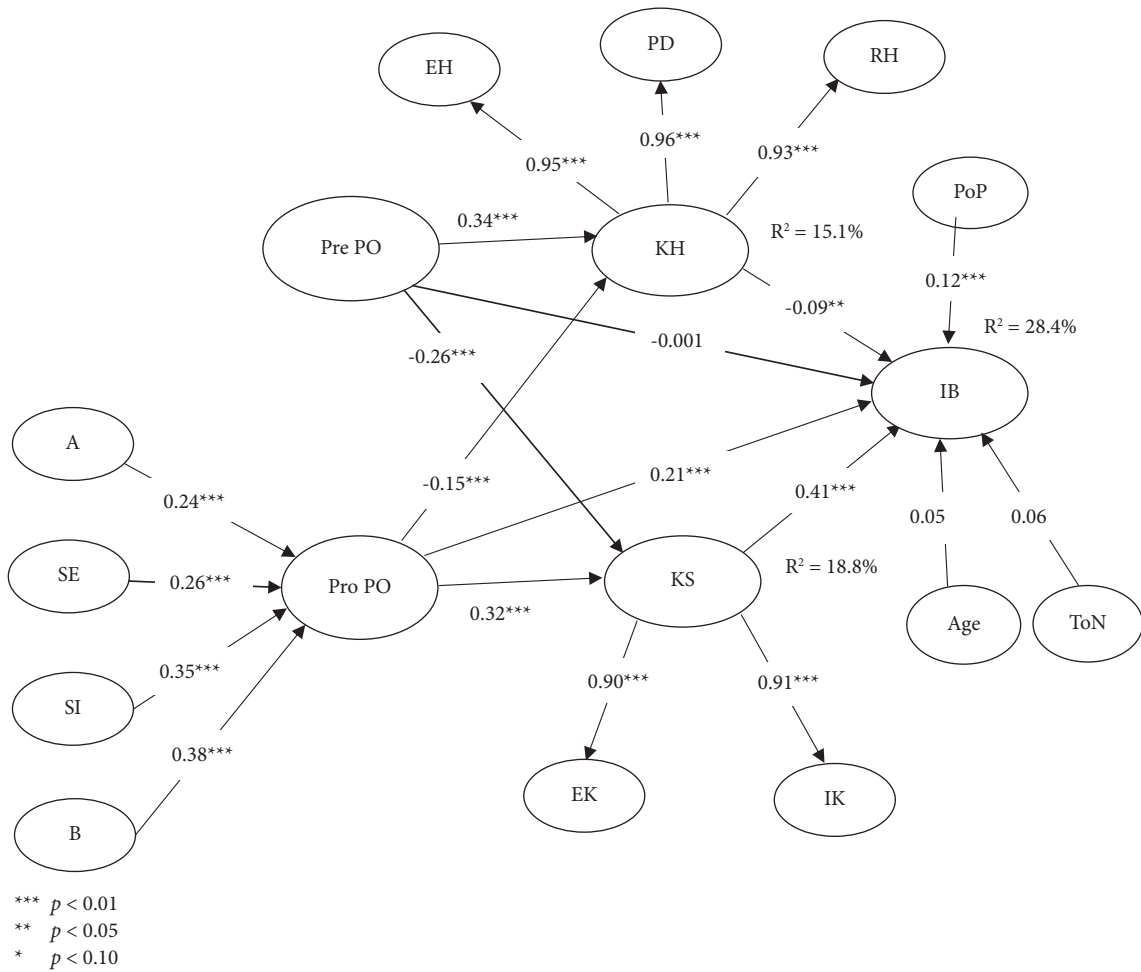


FIGURE 1: Results of the structural model.

TABLE 3: Assessment of discriminant validity of variables.

Constructs	1	2	3	4	5	6	7	8	9	10	11	12	13	14
(1) IB	0.74													
(2) T	-0.14	0.84												
(3) A	0.22	-0.01	0.78											
(4) SE	0.31	-0.03	0.45	0.79										
(5) SI	0.28	-0.15	0.52	0.46	0.82									
(6) B	0.29	-0.17	0.53	0.39	0.74	0.85								
(7) EH	-0.19	0.32	-0.07	-0.09	-0.22	-0.25	0.91							
(8) PD	-0.17	0.33	-0.06	-0.06	-0.17	-0.21	0.89	0.92						
(9) RH	-0.13	0.37	0.00	-0.06	-0.19	-0.23	0.81	0.84	0.87					
(10) EK	0.41	-0.25	0.12	0.19	0.29	0.31	-0.28	-0.23	-0.26	0.80				
(11) IK	0.46	-0.29	0.12	0.30	0.32	0.30	-0.18	-0.15	-0.18	0.63	0.81			
(12) PoP	-0.04	0.43	-0.08	0.00	-0.16	-0.21	0.48	0.52	0.44	-0.25	-0.12	—		
(13) ToN	-0.03	0.00	-0.09	-0.01	-0.18	-0.18	0.11	0.09	-0.01	-0.10	-0.07	0.05	—	
(14) Age	0.04	-0.05	0.02	-0.05	-0.01	0.01	-0.04	-0.07	-0.02	0.01	0.00	-0.07	-0.28	—

It is revealed that preventive PO causes employees to engage in KH, and it also negatively affects KS. However, promotive PO causes employees to engage in KS and prevents them from hiding knowledge. With every one unit increase in promotive PO, there is an increase of 0.32*** in KS, and with every one unit increase in preventive PO, there

is a decrease of -0.15*** in KH. This means that the greater the sense of promotive PO, the more employees will practice KS, and the greater the sense of promotive PO, the lesser employees will engage in KH practices. Similarly, for the second type of PO i.e., preventive PO, with a single unit increase in preventive PO, there is a 0.34*** increase in KH,

and with a single unit increase in preventive PO, there is a -0.26^{***} effect on KS. This means that a stronger sense of preventive PO leads to more KH by employees and a stronger sense of preventive PO also negatively impacts the KS practices by employees, confirming our theory. Employees who feel like a part of their organization (self-identity) and consider it a second home (belongingness) for themselves are concerned (accountability) about the well-being and prosperity (self-efficacy) of their organization will engage in beneficial practices. They know that their positive attitude towards better managerial practices like KS and IB will benefit their organization and therefore they make efforts to share their knowledge and contribute to their organization's success.

On the other hand, employees are also aware that any form of KH, evasive, rationalized, or playing dumb, would put their organization at the risk of failure, which they do not want as they feel they have a stake in that organization. They avoid hiding knowledge to make sure their home does not suffer. Our results for these relationships can thus be considered a demonstration of employees' stewardship approach [47]. Consistent with the stewardship perspective, PO accentuates the value of KS as a tool to convert employees' cognitive and affective mindsets into organizational-level consequences, the outcome in this case being IB. As knowledge is obtained, controlled, or invented by employees, they typically consider knowledge as their marked territory or personal property. The preventive PO (territoriality) theory can ideally be used to explain KH. Researchers have noted that "territoriality or feelings of ownership have not been explored enough" and recommended employing this tactic in the management of knowledge-related studies [64]. Consistent with PO theory, this research effort found preventive PO and promotive PO play important roles in the links with KS and KH.

We thus enlarge the cluster of variables empirically associated with PO by providing a maiden look at its relationship in the form of prevention and promotion-oriented behaviours [7]. One potentially dysfunctional behaviour is KH (preventive), and productive behaviour is KS (promotive). As knowledge has progressively become a means for organizations' competitive advantage, withholding of knowledge is thus seen as counterproductive [40]. For instance, the need for control is understood to be the reason for clinically noted possessive acts such as, denial in sharing of items (e.g., tools, ideas, office space) and exerting command over the object of possession (e.g., not letting other colleagues share responsibility for a given task). Thus, one might predict that preventive PO (territoriality) promotes counterproductive work behaviours such as KH with respect to the object of ownership, where the feelings of bereavement or damage of the psychologically possessed entity is expected to cause frustration and unease. On the contrary, the promotive PO literature postulates that ownership targets grow into a portion of the extended self [51] and it is believed that development of the same will result in an enrichment of the sense of self and thereby the motivation to safeguard and improve the target of ownership.

Central to PO theory is the notion that there has been a fusion between the target of ownership and the psychological owner. It has been theorized that this relationship satisfies one or more motives that serve as the genesis for PO, and it is this bonding process that sustains the PO object-person relationship [4]. Hence, it is understandable for employees driven by promotional PO to share their knowledge and try for the betterment of their organizations. Research has linked PO with KS and proposed the positive effects [12, 13]. Our findings go one step ahead and reveal that these feelings also lead to counter-productive work behaviours such as KH. Organizations can reduce KH by taking measures (e.g., adopting open workspaces) to decrease individuals' territorial orientation and by promoting teamwork, stressing collective ownership of knowledge. Organizational knowledge-sharing culture may also inhibit the negative effect of preventive PO. In such a climate, territoriality will be thought of as unacceptable and those who transgress organizational norms will feel left out. When employees have a deep sense of positive PO, they believe they own the organization and are more likely to engage in IB because, through their contributions, they feel needed and appreciated. As a means of self-expression, IB could have personal benefits such as pride, increased personal identification with co-workers or the organization, more respect from others, and a better reputation. This reduces alienation and encourages stronger feelings of commitment. Our results show that a single unit increase in promotive PO is produces a 0.21^{***} increase in IB, which is very significant, confirming our belief and theory. Individual extra-role IB is typically exhibited on employees' own initiative. By enhancing the promotional aspects of PO, employees will take the initiative to contribute new ideas and suggest better ways of performing job functions and improving quality assurance.

3.3. Theoretical and Managerial Implications. This paper offers a sound theoretical perspective on PO, KS, KH, and IB, serving as a useful springboard for additional theorizing. To ascertain the generalizability of empirical observations emerging from western studies, we examined the emergence and possible effects of PO on work outcomes in emerging economies with a Pakistani sample. The legal ownership framework of a firm does not explain IB in a comprehensive way. However, through this work we have demonstrated a connection between PO and IB in employees. Our findings support the notion that a greater sense of PO would lead the employees towards IB. Gaining insight from prior research limitations, we have drawn attention to the "dark" side of PO. Most of the research attention to date has been directed toward those outcomes that are positive in nature (for example, job satisfaction, organizational commitment, performance, and citizenship behaviours). We have tried to fill this research gap by identifying negative behaviours like KH and their adverse effects on IB due to strong feelings of possessiveness. Preventive PO can hamper the efforts of managers to inculcate KS practices. Yet, by providing ample recognition to employees for their contributions,

involvement in decision making, and assigning them rights to their psychological property or objects of ownership, they can develop a strong sense of self-identity, efficacy, accountability, and belongingness, which can in turn benefit the organization through their positive workplace behaviours.

Studying KH between dyads in organizations is novel. Given increased calls for research to investigate the failure of KS initiatives in organizations, our exploration of KH is timely and advantageous. Our results demonstrate that KH occurs together with KS. The evidence discovered in our research here implies that interrelationships between PO and knowledge management behaviours serve to provide a sustained advantage to organizations through IB and are therefore important to understand. Innovativeness is a much-sought attribute in employees, given the continued turbulence that characterizes many industries. Under such conditions, organizations are advised to invest in their most valuable resource, human resources. Additionally, the management may plan and implement innovative activities within the framework of these antecedent constructs. The central message from the evidence provided is that the perceptions and feelings of employees are a strong base for positive outcomes to take place. Organizations are less likely to achieve their performance goals if employees' psychological orientation is not channelized in the right direction. If innovativeness is important for organizational performance, the task for the management is to design and implement an organizational environment that recognizes its employees' contributions and makes them feel worthwhile and fosters a sense of belonging.

3.4. Limitations and Future Directions. Limitations in this research effort open future research opportunities. Firstly, we would have preferred a bigger sample size from a wider choice of organizations. Next, the nature of the issues being investigated necessitated the use of self-reported data. Indeed, it is difficult to ask supervisors or co-workers to assess an employee's feelings. For example, for KH behaviours, the actions involved are likely to be concealed. Supervisor or co-worker ratings would reflect the observer's broad impressions and implicit theories about the target employees [65]. There is a possibility in research that deals with potentially awkward interpersonal behaviours that participants respond in socially desirable ways. We attempted to mitigate this issue by ensuring the confidentiality of responses and anonymity. However, future research could include some items to assess if participants are actively altering their responses in a socially desirable manner. Measures of KH could include "lie" statements like those used in personality measures. In the future, it may be explored as to which nature and types of jobs generate a greater sense of PO. It is felt that certain types of jobs could lead to a deeper sense of ownership as compared to others that may be repetitive, boring, or lacking meaning. Another interesting direction could be situational considerations, such as the recent pandemic or other peculiar settings in the environment. The cultural aspects of societies are another future direction.

Individualistic societies could be expected to draw different results as compared to Pakistan, which is collectivist. Considering our results concerning the role of preventive PO in predicting KH, it would be exciting to ascertain what other interpersonal dynamics affect this behaviour. Future research may identify specific consequences of knowledge management behaviours at individual, interpersonal, and organizational levels, exploring whether they have consequences on interpersonal relationships in the workplace or not.

4. Conclusion

This research effort examines the status quo of PO and asserts that organizations need to explicitly address feelings of ownership in employees, which were found to be common and consistent with past research. The study observed the existence of PO among employees, no matter whether formal ownership and/or familial association exist or not, and further established the differences between public and private organizations. Identification with mutual goals and values enhances a sense of shared ownership, and can give organizations that invaluable competitive advantage they always seek. When we think of firms pulling through for many generations, the most liable conclusion comes from emotional ties that bind employees to their workplace and push them to contribute to its continuous success. This cognitive linking and emotional bondage are PO, which can serve as a strong base for organizational citizenship behaviours in employees such as KS and IB. PO is not a "cure-all," but it does have considerable power in explaining a rich number of phenomena in the work and organizational context.

We can conclude that promotive PO positively affects KS between employees and the preventive form of PO has a causal relationship with KH. Most practitioners are interested in developing strategies to minimize KH and encourage KS as knowledge is crucial for innovativeness, which is in turn vital for organizational effectiveness and prosperity. Through IB, managers can devise solutions to problems and face challenges, providing the basis for the survival and success of the firm well into the future. To encourage such behaviour in employees, a strong sense of ownership of their workplace needs to be developed. When employees know they count and can make a difference for better or worse, they will assume responsibility and exhibit positive behaviours such as KS and IB. Thus, we can sum up with the suggestion that organizations cannot limit themselves to employee stock ownership plans only. Fostering a sense of PO is equally vital or more so, as we saw in the relationships with KS, KH, and IB. Public sector managers and leaders can rethink their strategies for developing organizational citizenship behaviours and limiting counter-productive work behaviours in their employees based on the PO theory. After all, when a team takes ownership of its problems, the problems get solved. It is true on the battlefield, in business, and in everyday life (Jocko Willink).

Data Availability

The data for this study is available with the submitting author.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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