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Innovative Use of EKRs by Older Workers: The Mediating Role of Job Crafting

Emergent Research Forum (ERF)

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Abstract

As older workers retire, their rich knowledge of the organization and its environment literally walks out the door. By means of electronic knowledge repositories (EKRs), organizations can prevent this knowledge from disappearing. However, older workers do not contribute to these knowledge repositories as much as younger workers do, which is especially problematic once they reach retirement age. Drawing on the literature on proactive work behavior, we argue that older employees use EKRs less innovatively and that this reduces their knowledge contributions. We explain this age-related decline with decreases in job crafting behavior. Further, we hypothesize that there are three IT-related mitigating factors that boost the knowledge contributions of older workers, namely, EKR self-efficacy, Trust in EKR, and Perceived enjoyment when using EKRs. By reducing the relevance of job crafting for innovative use, these factors will allow older workers to exploit previously unused features of EKRs to support new tasks.

Keywords

Electronic knowledge repositories, post-adoption, innovative use, older workers.

Introduction

Davenport and Prusak (1998) maintain that organizational knowledge walks out the door when older workers retire. This has been a critical issue in recent years when one out of four employees is older than 55 and approaching retirement (U.S. Department of Labor 2014). However, research in information systems (IS) has barely addressed this issue. Electronic Knowledge repositories (EKRs) can capture a great deal of organizational knowledge if fully used. They are the primary medium of knowledge exchange in integrative knowledge management systems and serve as the institutional memory for sharing and preserving knowledge (Liebowitz and Beckman 2020; Zack 1999). Thus, for an organization to be successful in knowledge management, it must implement, manage, and maintain EKRs as well as persuade employees to use them (Liebowitz and Beckman 2020). This study focuses on knowledge contributions to EKRs.

Studying contributions to EKRs in the context of the aging workforce is important since there is preliminary evidence showing that older workers use these systems to a lesser extent than younger ones do (e.g., Tams et al. 2020). Yet, clear evidence and a fuller understanding of this issue is missing from the literature. Prior research indicates that workers exploit the potential of a system the most when they use it innovatively (Ahuja & Thatcher, 2005; Tams et al., 2018). Thus, we focus on the innovative use of EKRs by older workers. The innovative use of EKRs reflects the extent to which users try to find new ways of using them to share their knowledge with others (Tams et al. 2020). This means that workers incorporate more types of knowledge into their contributions. For example, they can supplement explicit documents from the EKR with social knowledge.

In light of the above, the main objective of this study is to investigate the impact of age on the innovative use of EKRs for making knowledge contributions. We seek to understand how this impact unfolds and whether individual differences can lessen the effect. According to the management literature, age is

negatively associated with innovative behavior in general (Janssen and Van Yperen 2004). This reduced innovative behavior is explained by age-related changes in the risk-tolerance. Therefore, we argue that the innovative use of EKR decreases with age.

Importantly, we posit that the diminished job crafting behavior of older workers explains the reduced innovative use of EKR. Job crafting is a self-initiated workplace behavior that increases engagement and innovative behavior in the workplace, and that has been reported to decrease with age (Afsar et al. 2019; Petrou et al. 2012; Rudolph et al. 2017). Last, building on the model of proactive motivation process (MPMP) developed by Parker et al. (2010), we propose that three IT-related individual differences—EKR self-efficacy, Trust in EKR, and Perceived enjoyment when using EKR—can provide a buffer against the negative indirect effect that age has on the innovative use of EKR by way of job crafting.

The remainder of this paper is structured as follows. The next section presents the theoretical concepts and develops the research hypotheses. Then, the proposed research methodology is presented. Finally, we discuss the expected contributions of this exploratory study.

Theoretical Background and Hypothesis Development

We first conceptualize innovative use as trying to innovate with IT. Next, we discuss how trying to innovate with IT is related to age. Then, we introduce the concept of job crafting and MPMP to theorize the mediation and moderation relationships of the research model. The proposed model is presented in Figure 1.

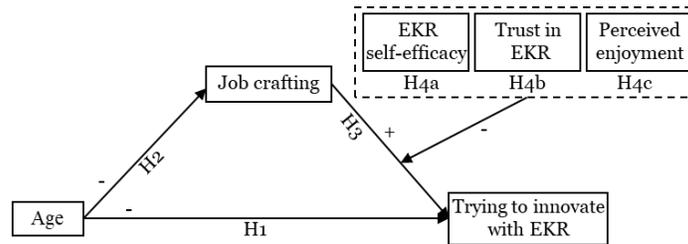


Figure 1: Research model

Innovative Use and Trying to Innovate with IT

Innovative use of IT is a proactive behavior because it consists of self-initiated actions conducted as a result of excess resources and is not usually in the job description. In line with Tams et al. (2020), we view the innovative use of EKR as a goal-directed behavior and conceptualize it using the construct of trying to innovate with IT. This construct is defined as “a user’s goal of finding new uses of existing workplace information technology” (Ahuja and Thatcher 2005, p. 431).

Like other types of innovative behavior, the innovative use of IT involves risk. When employees deviate from the basic use of a system, they are uncertain whether their efforts will lead to successful outcomes or not (Tams et al. 2018). Risk-taking is negatively related to age. Indeed, studies on the neuroanatomy of the brain have reported a decrease in the gray matter volume in the parietal region associated with risk tolerance (Grubb et al. 2016). Empirical studies in management and IS also support a negative relationship between age and innovative behavior (Guillén and Kunze 2019; Lee et al. 2010). Therefore, we hypothesize:

Hypothesis 1: Age is negatively associated with trying to innovate with an EKR.

The Role of Job Crafting

Job crafting is a self-initiated behavior defined as the cognitive changes that employees make in the boundaries of their work to fit themselves with their job and engage with it (Petrou et al. 2012; Tims et al. 2012). Employees craft their jobs and become more engaged with them by challenging themselves with more responsibilities and ensuring that their work is intense and interesting. Prior findings reveal that job crafting results in increased engagement, creativity, and innovative behavior in the workplace (Afsar et al. 2019; Petrou et al. 2012). As workers engage in more job crafting, they are more willing to help others or go the extra mile to be creative (Demerouti et al. 2015). Therefore, job crafting can be highly beneficial for innovative work behaviors such as trying to innovate with IT.

Rietzschel et al. (2016) argue that direct, zero-order relations of age with innovation do not do justice to the complex and multifaceted nature of age-related effects. These authors maintain that complex indirect and moderated relationships can better explain the changes in innovative behaviors in older adults. We adopt the construct of job crafting to explain why trying to innovate with IT can diminish with age. Job crafting has strong relationships with worker age and with innovative work behavior. This means that it is highly relevant for explaining in greater detail the relation between the constructs of interest to this article.

Like innovative use, job crafting is a risky behavior because it involves breaking routines and exposing oneself to uncertainty. The risk aversion in older adults also suggests that job crafting behavior decreases with age. A meta-analysis supports this idea (Rudolph et al. 2017). Therefore, we hypothesize:

Hypothesis 2: Age is negatively associated with job crafting.

As mentioned above, there is a positive relationship between job crafting and innovative work behavior. Job crafting allows employees to utilize opportunities to customize their jobs to better fit their motivations, strengths, and passions, and this favors more innovativeness in the workplace (Afsar et al., 2019). Hence, employees who engage in more job crafting can be expected to try to innovate with EKR more than others. For instance, job crafters may challenge themselves while using IT systems and thus go beyond the basic use of these systems. Moreover, they are more likely to seek help if they find themselves stuck in the system so that they are more confident in trying to innovate with it. Therefore, we hypothesize:

Hypothesis 3: Job crafting is positively associated with trying to innovate with an EKR.

Model of Proactive Motivation Process (MPMP)

The MPMP identifies workplace innovative behavior as a proactive behavior and proposes that actors' motivational states predict this type of behavior (Parker et al. 2010). According to Grant and Ashford (2008), "employees do not just let life happen to them." This is the very essence of proactivity, which is defined as a set of self-starting, goal-oriented behaviors designed to change one's environment or oneself (Holman et al. 2003). In line with Tams et al. (2018), we argue that innovative use of IT is a proactive behavior because it is an extra-role behavior that is not included in formal job requirements, and it is at employees' discretion to go beyond the basic use of the system. Further, Parker et al. (2010) argue that proactive behavior consists of setting a goal and striving for it. This is in line with the definition of trying to innovate with IT, which conceptualizes the innovative use as a goal-oriented behavior that users strive for.

According to the MPMP, three motivational states impact proactive work behavior. First, individuals should believe that they "can do" a certain proactive behavior. Second, they should have a "reason to" do the behavior. Third, they should be "energized to" do it proactively. These three motivational states prompt a process of goal generating and goal striving for proactive behaviors such as trying to innovate with IT. For example, employees who have all these motivational states take charge to improve work methods and engage in proactive problem-solving in the organization (Parker et al. 2010).

Drawing on the MPMP, we develop three hypotheses using IT-related individual differences as moderators that can mitigate the indirect negative relationship between age and innovative use. First, employees should believe that they "can do" a proactive behavior. Self-efficacy is relevant here because it reflects individuals' beliefs in their ability to perform a behavior such as using a technology (Rietzschel et al. 2016). The literature on knowledge contributions has discussed the role of contributors' knowledge self-efficacy (e.g., Kankanhalli et al. 2005). However, the present study focuses on EKR self-efficacy, defined as persons' beliefs in their ability to use EKR successfully. Greater EKR self-efficacy has been shown to improve EKR usage (Rich et al. 2010), and we posit that it should compensate for reduced job crafting because the belief in one's ability to use EKR successfully presents an alternative means of trying to innovate with the EKR. In general, job crafting leads employees to become more engaged with their work, and self-efficacy has a similar effect. It increases work motivation and effort and leads employees to feel more capable of dealing with their work demands. As a result, they can invest themselves more fully into their work roles, and they can engage more effectively in proactive behaviors like trying to innovate with an EKR. Therefore:

Hypothesis 4a: The negative mediated relationship between age and trying to innovate with an EKR (via job crafting) is weaker for higher levels of EKR self-efficacy.

Furthermore, employees should have a “reason to” do the behavior. Trust in EKR is relevant here because it reflects employees’ expectations of the technology’s functionality, reliability, and helpfulness in doing its job—i.e., allowing employees to contribute to the organizational knowledge base (Mcknight et al. 2011). As mentioned earlier, innovative behavior is risky. Employees who trust in an EKR have the judgment that the system performs as expected and have more certainty when they try to innovate with it (Tams et al. 2018). This judgment thus counteracts perceptions of risk and presents an alternative reason for trying to innovate with the EKR so that it compensates for reduced job crafting. Therefore, we hypothesize:

Hypothesis 4b: The negative mediated relationship between age and trying to innovate with an EKR (via job crafting) is weaker for higher trust in EKR.

Finally, workers should be “energized to” perform a proactive behavior. This motivational state describes the individual’s momentary affect while performing an action, such that positive energized-to states allow workers to set more challenging goals for themselves. As mentioned earlier, job crafting energizes employees to engage in proactive behaviors (Berg et al., 2008). Perceived enjoyment is also relevant because it reflects the positive affect that users experience while they interact with the system (Venkatesh 2000). This means that perceived enjoyment should compensate for reduced job crafting. For users, it presents an alternative means of feeling energized to innovate with an EKR. Therefore, we hypothesize:

Hypothesis 4c: The negative mediated relationship between age and trying to innovate with an EKR (via job crafting) is weaker for higher levels of perceived enjoyment.

Brief Outline of the Proposed Methodology

We will conduct a large-scale survey of knowledge workers who use EKR in their jobs. We intend to recruit respondents from two groups of employees: younger (below 30) and older (above 60). To ensure access to a large representative sample, the online survey will be administered by a renowned market research company. All measures for this study will be adapted from prior research to ensure good psychometric properties. The measure for job crafting will be adopted from Petrou et al. (2012), and the one for trying to innovate will be adapted from Ahuja and Thatcher (2005). EKR self-efficacy will be adapted from Sherer et al. (1982), and trust in EKR will be adapted from Mcknight et al. (2011). Finally, the measure for perceived enjoyment will be adapted from Venkatesh (2000). To control for common method variance (CMV), we will use procedural and statistical remedies (Podsakoff et al. 2003). To reduce evaluation apprehension, we will assure respondents that the data are collected anonymously. Also, after data collection, we will assess the statistical significance of CMV. The data will be analyzed using PROCESS v3.5 for conditional process analysis in SPSS (Hayes, 2018). PROCESS model 14 will be used, and the tests will be conducted with a 95% confidence interval and 5,000 bootstrap resamples in SPSS v.27.

Expected contributions

This study shall make two theoretical contributions. First, it will provide evidence of a negative association between age and innovative EKR use. Second, it will identify job crafting as a mechanism that helps explain the relation between age and innovative EKR use among older workers. From a practical standpoint, the mitigating factors shall help in the development of interventions that provide a buffer against the negative effects of age on innovative EKR use. For example, EKR designers can customize interfaces to make them more enjoyable for older workers. They can make use of sensory aesthetics such as screen colors and formal aesthetics such as screen layouts to trigger positive emotions related to enjoyment. Moreover, to play to the strengths of older workers in terms of vocabulary knowledge, designers should implement EKR that use keyword-based interface navigation. Last, interventions such as coaching and continuous training on EKR can be designed to increase older workers’ self-efficacy and help them use these systems more innovatively.

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