

Citation for published version

Martínez-Córcoles, M. [Mario], Peñarroja, V. [Vicente] & Stephanou, K. [Konstantinos] (2023). Angels, demons and empowering leadership: simultaneous compensatory links to work role performance. *Baltic Journal of Management*, 18(1), 54-69. doi: 10.1108/BJM-06-2022-021

DOI

<http://doi.org/10.1108/BJM-06-2022-021>

Handle

<http://hdl.handle.net/10609/147678>

Document Version

This is the Accepted Manuscript version.

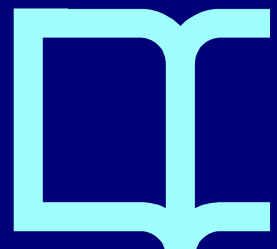
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3 **Angels, demons, and empowering leadership: Simultaneous compensatory links to work**
4 **role performance**
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7 **Abstract**
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10 **Purpose:** Prior research indicates that empowering leadership has simultaneous contradictory
11 effects on work performance. This study aimed to explore contradictory mechanisms through
12 which empowering leadership is related to work role performance behaviors.
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15 **Design/Methodology:** The sample was composed of 274 professionals from five IT companies
16 located in the Baltic area. OLS regression analyses were performed using MEDCURVE for SPSS
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18 23.0.
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22 **Findings:** Empowering leadership is positively related to work role performance behaviors;
23 additionally, perceived uncertainty mediates the relationship between empowering leadership and
24 work role performance behaviors, with the relationship between empowering leadership and
25 uncertainty having a curvilinear U-shape (concave upward). That is, although empowering
26 leadership is positively related to work role performance, the relationship between empowering
27 leadership and work role performance though uncertainty becomes non-significant at high levels
28 of empowering leadership.
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33 **Originality:** This is one of the first studies to demonstrate that empowering leadership is related
34 to work performance through simultaneous compensatory mechanisms. Moreover, we provide
35 evidence about the curvilinear relationship between empowering leadership and performance
36 through uncertainty (previously unknown).
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40 *Keywords:* Empowering leadership; empowerment; uncertainty; work performance; work role
41 performance; proactivity.
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1. INTRODUCTION

In recent years, organizational research has shown an overwhelming interest in studying the effects of empowering leadership on followers' performance [see the recent extensive reviews by Cheong *et al.*, (2019) and Sharma and Kirkman, (2015) or the meta-analyses by Kim *et al.*, (2018) and Lee *et al.*, (2018)]. Most of this literature highlights the benefits of empowering leadership. For instance, empowering leadership has been positively associated with a wide range of followers' behaviors, such as employee performance (Cheong *et al.*, 2016; Harris *et al.*, 2014; Humborstad *et al.*, 2014), in-role and extra-role behaviors (Auh *et al.*, 2014; Fong and Snape, 2015; Humborstad *et al.*, 2014), safety performance (Martínez-Córcoles *et al.*, 2013), or innovative work behavior and creativity (Kim and Beehr, 2022; Zhang and Zhou, 2014). It has also been positively associated with positive employee attitudes such as affective and organizational commitment (Fong and Snape, 2015; Harris *et al.*, 2014), job crafting and engagement (Kim and Beehr, 2021), self-efficacy (Cheong *et al.*, 2016; Zhang and Zhou, 2014), job satisfaction (Fong and Snape, 2015; Martínez-Córcoles *et al.*, 2021), or motivation and accountability (O'Donoghue and van der Werff, 2021).

However, a growing number of recent studies claim that, far from being a panacea, empowering leadership has unintended negative effects on followers' motivation and attitudes (Humborstad and Kuvaas, 2013; Wong and Giessner, 2018), ethical behavior (Dennerlein and Kirkman, 2022; Mai *et al.*, 2021), expected conventional behaviors (Yam *et al.*, 2021), or work role performance (Cheong *et al.*, 2016). Therefore, previous research indicates that empowering leadership may be a double-edged sword with mechanisms of influence working in parallel and affecting work performance differently. In this study, we propose and test a model with two contradictory linking mechanisms (positive and negative) to find out how they relate to work role

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3 performance simultaneously. To do so, we draw on Organizational Role Theory (Katz and Kahn,
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5 1978) as a framework for our hypotheses.

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8 Our study makes three important contributions. First, we contribute to modifying the
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10 dichotomous view of empowering leadership as either beneficial or harmful by showing that
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12 empowering leadership can also be innocuous. Second, to our knowledge, this is the first study to
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14 explore perceived uncertainty as a relevant mediation mechanism in the relationship between
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16 empowering leadership and work role performance. Third, we demonstrate that empowering
17
18 leadership is related to performance through simultaneous linear and non-linear mechanisms
19
20 (direct and mediated, respectively) that compensate each other.
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23 24 *1.1. Theoretical development and hypotheses*

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26 According to Griffin *et al.* (2007), work role performance is shaped by three types of
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28 behaviors (i.e. task proficiency, task adaptivity, and task proactivity). Task proficiency refers to
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30 the extent to which a person meets the expectations and requirements that can be formalized in a
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32 well-defined standard and are not part of the social context. Task adaptivity refers to the degree
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34 to which a person conforms to the constant changes that occur in a work system or role. Task
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36 proactivity is the extent to which a person autonomously takes the initiative to engage in self-
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38 directed actions in a changing work function or role (Griffin *et al.*, 2007). Given the increasing
39
40 need for continuous evolution and innovation, along with growing decentralization, individual
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42 task proactivity is an asset to the workforce. Thus, employees are expected to engage in self-
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44 starting, future-oriented actions, without depending on instructions from superiors.
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49 Empowering leadership seems to have simultaneous opposing effects on work role
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51 performance. For instance, it has been positively associated with work role performance due to
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53 its ability to increase follower self-efficacy, and negatively associated with work role
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3 performance due to high levels of autonomy granted to followers (Cheong *et al.*, 2016) and their
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5 mismatched role expectations about their leader (Wong and Giessner, 2018). Based on these
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7 findings, Cheong *et al.* (2019) proposed investigating other possible contradictory effects and
8
9 relevant mechanisms through which empowering leadership could transmit its negative effects to
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11 specific work-related outcomes such as work role performance. In this article, we follow this
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13 suggestion by testing this contradictory link and examining a new mediation mechanism that
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15 could lead to decreased work role performance.
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19 According to Organizational Role Theory (Katz and Kahn, 1978) (hereinafter ORT),
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21 employees accept and enact specific roles related to the position they occupy in the organization.
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23 A work role is traditionally defined as a set of behaviors expected from an employee (role
24
25 occupant) who occupies a certain position. For effective and efficient organizational functioning,
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27 the array of roles must be effectively communicated, fully understood, and accepted by the
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29 employees (Katz and Kahn, 1978). ORT provides a dynamic review process known as role
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31 episodes, in which interactions between the role occupant and the role emitters (leader/s,
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33 teamwork colleagues, colleagues from other units, subordinates, etc.) help to provide
34
35 performance feedback to the role occupant and make adjustments to possible discrepancies
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37 between expected and enacted behaviors. Although colleagues' expectations are relevant, if we
38
39 take the source's legitimacy into account, the power of the expectations emitted by direct leaders
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41 resides in the fact that they represent the organization in terms of implementing what the
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43 organization requires (in this case, the standards individuals need to meet). Accordingly, leaders
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45 are in a key position to convey to followers what is expected of them.
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51 From an empowerment perspective, leaders would not limit their behaviors to supervising
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53 and providing feedback about individuals' role behavior. Instead, empowering leadership works
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3 as a clear source of expectations in two main directions. First, empowering leadership is
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5 characterized by bottom-up (participative decision-making) and specific top-down interactions
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7 (i.e. informing, showing concern for their followers) that help employees meet the expectations
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9 and requirements of their prescribed roles (Martínez-Córcoles *et al.*, 2014). Second, empowering
10
11 leadership has emerged and evolved as a response to the constant pressure for continuous
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13 improvement and innovation that currently pushes companies to rely on employees' personal
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15 initiative and self-management. That is, employees are not only expected to passively follow
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17 instructions, task descriptions, and orders, but they are also expected to go beyond their
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19 prescribed role, using their initiative and acting proactively to identify and solve emerging issues
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21 (Frese, 2008). Empowering leadership provides followers with autonomy from bureaucratic
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23 constraints (Kirkman and Rosen, 1999), and it enables collaborative dynamics and participation
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25 (Martínez-Córcoles *et al.*, 2012). Thus, followers can be autonomous in analyzing each situation,
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27 thinking proactively and responding with initiative when changes or unexpected events arise (i.e.
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29 adaptive and proactive performance behaviors). Accordingly, we expect empowering leadership
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31 to be positively related to work role performance behaviors.
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38 *H1. Empowering leadership is positively related to work role performance behaviors.*
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41 According to ORT, uncertainty is a defining characteristic of organizational settings
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43 (Katz and Kahn, 1978). Uncertainty occurs when significant information is missing or
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45 inconsistent and there is a lack of knowledge about what outcomes are possible (Dönmez and
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47 Grote, 2018). Uncertainty is a subjective phenomenon because there may be important
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49 interpersonal differences when coping with the same situation (McPherson, 1983). The same
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51 situation may cause excessive uncertainty in one individual, but negligible uncertainty in another
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(Kramer, 1999). In this regard, our conceptualization of uncertainty relies on the individual's perception of uncertainty, rather than on an objective measure.

Uncertainty has been found to have a negative effect on performance (Argote *et al.*, 1989). On the one hand, from an ORT approach, having incomplete, inconsistent, and/or ambiguous information (uncertainty) is the main reason employees experience strain and are not able to reach their performance aims. The more uncertainty there is, the more difficult it is for the individual to take control of the task and achieve good task performance (Ilgen and Hollenbeck, 1991). Therefore, uncertainty is expected to be negatively and linearly related to individual task proficiency. On the other hand, it is fairly well known that uncertainty is a sense of doubt that makes decision-making activities more complex and difficult and blocks or delays action (Lipshitz and Strauss, 1997). Whereas small doses of uncertainty might motivate individuals to take initiative and proactively adapt to the environment, higher levels of uncertainty complicate decision-making in adaptive responses (Marchau *et al.*, 2019) because high uncertainty keeps individuals from having sufficient knowledge to cope with situations (Lempert *et al.*, 2003). As uncertainty increases, it becomes more difficult for individuals to anticipate events and adapt their behavior accordingly, and very high levels of uncertainty could even cause "analysis paralysis" (Lipshitz and Strauss, 1997). Thus, we also expect uncertainty to be negatively and linearly related to individual task adaptivity and individual task proactivity.

According to the theory of management of uncertainty by Grote (2004, 2009), there are two approaches to handling uncertainty. On the one hand, "minimizing uncertainty" is the approach that is still being followed by many organizations, and it is often fostered by keeping systems under control through compliance with detailed specifications. On the other hand, "coping with uncertainty" is a relatively new approach that gives local actors more autonomy,

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3 self-management, and control over the environment in handling imperfect knowledge. To cope
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5 with uncertainty (rather than minimize it), individuals need to actively explore and understand
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7 how the system functions, seek missing information, and act beyond the constant default work
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9 boundaries (Weick, 2002). Thus, empowering leadership can mitigate the sense of uncertainty
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11 that places followers in a vulnerable position, given that it enables followers to actively seek
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13 information, participate in decision making, and take more control and responsibility in the
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15 situation. Hence, empowering leadership is expected to reduce perceived uncertainty and,
16
17 therefore, improve work role performance.
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22 Although it is widely assumed that empowering supervision is an efficient managerial
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24 style that helps organizations cope with uncertainty (Lee *et al.*, 2018), there is more to it than
25
26 meets the eye. Leaders undoubtedly serve as sources of expectations and information that reduce
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28 followers' uncertainty by helping them to understand organizational processes and expected job
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30 behaviors (Harris *et al.*, 2014, Martínez-Córcoles *et al.*, 2014). However, several studies have
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32 proposed that empowering leadership might have detrimental consequences for individual
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34 performance (Maynard *et al.*, 2007) because empowering leader behaviors focus on high
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36 autonomy in decision making and task delegation, which might increase role ambiguity
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38 (Humborstad and Kuvaas, 2013) and task uncertainty (Cordery *et al.*, 2010; Kim *et al.*, 2018;
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40 Martin *et al.*, 2013). In recent years, these opposing approaches have led scholars to focus on the
41
42 contingent nature of empowering leadership, finding that the effect of empowering leadership on
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44 performance is contingent upon factors such as culture (Kim *et al.*, 2018; Zhang and Zhou,
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46 2014), the urgency of the situation (Klein *et al.*, 2006, Yun *et al.*, 2005), follower experience
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48 (Harris *et al.*, 2014), leader and follower expectations and perceptions (Humborstad and Kuvaas,
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50 2013), or the level of empowering style shown by the leader (Lee *et al.*, 2017).
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3 In particular, the fact that the level of empowering style shown by the leader can have
4 detrimental effects contradicts the mainstream assumption that “the more empowering
5 leadership, the better”. However, it is still unclear what levels of empowering leadership are
6 optimal because research findings are also contradictory in this regard. On the one hand,
7 researchers have shown that there might be a “Too-Much-of-a-Good-Thing” (TMGT) effect
8 (Pierce and Aguinis, 2013) of empowering leadership on follower performance (Sharma and
9 Kirkman, 2015). This effect exists when apparently beneficial things (as empowering leadership
10 can be) can become counterproductive when taken too far. A good example of the TMGT effect
11 in empowering leadership is illustrated in the study by Lee *et al.* (2017). Using 137 supervisor–
12 subordinate dyads in different types of organizations, these authors found an inverted U-shaped
13 link between empowering leadership and followers' task performance, where low and high levels
14 of empowering leadership were related to lower task performance. Similarly, Amudsen and
15 Martinsen (2014) found a curvilinear relationship (inverted U-shape) between empowering
16 leadership and leader effectiveness when the leader's self-ratings were in agreement with
17 subordinates' ratings. On the other hand, in a study with a sample of 655 accountants,
18 Humborstad *et al.* (2014) found a U-shaped relationship (positive concave upward curve)
19 between empowering leadership and individual in-role and extra-role performance. That is,
20 “subordinates demonstrated lower in-role and extra-role performance when they considered their
21 leaders' empowering behaviors to be somewhat mediocre. However, they also reported lower in-
22 role and extra-role performance when they rated their leaders as less empowering than when they
23 rated them as more empowering” (p.258). These findings suggest that the variability in the
24 relationship between empowering leadership and performance might occur because empowering
25 leadership can easily create confusion and uncertainty at some point.
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3 According to ORT, empowering leadership is a style characterized by active and dynamic
4 bottom-up interactions between leaders and their followers (Martínez-Córcoles *et al.*, 2014). By
5 granting more self-control and autonomy and encouraging involvement and decision making,
6 empowering leadership enables followers to explore and navigate the work environment beyond
7 their prescribed role. Low levels of empowering leadership would not give members enough
8 autonomy and self-control to freely ask, seek, check, become involved, take initiative, or adopt a
9 critical perspective, activities that would keep them from handling imperfect knowledge and
10 reduce perceived uncertainty. However, in line with the TMGT effect found for empowering
11 leadership (Amudsen and Martinsen, 2014; Lee *et al.*, 2017), we also believe that high levels of
12 empowering leadership can be problematic because too much autonomy granted by the leader
13 can paradoxically be perceived by followers as their leader's abandonment of his/her
14 responsibilities (Wong and Giessner, 2018). In this case, when an empowering leader provides
15 high levels of autonomy and high decision-making latitude, followers must deal with additional
16 responsibilities and new information, which increases uncertainty. Based on these arguments, we
17 expect uncertainty to decrease as empowering leadership increases. However, at moderate levels
18 of empowering leadership, further increments will become a double-edged sword with
19 incremental effects on uncertainty. Thus, although low to moderate levels of empowering
20 leadership will increase work role performance by reducing uncertainty, high levels of
21 empowering leadership could have the opposite effect of reducing work role performance by
22 increasing uncertainty. Specifically:

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49 *H2. Uncertainty will mediate the relationship between empowering leadership and work*
50 *role performance behaviors, with empowering leadership being related to uncertainty in a*
51 *curvilinear U-shape.*
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2. METHOD

2.1. Participants and procedure

This study used survey data from a convenience sample composed of 274 professionals from five IT service providers located in Estonia and Lithuania. Although a convenience sample is not best compared with a probability sample, it is reliable as long as the respondents' propensity to be included does not influence the main outcome of interest (Remler and Van Ryzin, 2010). Approximately 400 questionnaires were disseminated via the online software tool SurveyMonkey. Participation was voluntary, and the approximate time needed to fill out the whole form ranged from 18 to 20 minutes. The response rate was 68.5%. In the sample, around 28% of the respondents were between 18 and 30 years old, 45% were between 31 and 45 years old, and 27% were 45 years old or more. Furthermore, the vast majority of the participants had tertiary education (i.e. university graduates) and were positioned at different hierarchical levels: i.e. 52% of the respondents were staff members, 34% were managers, 8% were group leaders, and the remaining 6% held C-level positions. Finally, the gender balance was relatively closely distributed, given that around 52% were male and 48% female.

2.2. Measurement

Empowering leadership was measured using the 17-item reduced version of the empowering leadership Questionnaire (see Martínez-Córcoles *et al.*, 2011), which originally contained 38 items (ELQ; Arnold *et al.*, 2000). Items were rated on a 5-point Likert response scale ranging from 1 ('never') to 5 ('always'). We used this scale because it has been shown to be a robust measure in organizations operating in a highly complex, specialized, and uncertain environment. The IT service providers in our sample operate under these circumstances.

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3 *Uncertainty* was measured with four items adapted from van den Bos and Lind (2002).
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5 The items were: “There is a lot of uncertainty at work right now”; “Many things seem unsettled
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7 at work currently”; “If I think about work, I feel a lot of uncertainty”; and “I cannot predict how
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9 things will go at work”. The items were rated on a 5-point Likert response scale ranging from 1
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11 (‘strongly disagree’) to 5 (‘strongly agree’).
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15 *Individual work role performance* was measured with nine items taken from Griffin *et al.*
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17 (2007). The items measured three components of individual work role performance (task
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19 proficiency, task adaptivity, and task proactivity). The items were rated on a 5-point Likert scale
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21 ranging from 1 (‘very little’) to 5 (‘a great deal’).
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24 *Control variables.* We included participants’ age and gender as control variables in our
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26 research model because previous research has shown that they are related to employee adaptivity
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28 (Bodla and Ningyu, 2017), proactive behaviors (Fritz and Sonnentag, 2009), and job
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30 performance (Raja and Johns, 2010). Because gender was a dichotomous variable, a dummy
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32 variable was created to enter it in the regression equations. For the dummy variable, male
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34 respondents were assigned a score of 0, and female respondents were assigned a score of 1. To
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36 enter age in the regression equations, two dummy variables were created. For the first dummy
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38 variable, respondents who were between 31 and 45 years old were assigned a score of 1, and the
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40 rest were assigned scores of 0. For the second dummy variable, respondents who were 45 years
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42 old or more were assigned a score of 1, and the rest were assigned scores of 0. Respondents with
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44 scores of 0 on the two dummy variables were the reference group (e.g., respondents between 18
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46 and 30 years old).
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50 51 2.3. Preliminary analysis 52 53 54 55 56 57 58 59 60

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Prior to hypothesis testing, a set of preliminary analyses were carried out. A confirmatory factor analysis was performed to assess the underlying factor structure of individual work role performance using Mplus 7.4 (Muthén and Muthén, 1998–2015). The robust weighted least squares (WLSMV) estimation method was used because our observed variables were measured on an ordinal scale. Additionally, goodness-of-fit of the models was tested using the following cut-off criteria: a comparative fit index (CFI) and Tucker-Lewis Index (TLI) greater than .95 and a root mean squared error of approximation (RMSEA) of .06 or less (Hu and Bentler, 1999).

Based on Griffin *et al.* (2007), we defined a three-factor model in which the first three items loaded on the first factor, which assessed task proficiency, items 4 to 6 loaded on the second factor, which assessed task adaptivity, and the last three items loaded on the third factor, which assessed task proactivity. The fit indices supported the model (Chi-square = 31.21, $df = 24$, $p = .148$; RMSEA (90 % C.I.) = .033 (.000 - .063); CFI = .995; TLI = .992). However, when exploring the output, we found that task adaptivity and task proactivity were highly correlated, with a value of .998. This might have caused the program to generate the warning message of a non-positive definite PSI latent variable covariance matrix, indicating that the model should be respecified. Thus, we modified this factor model by merging task adaptivity and task proactivity into one factor. The fit indices also supported the two-factor model (Chi-square = 32.14, $df = 26$, $p = .189$; RMSEA (90 % C.I.) = .029 (.000 - .059); CFI = .996; TLI = .994), and the program did not produce a warning message in this case. The chi-square test for difference testing between the three- and two-factor models was not statistically significant ($\Delta\chi^2 = 0.96$; $df = 2$; $p = .620$), indicating that the fit of the two models was similar. Moreover, we compared the two-factor model with an alternative one-factor model in which all the items loaded on a single factor. Results showed that the restriction worsened the model fit (Chi-square = 61.21, $df = 27$, $p < .001$;

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3 RMSEA (90 % C.I.) = .068 (.045 - .091); CFI = .976; TLI = .968). The chi-square difference test
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5 also confirmed that the two-factor model fitted the data better than the one-factor model ($\Delta\chi^2 =$
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7 14.83; $df = 1$; $p < .001$).

10 All three types of work role performance (proficiency, adaptivity, and proactivity) are
11 important for effectiveness in the workplace. Proficiency refers to well-defined behaviors that
12 are formally specified in the job description and can be anticipated by the employee,
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14 whereas adaptivity and proactivity consist of role aspects that are not as easily defined in
15
16 advance, but emerge depending on the dynamics of the work context. Moreover, they are
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18 oriented towards organizational change and contribute to organizational effectiveness when
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20 demands are unpredictable (Griffin *et al.*, 2010). Although adaptivity and proactivity are
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22 considered different dimensions of work role performance, they are also closely related
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24 (Ghitulescu, 2013; Griffin *et al.* 2010; Marques-Quinteiro and Curras, 2012). According to
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26 Strauss *et al.* (2015), when organizational changes take place, dealing with these changes and
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28 adapting to them (adaptivity) provides knowledge and resources that can be used later to propose
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30 positive changes in organizations that will improve effectiveness. Thus, adaptive behaviors make
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32 it possible to acquire relevant and up-to-date knowledge that facilitates the adoption of proactive
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34 behaviors. Therefore, it is possible that the employees mainly interpreted two factors: on the one
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36 hand, the proficiency factor and, on the other, a single factor that merges adaptivity and
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38 proactivity, considering the differentiation between anticipated versus emergent role behaviors.
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40 Our empirical results show that participants paid less attention to the nuances that differentiate
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42 between adaptivity and proactivity factors, conceiving them as part of the same process of
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44 adaptation to organizational changes. Although Griffin *et al.* (2007) showed that proficiency,
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46 adaptivity, and proactivity were structurally distinct from each other, we found that, for our study
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EMPOWERING LEADERSHIP AND WORK ROLE PERFORMANCE

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3 participants, distinguishing between adaptivity and proactivity was more difficult. Thus, based
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5 on the theoretical arguments provided and the results obtained, we decided to merge adaptivity
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7 and proactivity and analyze our hypotheses based on two factors of work role performance:
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9 proficiency and pro-adaptivity.
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12 Regarding the two-factor model, all factor loadings were significantly different from zero
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14 at the $p < .01$ level. The standardized factor loadings of the items ranged from .64 to .75 for task
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16 proficiency and from .58 to .74 for task pro-adaptivity. The correlation between task proficiency
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18 and task pro-adaptivity was .80. These results provide support for the two-factor model, even
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20 though the two factors were highly correlated.
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23 Because all the variables in this study were measured with self-reports, confirmatory
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25 factor analysis was performed to check for common method bias (Podsakoff *et al.*, 2003). We
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27 compared the fit of a four-factor model (items load on four different factors: Empowering
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29 leadership, uncertainty, task proficiency, and task pro-adaptivity) to the fit of an alternative one-
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31 factor model (all items load on a single factor). Because the data were measured on an ordinal
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33 scale, the WLSMV estimation method was used. The results of the CFA are displayed in Table I.
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37 -- TABLE I HERE--
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40 The hypothesized four-factor model showed a better fit to the data than the alternative
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42 one-factor model (see Table I). Moreover, chi-square difference testing for WLSMV in Mplus
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44 revealed that the four-factor model fitted significantly better than the alternative one-factor
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46 model ($\Delta\chi^2 = 224.06$; $df = 6$; $p < .001$). All the factor-loading estimates of the items in their
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48 respective factors were significantly different from zero at the $p < .001$ level. The standardized
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50 factor loadings of the items ranged from .64 to .80 for empowering leadership, from .87 to .92
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52 for uncertainty, from .64 to .75 for task proficiency, and from .60 to .75 for task pro-adaptivity.
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The correlation between empowering leadership and task proficiency was .66, between empowering leadership and task pro-adaptivity .60, between empowering leadership and uncertainty -.55, between uncertainty and task proficiency -.47, between uncertainty and task pro-adaptivity -.46, and between task proficiency and task pro-adaptivity .80. All correlations were significantly different from zero at the $p < .001$ level. Thus, these results provide support for the four-factor model, so that items from the four constructs measured four discriminable correlated factors: Empowering leadership, uncertainty, task proficiency, and task pro-adaptivity. This result suggests that common method bias does not pose a threat to the results shown in the next section (Podsakoff *et al.*, 2003). Finally, composite reliability was calculated for each variable (see Table II), showing that the measures used in this study were reliable.

2.4. Statistical plan

The study hypotheses were tested in a set of ordinary least squares (OLS) regressions using SPSS 23.0. Because our model tested partial mediation with a nonlinear path between empowering leadership and uncertainty (the path from uncertainty to individual work role performance was linear), we followed the procedure described by Hayes and Preacher (2010). This approach involved the following set of equations:

$$\hat{M} = i_1 + a_1X + a_2X^2 + \sum_{j=3}^k a_j W_j + e_1 \quad (1)$$

$$\hat{Y} = i_2 + b_1M + c'X + \sum_{j=3}^k b_j W_j + e_2 \quad (2)$$

$$\theta = (a_1 + 2a_2X)b_1, \quad (3)$$

where \hat{Y} is work role performance, X is empowering leadership, M is uncertainty, W_j are the age and gender of the participants, which are used as covariates, i_1 and i_2 are the intercepts, a_1 and a_2 are the coefficients of the linear and quadratic terms relating empowering leadership to

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3 uncertainty, a_j are the coefficients relating age and gender to uncertainty, b_l is the coefficient
4 relating uncertainty to work role performance, c' is the coefficient relating empowering
5 leadership to work role performance adjusted for uncertainty, b_j are the coefficients relating age
6 and gender to work role performance, and θ estimates the instantaneous indirect effect of
7 empowering leadership on individual work role performance through uncertainty at a specific
8 value of empowering leadership.
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17 This analysis was performed using the macro MEDCURVE for SPSS (Hayes and
18 Preacher, 2010). By using MEDCURVE, we also generated bootstrap confidence intervals to
19 make statistical inferences about the instantaneous indirect effect. To estimate and interpret the
20 instantaneous indirect effect, we used the sample mean and one standard deviation above and
21 below the sample mean to represent “relatively moderate”, “relatively high”, and “relatively
22 low” levels of empowering leadership, respectively.
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33. RESULTS

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35 Table II provides the means, standard deviations, and Pearson correlations for the
36 variables measured in our study. Pearson correlations show positive correlations among
37 empowering leadership, task proficiency, and task pro-adaptivity. Uncertainty negatively
38 correlated with empowering leadership, task proficiency, and task pro-adaptivity. All the
39 correlations were statistically significant and in the expected direction.
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47 -- TABLE II HERE--
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49 Supporting Hypothesis 1, our results showed that empowering leadership was positively
50 related to task proficiency ($r = .54; p < .001$) and task pro-adaptivity ($r = .52; p < .001$).
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52 Regarding Hypothesis 2, bootstrap analysis showed that the indirect effect of empowering
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3 leadership on task proficiency through uncertainty was statistically significant at low (estimate of
4 the product term = 0.13; 95% CI = 0.02 to 0.26) and moderate values of empowering leadership
5 (estimate of the product term = 0.06; 95% CI = 0.01 to 0.12), but not at high values (estimate of
6 the product term = - 0.01; 95% CI = - 0.06 to 0.03). Similarly, the indirect effect of empowering
7 leadership on task pro-adaptivity through uncertainty was statistically significant at low (estimate
8 of the product term = 0.16; 95% CI = 0.05 to 0.29) and moderate values of empowering
9 leadership (estimate of the product term = 0.07; 95% CI = 0.03 to 0.14), but not at high values
10 (estimate of the product term = -0.01; 95% CI = - 0.07 to 0.04). Moreover, as Table III shows,
11 empowering leadership was curvilinearly related to uncertainty (B for the squared term = 0.42; p
12 < .001). Figure 1 shows a U-shaped relationship between empowering leadership and
13 uncertainty, indicating that uncertainty decreases as empowering leadership increases from a low
14 level to a moderate level. We took the first derivative of Equation 1 and set it to zero to obtain
15 the turning point of the curve at $-a_1/2a_2$. The turning point of the curve was at $X = 4.05$, which
16 is around one standard deviation above the mean of empowering leadership. This indicates that
17 the turning point is at moderate-high levels of empowering leadership. Simple slope tests
18 indicated that the simple slope of empowering leadership on uncertainty was negative and
19 significant at low (simple slope = -1.30; $SE = 0.16$; 95% CI = -1.60 to -0.99) and moderate levels
20 (simple slope = -0.61; $SE = 0.08$; 95% CI = -0.77 to -0.45) of empowering leadership, but it
21 becomes non-significant at high levels of empowering leadership (simple slope = 0.08; $SE =$
22 0.21; 95% CI = -0.33 to 0.49). We also found that uncertainty was negatively related to task
23 proficiency ($B = -.10$; $p < .05$) and task pro-adaptivity ($B = -.12$; $p < .01$), after controlling for the
24 direct effect of empowering leadership.
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In sum, our findings point out that increasing empowering leadership in superiors who have low and moderate levels is related to an increment in individual work role performance through uncertainty. However, increasing empowering leadership in superiors who already have high levels of empowering leadership would have a smaller effect on individual work role performance via uncertainty. For instance, the instantaneous indirect effect of empowering leadership on individual work performance via uncertainty was still positive at moderate levels of empowering leadership, but it disappeared at high levels. We also found that the direct effect of empowering leadership on task proficiency ($B = .45; p < .001$) and task pro-adaptivity ($B = .40; p < .001$) was significantly different from zero, after controlling for the effect of uncertainty.

-- TABLE III HERE--

-- FIGURE 1 HERE--

4. DISCUSSION

In this paper, we explored the simultaneous linear and non-linear links from empowering leadership to work role performance. Specifically, we hypothesized that there would be a positive mechanism (Hypothesis 1): empowering leadership would be positively related to work role performance behaviors; and a negative curvilinear mechanism (Hypothesis 2): uncertainty would mediate the relationship between empowering leadership and work role performance behaviors, with a curvilinear U-shaped relationship between empowering leadership and uncertainty. On the one hand, the results showed that empowering leadership had a direct and linear relationship with both task proficiency and task proadaptive behaviors; therefore, the more empowering leadership, the more proficiency and proadaptive performance behaviors. These findings are in line with previous research that highlights the bright side of empowering

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3 leadership. On the other hand, empowering leadership was also indirectly linked to both of the
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5 work role performance behaviors through uncertainty in a curvilinear (U-shaped) relationship.
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7 The curvilinear relationship shows that the level of uncertainty is low at high levels of
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9 leadership, which is positive. However, the analysis of simple slopes indicates that increasing
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11 empowering leadership does not always reduce uncertainty. More specifically, an increase in
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13 empowering leadership from low to moderate levels is related to a significant reduction in
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15 uncertainty, which in turn is associated with an improvement in employees' work role
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17 performance. However, there is a diminishing return, given that the relationship between
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19 empowering leadership and uncertainty is weaker (or even non-significant), for managers who
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21 are already moderate or high in empowering leadership than for those who are low in
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23 empowering leadership. In fact, increasing empowering leadership in managers who are already
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25 high in empowering leadership is no longer related to a decrease in uncertainty; instead,
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27 perceived uncertainty begins to increase. Thus, according to our findings, investing efforts or
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29 resources in increasing the empowerment skills of managers who are already high in
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31 empowering leadership is useless to improve followers' proficiency and proadaptive
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33 performance by reducing their perceived uncertainty.
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40 The results of this study make three important contributions to organizational and
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42 leadership research. First, research related to empowering leadership and its effects on
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44 uncertainty is scarce. To our knowledge, this is the first study to disentangle the relationship
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46 between empowering leadership and followers' uncertainty. According to Cordery *et al.* (2010)
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48 and Grote (2004, 2009), leaders should increase employees' level of autonomy and self-
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50 determination in order to tackle uncertainty and handle imperfect knowledge. The question is:
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52 How far? Whereas the decreasing uncertainty level until reaching the inflection point on the
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3 curvilinear graph supports previous research, the less steep right side of the U-shaped curve
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5 demonstrates that highly empowering leaders are unable to mitigate uncertainty and, thus,
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7 improve work role performance behaviors.
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10 Second, the fact that highly empowering leaders cease to relate negatively and
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12 significantly to followers' perceived uncertainty (and ultimately to their work role performance)
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14 does not mean that high levels of empowering leadership are detrimental; they merely become
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16 innocuous. Contrary to the growing body of research defending positive, negative, or double-
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18 edged effects of empowering leadership (e.g., Cheong *et al.*, 2016), our results show that
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20 empowering leadership can also become innocuous; that is, too much empowering leadership
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22 simply ceases to have a significant link to work performance (neither positive nor negative, just
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24 no relationship) via uncertainty.
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28 Third, both Hypotheses 1 and 2 do not show two contradictory links from empowering
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30 leadership to work role performance, but two compensatory links. That is, significant high levels
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32 of empowering leadership in Hypothesis 1 compensate the non-significant high levels of
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34 empowering leadership in Hypothesis 2. Thus, the fact that different mechanisms linking
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36 empowering leadership to work role performance compensate each other means that empowering
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38 leadership is powerful at any level of increase, from low levels upward. We believe that these
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40 findings open up a new research avenue on the way relationships interact simultaneously and
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42 compensate each other to impact followers' outcomes (e.g., performance, attitudes, etc.).
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47 A question emerges from this study that both authors and practitioners ask themselves: Is
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49 empowering leadership worthwhile after all? We are convinced that the response to this question
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51 is affirmative if we consider the overall research on the topic, but there are nuances that should
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53 be understood not only by researchers, but also by practitioners. This study has practical
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3 implications in this regard. First, our findings help practitioners from the IT sector to understand
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5 how an excess of empowering leadership may no longer reduce uncertainty. Thus, rather than
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7 seeking the highest levels of empowering leadership, training programs should be oriented
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9 towards achieving optimal levels (low to moderate). These training programs should also
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11 consider that, because the level of perceived uncertainty might fluctuate over time depending on
12
13 other contextual factors (e.g., additional new tasks, time constraints, etc.), empowering
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15 leadership should be calibrated dynamically and depend on these factors. For instance, according
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17 to the Job Characteristic model (Hackman and Oldham, 1980), there are situational factors that
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19 could affect empowering leadership's effectiveness. One factor is the degree to which an
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21 employee wants to have opportunities for self-direction, learning, and personal accomplishment
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23 at work (growth-need strength). That is, employees differ in the extent to which they desire self-
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25 control or self-management, and they are likely to show resistance to working autonomously.
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27 Such resistance has been shown to be associated with lower job satisfaction and lower
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29 organizational commitment (Maynard et al., 2007). Another factor is the followers' level of
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31 knowledge and skills (Hackman and Oldham, 1980), which is analogous to the concept of job
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33 maturity in the Situational Leadership theory (Hersey and Blanchard, 1977). When employees'
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35 job maturity is adequate, the autonomy provided is beneficial for their self-management. By
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37 contrast, when followers' job maturity is not adequate, high levels of autonomy could easily
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39 overwhelm them because they might not be ready to accept high levels of responsibility and
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41 control, which would eventually affect their performance negatively (Hersey and Blanchard,
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43 1977). Future research should study the effect of some situational moderators that could short-
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45 circuit the positive effects of empowering leadership on work role performance.
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This research has several limitations. First, the cross-sectional nature of the study reduces the content of our variables to a snapshot, rather than providing a longitudinal assessment that dynamically explores the proposed processes over time. Longitudinal assessment would provide further validation of our model derived from a cross-sectional design. Second, our variables were assessed by means of self-report measures. Self-report measures provide valid information about the informants' perceptions of their work reality, but their exclusive use without any alternative measures can produce distorted results due to participants' tendency to answer in a consistent and socially desirable manner. Nevertheless, although we guaranteed the anonymity and confidentiality of the survey in order to obtain reliable data, future studies should combine supervisor and self-report data, as well as peer-ratings, to obtain a more complete picture.

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EMPOWERING LEADERSHIP AND WORK ROLE PERFORMANCE

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Table I. Results for CFA

Model	χ^2	<i>df</i>	RMSEA (90% C.I.) ^b	TLI ^c	CFI ^d
1. Four factors ^a	490.50*	399	.029 (.019 - .037)	.989	.990
2. One factor	1643.75*	405	.106 (.100 - .111)	.855	.865

Note. *N* = 274

^a Four factors: (1) empowering leadership, (2) uncertainty, (3) task proficiency, and (4) task proadaptivity.

^b RMSEA (Root Mean Square Error of Approximation); ^c TLI (Tucker-Lewis Index); ^d CFI (Comparative Fit Index).

* *p* < .01

Table II. Means, standard deviations, composite reliability, and inter-correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Empowering leadership	3.32	0.82	.94			
2. Uncertainty	3.00	1.20	-.52***	.94		
3. Task proficiency	3.74	0.80	.54***	-.37***	.75	
4. Task proadaptivity	3.57	.78	.52***	-.41***	.62***	.83

Note.

Composite reliability (CR) for each variable is on the diagonal.

*** $p < .001$.

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Table III. Results of OLS regressions and mediation analysis

Predictors	Uncertainty		Task proficiency		Task proadaptivity	
	<i>B</i> (β)	S.E.	<i>B</i> (β)	S.E.	<i>B</i> (β)	S.E.
Intercept	2.80***	0.14	3.94***	0.08	3.60***	0.08
<i>Controls</i>						
Gender	0.14 (.06)	0.12	0.01 (.01)	0.08	0.01 (.01)	0.08
Age_dummy1	-0.20 (-.08)	0.15	-0.23* (-.15)	0.10	-0.00 (-.00)	0.10
Age_dummy2	-0.26 (-.10)	0.17	-0.38** (-.21)	0.11	-0.09 (-.05)	0.11
<i>Independent</i>						
EL	- 0.61*** (-.42)	0.08	0.45*** (.46)	0.06	0.40*** (.42)	0.06
(EL) ²	0.42*** (.24)	0.10				
<i>Mediator</i>						
Uncertainty			-0.10* (-.15)	0.04	-0.12** (-.19)	0.04
<i>R</i> ²	.32		.33		.30	
<i>F</i>	<i>F</i> (5, 262) = 25.02***		<i>F</i> (5, 262) = 25.88***		<i>F</i> (5, 262) = 22.57***	
Indirect effect of empowering leadership on task proficiency through uncertainty						
EL	Instantaneous indirect effect		S.E.		95% C.I.	
2.50 (Mean – 1 S.D.)	0.13		0.06		[0.02; 0.26]	
3.32 (Mean)	0.06		0.03		[0.01; 0.12]	
4.15 (Mean + 1S.D.)	-0.01		0.02		[-0.06; 0.03]	
Indirect effect of empowering leadership on task proadaptativity through uncertainty						
2.50 (Mean – 1 S.D.)	0.16		0.06		[0.05; 0.29]	
3.32 (Mean)	0.07		0.03		[0.03; 0.14]	
4.15 (Mean + 1S.D.)	-0.01		0.03		[-0.07; 0.04]	

Note:
Empowering leadership was grand-mean centered before computing the squared term to reduce multi-collinearity.
Uncertainty was also grand-mean centered to facilitate the interpretation of the coefficients that relate uncertainty to task proficiency and task proadaptativity.
95% C.I. = 95% confidence intervals with lower and upper limits; Bootstrap samples = 10,000.
****p* < .001
***p* < .01
**p* < .05

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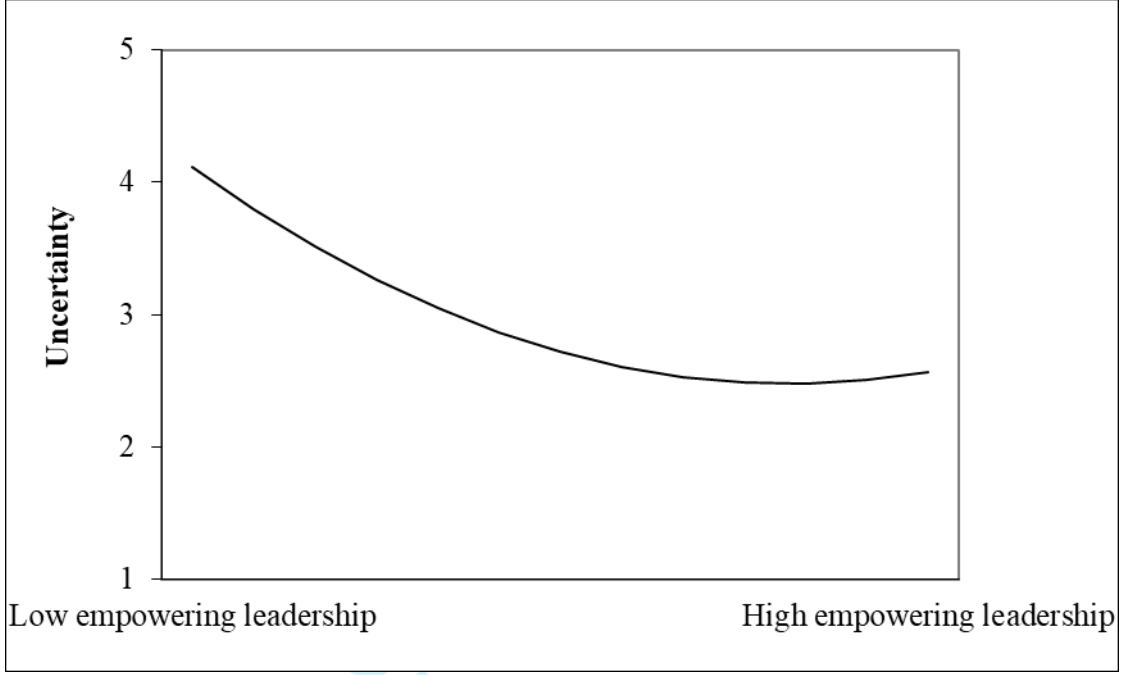


Figure 1. U-shaped relationship between empowering leadership and uncertainty

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