

Organizational climate and creative performance in the public sector

Creative performance in the public sector

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615

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Abstract

Purpose – The aim of this study is to examine the role of organizational climate in employees' creative performance using the public sector as an empirical context. The employees' creative performance is divided into two entities and studied as two separate effect variables: individual creativity and individual innovative behavior.

Design/methodology/approach – A conceptual model is developed and tested in a survey in which employees of a public sector organization participated.

Findings – The findings indicate that organizational climate has an important role in employees' creative performance. The organizational climate showed a positive and significant link to the two creative performance variables included in this study. Moreover, the study revealed that individual creativity mediates the relationship between organizational climate and individual innovative behavior.

Research limitations/implications – This paper is limited to examining the role of organizational climate on two creative performance variables related to individual employees in the public sector. To trigger individual creativity and individual innovative behavior in the public sector, there is a need for managers to build, develop and maintain an organizational climate that supports both employees' creativity and enthusiasm in implementing those novel and useful ideas.

Originality/value – To the best of the authors' knowledge, this study is among the first in the public sector to demonstrate the importance of organizational climate for employees' individual creative performance. The findings of this study adds to our current knowledge and understanding of the value of organizational climate, and its influence on individual creative performance in the public sector.

Keywords Public sector, Organizational climate, Creative performance, Individual creativity, Individual innovative behavior

Paper type Research paper

Introduction

Today, organizations face fast-paced changes that push them to face unpredictable challenges (Anderson *et al.*, 2014). Accordingly, the need for creative performance, manifested as employees' individual creativity (IC) and individual innovative behavior (IIB), is perceived as both a necessary and desired feature among a firm's employees (Imran *et al.*,

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2010). This study defines IC as the individuals' production of novel, useful ideas, that are appropriate to any given situation (Amabile, 1988; Amabile *et al.*, 1996; Amabile *et al.*, 2005; Zhou and George, 2001). IIB is understood here as the set of activities and behaviors toward and during the process of innovation (Janssen, 2005; West and Farr, 1989).

It is reasonable to assume that firms within the public and private sectors are concerned with the need for creative performance. Such factors as competitive advantage, survival and competitive power in a business environment can be characterized as turbulent and dynamic, both nationally and globally (Miao *et al.*, 2018). Considering these environmental factors, Potočnik and Anderson (2012) argued for the importance of creative performance in the public sector because it is indispensable for organizational success and survival (Choi and Chang, 2009; Imran *et al.*, 2010). In recent research, Miao *et al.* (2018) commented on the small amount of research examining the influence of creative performance in public sector organizations, especially when "innovation in public sector organizations has been linked to improved effectiveness, efficiency, and citizen involvement" (p. 71). Employees in the public sector are also heavily relied upon to bring innovation into their processes, operations and methods (Imran *et al.*, 2010; Windrum and Koch, 2008). Aspects related to creative performance in the public sector have become a topic of great interest (Bason, 2010; Borins, 2002; Cole and Parston, 2006) because of their core role in increasing "the responsiveness of services to local and individual needs, and to keep up with public needs and expectations" (Mulgan and Albury, 2003, p. 5).

Based on the discussion above, it is apparent that the organizational climate (OC) in the public sector plays an essential role in an employee's creative performance. In this paper, OC is defined as individuals' cognitive representations and psychological interpretations of their organizational setting (Abbey and Dickson, 1983; Sarros *et al.*, 2008; Scott and Bruce, 1994).

Previous research has revealed that OC is "assumed by the employees through organization's practices and procedures, which in turn formulate and shape their priorities" (Imran *et al.*, 2010, p. 3338). Most research on the role of OC for individual creative performance concentrates on private sectors (Choi and Chang, 2009; De Jong and Den Hartog, 2007; Imran *et al.*, 2010; Slåtten and Mehmetoglu, 2015). In addition, "researchers [...] have devoted increasing attention to organization and individual factors that potentially promote" IIB (Shanker *et al.*, 2017, p. 68). Moreover, Yuan and Woodman (2010) have pointed to how IIB can "assist organizations to gain competitive advantage and to enhance organizational performance" in the private sector (Shanker *et al.*, 2017, p. 68).

However, the relationship between OC and creative performance in the public sector is still largely unexplored (Anderson *et al.*, 2014; Sarros *et al.*, 2008; Sexton and Barrett, 2005; Yuan and Woodman, 2010). Based on this seeming knowledge gap from previous research, this paper will examine how public sector organizations can manage to satisfy public expectations by acquiring and possibly increasing employees' creative performance through OC.

Recently, Anderson *et al.* (2014) and Sarros *et al.* (2008) emphasized the need to explore the role of OC in creative performance in the public sector. This study makes three main contributions:

- (1) It calls for more research on IIB in the public sector.
- (2) To the best of the authors' knowledge, this is the first study to examine employees' perceptions about their OC and its role in individual creative performance, using the public sector as the empirical context.
- (3) It adds to the literature of public sector and public sector organizations, in the field of creative performance.

This article begins with a brief explanation of the suggested conceptual model for this study, followed by a literature review and hypotheses on the concept of OC, creative

performance and the value of OC in creative performance. Next, the methodology is outlined, followed by a presentation of the analysis and the empirical findings. The article concludes with a discussion of the implications of the study, its limitations and suggestions for future research.

Conceptual model of the study

The aim of the study was to examine the role of OC for creative performance in the public sector. Figure 1 shows the conceptual model of the study.

As can be seen in Figure 1, the role of OC is suggested to be a cause variable in relation to the overall effect variable of creative performance. The creative performance variable is divided into two subcreative performance effect variables: each employee’s IC and IIB.

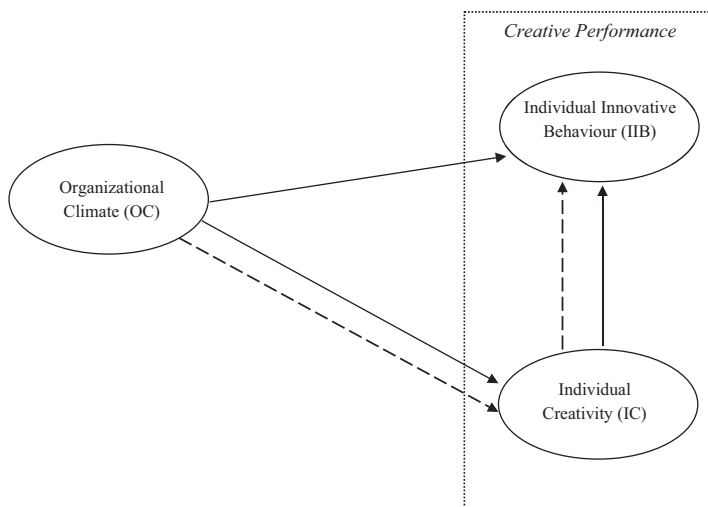
Four effects regarding the role of OC and IC are suggested in Figure 1. First, OC has a direct effect on an employee’s IC. Second, OC has a direct effect on an employee’s IIB. Third, IC has a direct effect on IIB. Finally, the model suggests that IC mediates the relationship between OC and IIB. In the following section, the content of each construct in Figure 1 is discussed in more detail.

Literature review and hypotheses

Organizational climate

Previous research has often highlighted OC as a crucial indicator necessary for observing an organization’s capacity to innovate (Sarros *et al.*, 2008), while arguing that climate plays a crucial role on innovation in organizations, thus coming down to individual employees (McLean, 2005; Schneider *et al.*, 2013; Scott and Bruce, 1994).

OC differs from organizational culture (Amabile *et al.*, 1996), and while organizational culture has been extensively studied (Anderson *et al.*, 2014), only a few studies concentrate on OC (Imran *et al.*, 2010; Isaksen and Akkermans, 2011; Schneider *et al.*, 2013). Isaksen and Akkermans (2011) and Schneider *et al.* (2013) emphasized that culture is a deep organizational structure rooted in values, meaning, beliefs and long-held assumptions, but



Notes: Direct effects ———> Mediating effect - - ->

Figure 1. Conceptual model of the study

climate is perceived as “the manifestation or practices and patterns of behavior rooted in the assumptions, meaning, and beliefs that make up a culture” (McLean, 2005, p. 229).

OC holds various definitions. Some scholars have suggested OC to channel and direct both attention and activities toward innovation within an organization (Amabile *et al.*, 1996; Anderson and West, 1998; Anderson *et al.*, 2014). Others have defined OC as consisting of “individual cognitive representations of the organizational setting” (Scott and Bruce, 1994, p. 581), which reflect the psychological interpretations of any given situation (Abbey and Dickson, 1983; Sarros *et al.*, 2008). Zhou and Shalley (2003) have argued that climate refers to an individual’s visible experiences and perceptions.

In this paper, OC is defined as individuals’ cognitive representations and psychological interpretations of their organizational setting (Abbey and Dickson, 1983; Sarros *et al.*, 2008; Scott and Bruce, 1994).

It is reasonable to assume that several aspects are related to an employee’s experiences and perception of OC. Consequently, several potential factors could serve as input for the OC construct chosen for this study. Scott and Bruce (1994) identified three core categories of factors associated with any OC, namely, leadership, co-workers and individual attributes, and these are used in the present study with minor modifications. The reason for this choice is twofold. First, the three categories are linked to different levels of factors affecting employees’ perceptions of OC. Second, previous research has linked the three categories of OC to different aspects related to innovation within organizations (Amabile *et al.*, 1996; Janssen, 2005; Sanders *et al.*, 2010; Shalley and Gilson, 2004; Yuan and Woodman, 2010).

Though the three factors suggested by Scott and Bruce (1994) capture the concept of OC, it is difficult to identify these factors. To illustrate, leadership can represent several leadership styles, such as transformational leadership or transactional leadership. The same is true with the other two categories, co-workers and individual attributes. As a result, this study focused on the role of OC in relation to creative performance. The OC factors were chosen based on three criteria: it had been related to aspects of creative performance; it had a logical connection with creative performance; and it remained within the set definition of OC selected for this study, that is, OC is defined as individuals’ cognitive representations and psychological interpretations of their organizational setting (Abbey and Dickson, 1983; Sarros *et al.*, 2008; Scott and Bruce, 1994). Based on the three criteria mentioned above, the three attributes were slightly modified: leadership became empowering leadership; individual attributes became individual learning orientation; and co-workers was replaced by work group cohesiveness. These changes will reflect the OC in a clear and precise manner.

It is important to note that the chosen variables serve as one way to study the value of OC in employees’ creative performance. Moreover, this study focuses on employees’ overall perceptions – the cognitive and psychological interpretation of their organizational setting. Therefore, the focus is on how OC is collectively perceived within an organization, in line with previous research that often referred to climate as a person’s perception of the entire organization (Zhou and Shalley, 2007).

Organizational climate and creative performance

Recently, Tan *et al.* (2019) found that creativity-related activities, such as IC and IIB, improved overall self-rated creativity, which in turn improved the organizations’ performance. Previous research has highlighted the benefits of creative performance as a positive influence on overall organizational performance (Tierney and Farmer, 2011), but there is a paucity of research that has examined the influence of employees’ OC on creative performance. While Shalley *et al.* (2009) investigated the influence of creative performance on individuals who worked for pay for at least 30 h per week, the present study narrowed

the focus down to the creative performance of employees in the public sector. In addition, the recent study by [Martinaityte et al. \(2019\)](#) called for further research on creative performance in organizations; this study answers that call by focusing on the public sector. In [Figure 1](#), OC is directly linked to the employee's creative performance. Here, the employee's creative performance is an umbrella concept that consists of the two core factors, IIB and IC. The proposed relationships in [Figure 1](#) will be elaborated in more detail below.

Individual innovative behavior

IIB has long been recognized as a crucial factor in facilitating innovation within an organization ([Isaksen and Akkermans, 2011](#); [Slåtten, 2011](#); [Yuan and Woodman, 2010](#); [Zhou and Shalley, 2003](#)). Previous research has defined IIB in several ways. For example, IIB has been described as how an individual recognizes a problem, generates ideas or solutions and sets a course in implementing the perceived solution ([King, 1992](#); [Scott and Bruce, 1994](#)). Other scholars have defined IIB as a multistage process, containing various activities that enable different individual behaviors at each stage ([Scott and Bruce, 1994](#); [Xerri and Brunetto, 2013](#)). According to this latter definition, it is believed that IIB is first enabled when the production of new ideas occurs, and second, when the environment is suitable to implement creative ideas ([Scott and Bruce, 1994](#); [Yuan and Woodman, 2010](#)).

This study defines IIB, in line with [Janssen \(2005\)](#) and [West and Farr \(1989\)](#), as the set of activities and behaviors toward and during the process of innovation (i.e. an individual's search for new technology or processes and suggestions for new ways of achieving goals). The goal is to benefit work-role performance, the work unit or the organization ([Janssen, 2003](#); [Janssen, 2005](#)). Consequently, the nucleus of IIB is that an individual is able to adopt, implement or make use of a creative idea ([Yuan and Woodman, 2010](#)).

[Scott and Bruce \(1994\)](#) defined IIB as a multistage process, and this subsequently laid the foundation for various literature reviews concerning IIB ([Bos-Nehles et al., 2017](#); [Hurley and Hult, 1998](#); [Lee and Choi, 2003](#); [Shalley and Gilson, 2004](#); [Zhou and George, 2001](#)). IIB has been defined and mainly studied in previous research on the basis of two necessary and interrelated factors for innovation:

- (1) IIB related to cognition or a person's creative thoughts; and
- (2) IIB related to a person's actual act or behavior, adoption or implementation of new and useful ideas.

In this study, the latter is considered when defining IIB, and the study focuses on the action or the behavioral aspect of innovation.

OC is perceived differently between one individual and the next in an organization ([Abbey and Dickson, 1983](#); [Sarros et al., 2008](#)), and as such, one can argue that an employee's perception of their OC plays a role regarding IIB. Although previous studies have shown a positive effect of OC on innovation in the private sector ([Amabile et al., 1996](#); [Patterson et al., 2005](#)), empirical studies on the effects of OC on IIB in the public sector have been infrequent ([Shanker et al., 2017](#)). Following this line of reasoning, the perception of OC could both positively and negatively affect employees' motivation levels and willingness to be innovative in the public sector. This entails individual employees going beyond their prescribed role expectations ([Sanders et al., 2010](#)), with previous research indicating that OC is related to an employee's IIB in the private sector ([Sarros et al., 2008](#); [Scott and Bruce, 1994](#)). Therefore, based on previous findings, it is assumed that OC is positively related to IIB in the public sector. For this reason, the following hypothesis is proposed:

H1. OC is positively related to IIB.

Individual creativity

For organizations to benefit fully from their employees' creative potential, it is essential to understand the drivers of employees' IC. Rego *et al.* (2012) note that IC "is a function of individual and social/contextual factors" (p. 429), and the most relevant contextual factor of IC is OC. OC refers to "behaviors, attitudes and feelings" that an individual employee finds at their workplace (Ekvall and Ryhammar, 1999, p. 303). Previous studies have focused on identifying how OC influences specific areas of creativity (Büschgens *et al.*, 2013; Li *et al.*, 2018; McLean, 2005). The characteristics and definition of IC follow in the next section.

Amabile *et al.* (1996) studied the role of work environment in creativity and argued that "social environment can influence both the level and the frequency of creative behavior" (p. 1155). Schneider *et al.* (2013) recently noted that OC should entail shared perceptions behind all that affects employees at work. In other words, Schneider *et al.* (2013) suggested that climate is behaviorally oriented. Patterson *et al.* (2005) supported this notion by arguing that OC "is more behaviorally oriented in..." (p. 381) creative climates. The review study performed by Hunter *et al.* (2007) revealed that OC had a positive influence on individual employees' creativity. Hunter *et al.* (2007) also termed OC as "localized phenomena."

While assessing creative environments within organizations, Mathisen and Einarsen (2004) found that OC could predict employee IC, thereby revealing that perceptions of OC could surface anytime. Hence, in line with Amabile *et al.* (1996), this paper focuses on "individuals' perceptions and the influence of those perceptions on the creativity of their work" (p. 1157). Studies that have measured the relationship between OC and IC have found that OC influences creativity and the creative behavior in the private sector (i.e. Amabile *et al.*, 1996; Ekvall and Ryhammar, 1999; Hunter *et al.*, 2007). In addition, Shanker *et al.* (2017) have noted that "where failure is tolerated and fear of submitting an absurd idea does not exist, creativity is encouraged" (p. 69). Therefore, it is believed that IC is first enabled when the production of new ideas occurs, and second, when the environment is suitable for implementing creative ideas (Sarros *et al.*, 2008; Yuan and Woodman, 2010). Thus, this paper assumes the same occurs in the public sector. On the basis of previous findings and the discussion provided above, the study proposes the following hypothesis:

H2. OC is positively related to IC.

Mediating role of individual creativity

Creativity is a field that has been highly studied because of its increasing importance in the workplace (Amabile *et al.*, 1996; Amabile *et al.*, 2005; Anderson *et al.*, 2014; Ekvall and Ryhammar, 1999; Zhou and Shalley, 2003). According to Figure 1, the relationship between OC and IIB can be influenced by other factors. Therefore, the study proposes that IC partially explains the effects of OC on IIB (Sarros *et al.*, 2008). To the best of the authors' knowledge, this is the first study to examine the mediating role of IC on IIB.

Creativity has been understood as the production of new and valuable ideas (Amabile, 1988). Drawing on Amabile *et al.* (1996) and Zhou and George (2001), this study defines IC as the individual's production of novel ideas that are useful and appropriate to any given situation. In other words, IC is the tendency to generate or recognize ideas, alternatives or possibilities that may be useful in solving problems.

Amabile *et al.* (2005) differentiated creativity from innovation, arguing that the production of new and valuable ideas is creativity and that the successful implementation of

the creative ideas within an organization is innovation (Isaksen and Akkermans, 2011; Isaksen and Treffinger, 2004; Shalley and Gilson, 2004). Moreover, Yuan and Woodman (2010) argued that the generation of creative ideas is only a component of IIB; accordingly, it is assumed that only with the implementation of new ideas can one achieve a successful innovation (Isaksen and Tidd, 2007). For this reason, creativity would have to precede innovation (Isaksen and Akkermans, 2011; Mathisen and Einarsen, 2004). Amabile *et al.* (1996) believe that “all innovation begins with creative ideas” (p. 1154), and it is considered that while creativity can proceed without innovation, successful innovation is more likely when it begins with creativity (Isaksen and Tidd, 2007). It is complex to proceed with innovation without creativity (Mathisen and Einarsen, 2004). Yuan and Woodman (2010, p. 324) argued that “creative behavior concerns new idea generation, whereas innovative behavior includes both the generation and implementation of new ideas,” although both of them are necessary to achieve positive IIB at work (Hunter *et al.*, 2007).

Amabile *et al.* (1996) posit that creativity is the root of innovation because it can influence and enhance an individual’s perception of their OC, which in turn can influence the level of IIB displayed (Scott and Bruce, 1994). The overall performance of an organization is believed to correlate to organizational innovation and creativity (Isaksen and Akkermans, 2011; Sanders *et al.*, 2010). Drawing on this seemingly positive correlation between IC and IIB in the private sector (Amabile *et al.*, 1996; Shalley and Gilson, 2004), this study proposes that an OC that supports creativity can positively influence IIB (Hunter *et al.*, 2007; Scott and Bruce, 1994). Following this reasoning, it can be assumed that IC partially explains the effects of OC on IIB in the public sector. Thus, the following hypotheses are proposed:

H3. IC is positively related to IIB.

H4. IC mediates the relationship between OC and IIB.

Methodology

In their recent review, De Vries *et al.* (2016) called for more survey methods in the research area of innovation in the public sector. As an answer to that call, this paper empirically and quantitatively examines the role of OC in employees’ creative performance in the public sector through survey data.

Participants and procedure

Data for this study were collected from one of the largest government-owned transportation organizations in Norway, where innovation and innovative work are centered. The organization offers transportation services to the public and has a geographical coverage throughout Norway. The organization primarily deals with transporting passengers and goods, and is today one of the largest ground transportation companies in Norway. The employees consist of a mix of individuals who often have work tasks that are monotonous, semi-autonomous and self-directed. The participants were from diverse functional backgrounds, including customer services, operations, marketing, human resources and finance, with offices and branches across Norway. Consequently, the employees in the public sector organization chosen for this study provided a suitable context for examining the role of OC in employees’ creative performance. OC was defined as an individual’s cognitive representation of an employee’s organizational setting (Scott and Bruce, 1994). All of the organizational members at the public transportation company were, therefore, able to interpret their organizational setting.

The collection of data was accomplished through an online questionnaire distributed by official e-mails to 256 employees in the spring of 2016. Because the study mainly focused on

the public sector, the population size was restricted to one public organization through convenience sampling. Employees with management or leadership positions were excluded because the study focused on those employees with no managerial positions. Prior to participation, the study was reported to the NSD[1] because voluntary participation was guaranteed and anonymity was assured.

In total, responses from 96 employees in five different departments were obtained, representing an overall response rate of 37.5%. Previous research on fostering IIB by [Xerri and Brunetto \(2013\)](#) gathered data from participants in both the public and private sectors, and had a response rate of 21%. As such, the 37.5% response rate in this study is considered adequate in this current cross-sectional study. Of the 96 employees, 56.3% were female, the average age was 41–50 years and 79% worked full-time. Further participant profile details are provided in [Table 1](#).

Measures

In assessing the role of OC in employees' creative performance, the study relied on employees' cognitive representations and psychological interpretations of their organizational setting ([Abbey and Dickson, 1983](#); [Scott and Bruce, 1994](#)). The questionnaire

Section	Frequency	(%)
<i>Gender</i>		
Male	54	56.25
Female	42	43.75
<i>Age</i>		
21–30	23	23.96
31–40	19	19.79
41–50	31	32.29
51–60	21	21.88
61+	2	2.08
<i>Department</i>		
Sales	65	67.71
IT	12	12.50
Market	9	9.38
HR	3	3.13
Finance	7	7.29
<i>Education level</i>		
Primary school	1	1.04
High school	27	28.13
Certificate of apprenticeship	10	10.42
Bachelor's/Master's	58	60.42
<i>Employment type</i>		
Full-time	77	80.21
Part-time	19	19.79
<i>Tenure</i>		
Under a year	10	10.42
1–5 year(s)	29	30.21
6–10 years	15	15.63
11–15 years	14	14.58
16–20 years	11	11.46
20+	17	17.71

Table 1.
Respondents' sample
characteristics
(*n* = 96)

consisted of three main sections that enveloped the three constructs in the conceptual model in [Figure 1](#). The questionnaire was structured, using statements that the participants rated using a seven-point Likert scale ranging from 1 = “strongly disagree” to 7 = “strongly agree”. OC was measured by three subcategories adopted from [Scott and Bruce \(1994\)](#): empowering leadership, work group cohesiveness and individual learning orientation. Items for OC were adopted from [Amabile et al. \(1996\)](#), [Amundsen and Martinsen \(2014\)](#), [Scott and Bruce \(1994\)](#) and [Sujan et al. \(1994\)](#). An example item is “Around here, it is allowed for employees to try and solve the same problem in different ways.” The eight items used to measure OC were found to be consistent, with an overall Cronbach’s alpha value of 0.86.

In this study, creative performance was viewed as an umbrella concept, consisting of two core factors, IC and IIB. The four items used to measure IC were inspired by and modified from [Zhou and George \(2001\)](#). An example item is, “I often have new ideas to accomplish my work tasks.” The scale was found to be reliable with a Cronbach’s alpha value of 0.84. IIB was measured using five items inspired by [Scott and Bruce \(1994\)](#) (e.g. “I promote my ideas so that others can use them in their work tasks”). The Cronbach’s alpha for the five items used for IIB was 0.85, demonstrating a reliable scale.

Control variables

According to [Bos-Nehles and Veenendaal \(2017\)](#), control variables such as age, tenure and education can potentially influence IIB because “these characteristics may be reflected in different characteristics of organizations” (p. 11). Consequently, the study controlled for several semi-demographic characteristics: age, gender, education level, tenure, job classification and the type of employment (part-time or full-time). No significant differences were found for the semi-demographic variables, so the control variables were excluded from further analysis.

Data analysis and results

Partial least-square structural equation modeling (PLS-SEM), with Stata version 15.1 is an appropriate tool for small sample data and was applied to analyze the reliability and validity of the reflective measurement model and to assess the structural model ([Hair et al., 2016](#)).

As a first step, a confirmatory factor analysis (CFA) on the reflective measurement model of the study was performed ([Mehmetoglu and Jakobsen, 2017](#)). As seen in [Table 2](#), the results of the CFA demonstrated satisfactory properties for all variables. The composite reliability for all factors was above the suggested value of 0.6 ([Bagozzi and Yi, 2012](#)), thereby indicating good internal consistency in the constructs of this study (OC, IC and IIB). According to [Hair et al. \(2011\)](#), the average variance extracted (AVE) value should not show values that are lower than 0.5. All the variables in this study showed an AVE value higher than 0.5, indicating a satisfactory degree of convergent validity. In addition, the AVE for each latent variable showed higher values than the squared interfactor correlation between OC, IC and IIB (see [Table 3](#)), indicating discriminant validity.

As a second step, several tests were completed, as suggested by [Hair et al. \(2019\)](#), to help evaluate the structural model of the study. The results from the variance inflation factor test showed that all the variables in this study were found to be below the suggested level of 3.0, indicating no problems with multicollinearity. Because the conceptual model of the study consisted of reflective latent indicators, the extent to which each construct was “empirically distinct from” other constructs was also tested ([Hair et al., 2016](#), p. 112). Consequently, based on the bootstrap method, discriminant validity was verified. All of the indicators’ loadings on their associated constructs (OC, IC and IIB) were higher than the cross-loadings on other constructs. For example, assessment of the internal consistency of the conceptual model, in

Constructs	Indicators	CR			
		Loadings (DG)	AVE	α	
Individual innovative behavior (IIB)	I try out new technology, processes and techniques to complete my work	0.739	0.896	0.634	0.85
	I promote my ideas so that others might use them in their work	0.800			
	I investigate and find ways to implement new ideas	0.885			
	I develop plans and schedules to realize my ideas	0.699			
	I try out new ideas in my work	0.842			
Individual creativity (IC)	I exhibit creativity at work when given the opportunity to	0.750	0.891	0.667	0.84
	I often have new ideas to accomplish my work task	0.867			
	I often come up with creative solutions to problems	0.828			
	I generally have many creative ideas	0.816			
Organizational climate (OC)			0.892	0.509	0.86
	My leader assigns responsibility	0.720			
	My leader encourages me to take initiative	0.792			
	My leader listens to me	0.794			
	It is permitted for employees to solve the same problem in different ways	0.594			
	There is a high "ceiling" for making mistakes among colleagues	0.708			
	I learn new things in my work	0.685			
	It is worth spending a great deal of time learning new ways to accomplish my work	0.702			
I acquire new knowledge when it is necessary	0.694				

Table 2.
Measurement model
results, CFA

Notes: CR(DG): composite reliability or Dillon–Goldstein’s rho; AVE: average variance extracted; α : Cronbach’s alpha; CFA: confirmatory factor analysis. All of the loadings are statistically significant

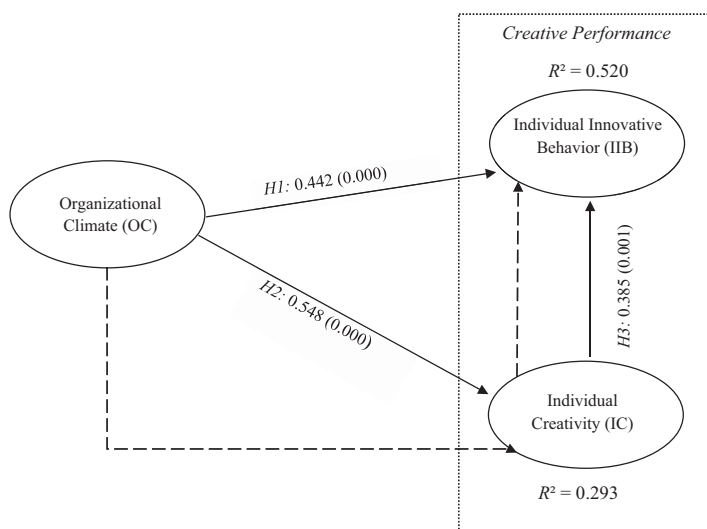
Table 3.
Discriminant
validity – squared
interfactor
correlation vs AVE

	IIB	IC	OC
IIB	1.000	0.393	0.426
IC	0.393	1.000	0.300
OC	0.426	0.300	1.000
AVE	0.634	0.667	0.509

Notes: AVE: average variance extracted; IIB: individual innovative behavior; IC: individual creativity; OC: organizational climate

accordance with the guidelines of Hair *et al.* (2019), showed that all of the indicator loadings were within the accepted range of 0.70–0.90, while the cross-loadings were found outside of the range. To evaluate the quality of the study’s hypothesized model further (Figure 2), the bootstrapping method was used to obtain path coefficient (standardized) and coefficient of determination (R^2) (Hair *et al.*, 2019; Venturini and Mehmetoglu, 2017).

The results from the PLS-SEM analysis are presented in Figure 2. OC was found to have a positive and significant relationship with the two creative performance variables. As hypothesized, OC was found to be positively related to IIB ($\beta = 0.442$). Figure 2 also shows that the relationship between OC and IC was positive and significant ($\beta = 0.548$), supporting $H2$. $H3$ was also supported because the relationship between IC and IIB was



Notes: Standardized path coefficients (Bootstrap), with p-values in parentheses ($p < 0.01$). R^2 is the amount of explained variance of endogenous latent variables. $-\rightarrow$; $H4$: Mediation analysis: $\beta = 0.211$ (0.000)

Figure 2.
Structural model results

positive and significant ($\beta = 0.385, p < 0.001$). OC and IC together explained 52% (R^2) of the variance of IIB, showing a substantial result. Moreover, OC explained 29% (R^2) of the variance of IC.

To test the mediating effect of IC ($H4$), the study applied the bootstrap method suggested by Venturini and Mehmetoglu (2017), by first estimating the indirect effects and then testing the statistical significance (Hair et al., 2016). The results showed that the mediating effect of IC on the relationship between OC and IIB was significant ($\beta = 0.211$), supporting the $H4$.

Discussion

Theoretical implications

The purpose of this study was to examine the role of OC in employees' creative performance in a public sector organization. More precisely, this study explored the effects of OC on IC and IIB, the effect of IC on IIB and examined the mediating role of IC. This study helps address the knowledge gap mentioned by Anderson et al. (2014), Bos-Nehles and Veenendaal (2017) and Shanker et al. (2017), who all noted a lack of research on the role of OC in employees' creative performance in the public sector. Furthermore, this paper contributes to the literature that emphasizes public sector organizations (Miao et al., 2018) in the field of employee creative performance. In addition, the study answers the call for a more quantitative approach in the public sector (De Vries et al., 2016), and for furthering the current understanding of the innovative behaviors of employees employed in the public sector (Orcutt and AlKadri, 2009).

The results show that OC has a significant and positive relationship with employees' creative performance. This study supports earlier research, which suggests that to sustain or increase an employee's creative performance, one needs an OC conducive to innovation (Bos-Nehles and Veenendaal, 2017; Sarros et al., 2008). Most of the studies that have

examined the relationship between OC and creative performance have focused on employees in the private sector (Imran *et al.*, 2010). Although the findings of this study do not contradict previous findings, they highlight OC as an important variable for observing the influence public organizations have on employees' creative performance (Sarros *et al.*, 2008).

As previously mentioned, this study divided the creative performance variable into two entities, IIB and IC. This enabled further exploration of the role of OC on IIB and IC. The results showed that the employees' representation of their organizational setting had a positive influence on IIB in the public sector. Thus, in line with Yuan and Woodman (2010), when an environment is suitable for innovation, it is easier to sustain and engage a positive IIB among employees, making it possible for employees to adopt and implement ideas in their work in the public sector. The results of the study further showed that whether OC is found in the private or public sector, it influences how an employee in a given organization can channel and direct both their attention and activities toward innovation (Amabile *et al.*, 1996; Anderson *et al.*, 2014; Bos-Nehles and Veenendaal, 2017).

H2 suggested that the perceived OC of an employee would have a positive impact on IC. The study is unique in revealing the relationship between OC and IC from the perspective of employees in the public sector, and arguing that one can nurture individual creativity through OC.

The study also hypothesized and established that employees who perceived their level of creativity to be good or above average were more likely to attain positive IIB in the public sector. In the footsteps of Amabile (1988), this study differentiated IC from IIB. To the best of the authors' knowledge, this is the first study that has studied the influence of IC on IIB in the public sector. Although previous studies have had a tendency to define IC and IIB interchangeably (Scott and Bruce, 1994), IC is a component of innovation (Yuan and Woodman, 2010). Therefore, successful innovation will only occur once new ideas are implemented (Isaksen and Tidd, 2007). Isaksen and Akkermans (2011) considered that while organizational performance hinges on various pillars, IC is the most prominent. Here, we contribute to the knowledge by empirically studying IC and IIB as two separate constructs. For this reason, the direct effect of IC on IIB, as well as the mediating role of IC on OC and IIB, is a significant contribution.

Practical implications

Prior to increasing employees' creative performance, organizations need to acquire and sustain a climate conducive to innovation. Previous research shows that the level of an employee's creative performance often depends on the organization's climate. The present study focused on uncovering the role of OC on an employee's creative performance. Thus, this study contributes to organizations within the public sector. In particular, leaders and managers who wish to encourage, motivate and invest in their employees' creative performance should pay more attention to their organization's climate (Imran *et al.*, 2010).

OC is composed of three underlying constructs: empowering leadership, work group cohesiveness and individual learning orientation. This study shows that there is a positive relationship between OC and IIB in the public sector. Previous research has observed OC to be crucial to an individual's capacity to innovate in the private sector (Sarros *et al.*, 2008). Managers in the public sector are encouraged to seek improvements, as well as creating or sustaining a climate supportive of innovation (Orcutt and AlKadri, 2009). OC also represents an individual's cognitive and psychological interpretations of their organizational setting (Sarros *et al.*, 2008; Scott and Bruce, 1994), and is a central factor in how an individual chooses to approach innovation at work. Therefore, it is crucial that managers in the public sector recognize that the climate, in general, differs greatly from one employee to another. For instance, in a study by Orcutt and AlKadri (2009) on barriers to and enablers of innovation, they found that 63% of the

respondents considered themselves champions of innovation. As such, what is valuable to one individual might not be the same for another. Leaders in the public sector should be eager to create a climate conducive to innovation, to influence or change employees' cognitive representations and psychological interpretations of their organizational setting because it results in an increase in employees' creative performance.

The results also demonstrate that a desirable OC has an effect on an employee's IC. The implications of the relationship between OC and IC are that managers need to provide a learning arena so that teams can function well together, and encourage employees themselves to lead. This would motivate IC and sustain positive creative behavior among their employees. In their review of climate and creativity, [Hunter et al. \(2007\)](#) suggested that some predictors that are effective for creative performance are found in the OC. In addition, the recent study by [Martinaityte et al. \(2019\)](#) emphasizes the importance of fostering employees' creative performance. For instance, it not only affects high-performance work systems but can also positively influence customer satisfaction. While [Martinaityte et al. \(2019\)](#) focused on retail banks and cosmetics in the private sector, this study has focused on the public sector. It is evident that the way an organization's climate is constructed contributes a great deal to IC in the public sector.

This study has viewed IC as the individual's production of novel and useful ideas ([Amabile et al., 1996](#); [Zhou and George, 2001](#)). The direct effect of IC on IIB and the mediating role of IC on OC and IIB were examined. The results suggest that successful innovation in the public sector will most promptly occur when new and useful ideas are implemented ([Isaksen and Tidd, 2007](#)). However, a study by [Malik et al. \(2015\)](#) argued for the importance of differentiating between employees at work when it came to their level of creativity because their motivation to introduce and implement new ideas at work was dependent on individual differences. While the study by [Malik et al. \(2015\)](#) focused on private universities, this study offers fresh insights on creative performance in the public sector. It is therefore important that organizations in this sector work hard to create and sustain a climate that welcomes IC, and where individuals are free to use their creative skills in solving a task. Ultimately, this will contribute positively to increase IIB ([Shalley and Gilson, 2004](#)). Leaders in public sector organizations are encouraged to search for and retain creative individuals while also helping to create and sustain a climate favorable to innovation. [Fernandez and Moldogaziev \(2012\)](#) examined the role of employee empowerment on innovative behavior in the public sector and found that empowerment positively increases the encouragement to innovate. Although their study focused on US federal government employees, the current study offers new insights on employees in the public sector; managers in the public sector can motivate, support and encourage new ideas, better ways or new ways of solving problems at work.

Limitations and future research

This study contributed by exploring public sector employees' perceptions of their OC. The study looked at one public sector organization at one given time, so the insights provided may offer limited generalizability to other public sector organizations. Although the study answered the call for more cross-sectoral studies in public sector innovation ([De Vries et al., 2016](#)), a limitation is its relatively small sample size, and as such, the results should be interpreted with caution. Therefore, it is suggested that future studies should broaden the present findings, and explore whether the same is true in other public organizations.

To the best of the authors' knowledge, this is the first empirical study to examine individuals' perceptions about their OC in a public sector. It is notable that in this study, OC was significant to employees' creative performance. Future studies should include other

variables for studying IIB, such as the consequences of IIB on an employee's commitment to the organization, or look into other dimensions, such as organizational culture.

In this study, it was assumed that OC comprised three underlying constructs: empowering leadership, work group cohesiveness and individual learning orientation. Although the current study found OC to be a positive influence on employees' creative performance, future research should exploit other factors that can alter employees' IC and IIB, such as the value of IIB in employer attractiveness, or the relationship between psychological capital and IIB.

Conclusion

To conclude, the aim of this study was to examine the role of OC for employees' creative performance using the public sector as an empirical context. The study therefore proposed and tested the direct and indirect effects of OC and IC on IIB. The findings revealed that an OC conducive to innovation provides nutriment to motivate employees' IC, which in turn influences the employees' level of IIB. IC also has a positive influence on IIB. This study, therefore, contributes to the literature by addressing the knowledge gap on employees' creative performance in three ways: calling for more research on IIB in the public sector; empirically examining employees' perceptions about their OC and the role of individual creative performance; and adding to the public sector literature in the field of creative performance. We hope that the findings in this study, as well as the abovementioned directions for future research, will inspire further investments in research efforts in the role of IIB in public sector organizations. Consequently, it might extend the existing knowledge and understanding of how IIB can be fostered to increase an organization's competitive advantage or capability in other areas within the public sector. This study highlights that although there is growing literature on OC and IIB in the public sector, much remains to be studied.

Note

1. Norwegian Center for Research Data (NSD).

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