



# Innovative behavior in individuals and work groups: Influence of collective psychological capital, strategic directionality and the ability to reach agreements

*Comportamiento innovador en individuos y grupos de trabajo: influencia del capital psicológico colectivo, la direccionalidad estratégica y la facilidad para alcanzar acuerdos*

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## Abstract

The aim of this study is to examine the mediating role of Psychological Capital and Agreement between strategic directionality and innovative behavior of both individual and work team members. Data from 231 public sector organizations' employees in Costa Rica was collected. PLS-SEM technique was used, by Smart PLS 3.0 software, to estimate the parameters of two measurement models and two structural models proposed in this research. The study findings indicate that work group's perception of strategic directionality has a direct effect on work group innovative behavior, and revealed indirect effects mediated by collective Psychological Capital and Agreement. On the other hand, the empirical results provide support for the hypothesis that collective psychological capital increases the innovative behavior of individuals. The proposed models have not been previously tested in the literature, therefore the present study provides new evidence on how to enhance innovative behavior in work groups and individuals. As findings were obtained in Government and public sector organizations the study

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is an empirical contribution in the understanding of innovative and entrepreneurial behavior of public sector's employees considering the scarce literature on this topic.

*JEL code:* M12, M19, O39

*Keywords:* Innovative behavior; Work groups; Individual; Psychological capital; Strategic directionality; Agreement

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## Resumen

El presente estudio tiene como objetivo analizar el efecto mediador del capital psicológico y del acuerdo de grupo en la relación entre la direccionalidad estratégica con el comportamiento innovador tanto del individuo como del grupo de trabajo. Para ello, se aplicó un cuestionario a 231 sujetos que laboran en organizaciones estatales en Costa Rica. Se procesan los datos ejecutando dos modelos de medida y dos modelos estructurales mediante Smart-PLS 3.0. Los resultados obtenidos sugieren que la direccionalidad estratégica del grupo influye de manera directa sobre comportamiento innovador del grupo y de manera indirecta a través del capital psicológico colectivo y la facilidad de alcanzar acuerdos. Por otra parte, el capital psicológico colectivo influye de manera directa el comportamiento innovador del individuo. Los modelos analizados no han sido valorados previamente en la literatura, por lo cual, el presente estudio aporta nueva evidencia relativa a cómo potenciar el comportamiento innovador en grupos e individuos. Adicionalmente, los hallazgos han sido obtenidos de sujetos que laboran en instituciones públicas o de gobierno, lo cual resulta relevante considerando la escasa literatura y aporte empírico relacionado con el comportamiento innovador y emprendedor del empleado público.

*Código JEL:* M12, M19, O39

*Palabras clave:* Comportamiento innovador; Grupos de trabajo; Individuo; Capital psicológico; Dirección estratégica; Acuerdos

## Introduction

Innovation is recognized as a significant element in maintaining competitiveness and improving the economic performance of companies (Dereli, 2015). For its part, the role played by human resources as a source of competitive advantage stands out, especially when treated as a capital resource (Luthans & Youseef, 2004). It has been said that the innovative behavior of employees in companies—in the development, adoption, and implementation of new ideas for products and working methods—is considered an asset that contributes to the success of an organization in dynamic environments (Yuan & Woodman, 2010).

Ideas and people are part of the essential elements of the innovative process; it is the latter who develop the ideas, manage them, react to them, and modify them (Van de Ven, 1986; p. 592). Both the creative stage—which is nourished by the generation of ideas—and the one that puts them into practice in new or improved products, services, or processes, are considered interrelated phases. These phases are the result of efforts to achieve the development and introduction of new and better ways of doing things at work (Anderson, Potočnik, & Zhou, 2014).

The literature has studied a type of behavior that occurs when an individual tries to do something different, known as innovative behavior (Van Rijnsouwer, Meeus & Donders, 2012). This behavior includes all those intentional efforts that aim to provide new results (Janssen, 2000). Thus, it is possible to understand this behavior as the sum of physical and cognitive activities carried out by employees in their work context, in isolation or a social environment, to fulfill a set of necessary tasks that allow the development of innovation (Messman & Mulder, 2012).

Innovative behavior has been studied from the perspective of the individual (Krause, 2004; Janssen, 2000; Scott & Bruce, 1994) as well as in working groups (Messman & Mulder, 2012; Post, 2012). There is empirical evidence that has focused on identifying factors that promote this type of behavior (Scott, & Bruce, 1994; Yuan & Woodman, 2010; Romero & Martinez-Roman, 2012). More than a decade ago, a new trend emerged called positive organizational psychology (Luthans & Youssef, 2004), which has been analyzing the effect of motivational dispositions of individuals (psychological capital; Luthans, Avolio, Avey, & Norman, 2007) in different areas of their performance (e.g., worker productivity, Luthans, Avolio, Walumbwa, & Li, 2005; creativity, Sweetman, Luthans, Avey, & Luthans, 2011; innovative behavior, Wojtczuk-Turek & Turek, 2015). However, because it is a relatively new construct, there is little research into the connection between psychological capital and innovative behavior (Schuckert, Kim, Paek, & Lee, 2018).

Psychological capital is considered an intangible and valuable asset that contributes to the competitiveness of a company (Luthans & Youssef, 2004). It is claimed that intangible assets have become vital resources for the creation of value in a company; especially, if they align with the strategy and the objectives of the internal processes (Norton & Kaplan, 2004). So far, in the literature review, it has not been possible to identify empirical studies that measure the alignment of objectives in individuals and working groups as a background to psychological capital. What has indeed been demonstrated is the direct effect that the strategic clarity of teams has on innovative behavior (Högl & Parboteeah, 2003; Hülsheger Anderson & Salgado, 2009; Caldwell & O'Reilly III, 2003; Janssen, Van de Vliert & West, 2004).

There are dimensions of psychological capital (such as hope and self-efficacy) linked to motivations for goals and objectives (Luthans, Youssef, & Avolio, 2007). Consequently,

exploring the possible mediating effect of psychological capital between strategic directionality and innovative behavior is advisable to generate a contribution to knowledge in this new current. The above is even more relevant since, although there are studies that use psychological capital as a mediating variable between leadership variables and innovative behavior (Schuckert *et al.*, 2018) and between variables related to resource systems and innovative behavior (Wojtczuk-Turek & Turek, 2015), this is not the case in the path proposed in this study. It is just as important to assess the effect of the possibility of developing agreements to create a shared vision (Revilla & Rodríguez, 2011) and its subsequent effect on innovative behavior in individuals and working groups.

For the above reasons, this study aims to analyze, in the dynamics of working groups, the mediating effect of psychological capital and group agreement on the relationship between strategic directionality and innovative behavior of both the individual and the working group. To this end, the study follows a quantitative research design, in which 231 officials from public institutions in Costa Rica were surveyed. The aim was to contrast a model that postulates that strategic directionality directly influences the innovative behavior of the individual and the working group, and also that the psychological capital and the development of agreements mediate this relationship.

This study has two contributions. Firstly, this network of relationships has not been previously evaluated in the literature, so it provides new evidence regarding the effect of motivational inducers on innovative behavior in individuals and working groups. Secondly, the analysis utilizes data from collaborators from the public sector, which is relevant considering the scarce literature and empirical contribution related to the innovative and entrepreneurial behavior of the public employee (Shoham, Vigoda-Gadot, Ruvio, & Schwabsky, 2012), as well as of possible inducers and inhibitors of innovation in this sector (Potts & Kastle, 2010).

The article is structured as follows. The next section provides background information and research hypotheses. Subsequently, the article presents the sample from which the data were obtained, the reflective latent variables with their respective measurement scales, and the procedure used. The following section comprises the results of the study, and finally, the results are discussed, as well as the limitations and future lines of research.

## Background and Research Hypotheses

### *Strategic management and innovative behavior*

Innovative behavior is a form of behavior that occurs when an individual tries something new (Van Rijnsoever *et al.*, 2012) or makes an effort to provide new results (Janssen, 2000). For their part, Kleysen and Street (2001, p. 285) define it as all those actions undertaken by individuals oriented toward the generation, introduction, or application of a novelty that is useful at any level of the organization. This study works with this last definition.

At the strategic level, the development and implementation of a set of functional objectives and policies, internally coherent and collectively defining their position in the market, has been recognized as one of the conditions that would determine a superior or sustainable performance position (Porter, 1991). Likewise, a good understanding of a global strategy, throughout the organization, would allow for the filtering of various actions and for individuals to design their ways of contributing to the strategy (Porter, 1991).

Since the theory of *goal setting*, it has been postulated that the goal affects action (Locke, 1996; Locke & Latham, 2002). Throughout more than five decades of experimental and field studies, the literature on this subject has provided evidence that recognizes the link between goal setting and performance and, therefore, the practical value of this theoretical perspective in the organizational field (Latham and Yukl, 1975; O'Leary-Kelly, Martocchio, & Frink, 1994; Locke & Latham, 2002).

According to this theory, directing attention to relevant activities, the dynamizing function that allows effort to be mobilized, the possibility of increasing persistence and motivating the development of the strategy are the primary mechanisms by which goals affect performance (Locke, Shaw, Saari, & Latham, 1981; Locke & Latham, 2002). Finally, previous studies have found that the difficulty of the goal and its degree of specificity are directly related to performance. In the former, the assumption is that the individual has the skills and knowledge to undertake them. In the latter, the reduction of ambiguity concerning what he or she expects to obtain allows for a reduction in the variation in performance (Locke & Latham, 2002).

In line with Anderson and West (1996), the degree to which the goals and vision of the team are clearly defined, shared, considered achievable, and valued allows for target orientation. Pearce and Ensley (2004) define shared vision as a common mental model relating to the future state of the team or its tasks, which prepares the basis for functioning within the team. Taking as a reference the considerations of these authors and the theoretical perspective of goal setting, this study conceives strategic directionality as the clarity of purpose that gives meaning to the individual and to the working groups of what is to be achieved, with clearly defined vision, goals, strategy, and planning to achieve the goal.

Empirical evidence supports the link between strategic directionality and innovative behavior. In the meta-analysis of these behaviors, Hülsheger *et al.* (2009) highlight vision as one of the team processes that lead, substantially and significantly, to innovation. According to the longitudinal study by Pearce and Ensley (2004), the central role played by shared vision in innovation processes stands out. Furthermore, making this vision clear is central to intensifying innovative efforts in teams. Additionally, Pearce and Ensley found a recursive effect in the sense that the innovative results reinforced, in turn, the vision of the group (Pearce & Ensley, 2004, p. 274). The study by Cardinal (2001) of teams in the pharmaceutical industry demonstrated that there is a direct and positive effect of goal specification not only on incremental innovations but also on the development of new products. The former is understood as the point at which goals are explicit, clearly defined, and provide unambiguous criteria for choosing between alternatives. Anderson and West (1998) indicated that it is more propitious to developing new working methods appropriate to the goals in working groups with clearly defined goals because their efforts are focused and directed.

In line with the above, Högl and Parboteeah (2003) demonstrated that goal setting correlated positively with measures of effectiveness in software development teams. They suggest that this result is because these types of measures are more realistic than efficiency measures in innovative projects. Likewise, the literature has revealed that those collaborators who have clarity concerning expectations are more likely to direct their efforts toward the fulfillment of objectives or expected standards for the work. This clarity in expectations has been recognized not only as a characteristic in successful teams (Franz, 2004) but also as an inducer of innovation implementation (Holleman, Poot, Mintjes-de Groot, & van Achterbergü, 2009). For their part, Gilson and Süalley (2004) found that teams with higher levels of participation in creative approaches to problem-solving had a higher degree of commitment and a sense of a shared goal. In addition to the above studies, other research has pointed out the relevance of clear and shared goals for the development of innovation (Caldwell & O'Reilly III, 2003; Janssen *et al.*, 2004), and that of strategy and planning oriented toward the achievement of these goals (Koch & Hauknes, 2005). All the above makes it possible to postulate the following hypotheses:

H1a: Strategic directionality has a positive effect on the innovative behavior of the group.

H1b: Strategic directionality has a positive effect on the innovative behavior of the individual.

### *Strategic management and psychological capital*

A new movement, called positive psychology, has focused on the productive and valuable aspects of the lives of people, as well as on realizing their human potential. More than a decade

and a half ago, within this movement, a new current of thought called positive organizational behavior arose (Luthans & Youssef, 2004). This postulates that the potential of human resources can be oriented and that there are measurable, developable, and manageable psychological capacities to improve performance in the workplace. As a result, there is a new construct that represents motivational dispositions of individuals, which emanate from constructs of positive psychology, such as effectiveness, optimism, hope, and resilience (Luthans *et al.*, 2007). This construct is called psychological capital, recognized as a valuable resource for organizations (Luthans & Youssef, 2004).

Luthans, Youssef & Avolio (2007) define the abovementioned construct as a state of positive psychological development of the individual that is characterized by four dimensions or traits, namely: (a) a self-confidence to assume and undertake efforts necessary to successfully undertake demanding tasks; (b) a positive attitude toward success today and in the future; (c) an ability to persevere in goals and, when necessary, confidence in redirecting paths towards goals to succeed; and (d) sufficiency to rise above problems and adversities to achieve success (p. 3). Although this construct has mainly been analyzed at the level of the individual, as a psychological state where positive attitude prevails, it has also been possible to analyze it at the level of working groups (Walumbwa, Luthans, Avey, & Oke, 2011, Luthans *et al.*, 2007).

Although it has been asserted that orientation to goals can improve performance in collaborators and working groups, the literature recognizes that the first one is not necessarily a sufficient condition; therefore, other variables would intervene in this relation (Locke & Latham, 2002; Camelo-Ordaz, Fernández-Alles, & Valle-Cabrera, 2008; Bart, Bontis, & Taggar, 2001; Boswell, 2006). The following are arguments concerning the possible link between strategic direction and dimensions of psychological capital.

Locke and Latham (2002) have put forth studies that demonstrate that the degree of commitment of people to the goal affects the abovementioned relationship. This variable would be positively associated with three drivers: a) the difficulty of the goal, by demanding a greater effort from people; b) the degree of belief that it is possible to achieve the goal; which is in line with studies cited by Pearce and Ensley (2004, p. 262-263) that have demonstrated that understanding and recognizing the objectives positively affects confidence and self-efficacy to achieve the goals; c) the influence of leaders who can communicate and inspire the vision, acting as a support to others. For their part, Luthans, Avey, and Patera (2008) state that clear goals and objectives could reduce negative expectations in collaborators. Similarly, Kirkpatrick and Locke (cited by Levin, 2000, p. 92) have proven that vision has a positive impact on both the attitudes and performance of employees.

In their meta-analysis Gully, Incalcaterra, Joshi, and Beaubien (2002) refer to Guzzo and

Shea, who have configured the construct called *group power*, whose empirical evidence is related to performance. It also refers to the beliefs, generalized, of the potential that the team perceives in all the tasks and contexts (that is to say, “our team will be successful no matter what the task is”). In their study, Pearce and Ensley (2004) demonstrate that the shared vision of the group has a positive impact on group power. Moreover, not only does it corroborate that such vision reinforces the positive beliefs that the members have about their abilities to successfully carry out their tasks, but also that the latter fortifies the shared group vision, recursively. All these factors lead to the following conjectures:

- H2a: Strategic directionality has a positive effect on the psychological capital of the group.  
H2b: Strategic directionality has a positive effect on the psychological capital of the individual.

### *Psychological capital and innovative behavior*

The optimistic dimension of psychological capital can influence the innovative behavior both of groups and of individuals by facilitating openness to change, risk-taking, goal-setting, and target-setting (Green, Medlin, & Whitten, 2004). According to Shani and Divyapriya (2011), a positive mindset is more creative because it generates self-confidence and sees mistakes as a learning opportunity. The findings of Avey, Wernsing, and Luthans (2008) reveal that psychological capital influences the attitudes and behaviors of individuals that drive organizational change, in part because positive practices and emotions may encourage the intention to generate change in the effectiveness of an organization (Cameron, Mora, Leutscher, & Calarco, 2011).

The literature has highlighted, as a characteristic of the individual who contributes to innovation, a certain degree of internal strength that keeps the person going even in situations where challenges are successfully overcome (Parzefall, Seeck, & Leppänen, 2008). This strength is described as a matter of positive tension, perseverance, and a desire to improve. In this sense, it is likely that some people possess a greater drive and need for achievement that will encourage them to remain intrinsically motivated (Parzefall *et al.*, 2008).

Regarding the hopeful trait of psychological capital, studies by Rego, Marques, and Cunha (2012) have found that this ability to target and redirect efforts toward achieving objectives nurtures creativity. On the other hand, concerning the self-efficacy trait, it has been found that collective effectiveness helps group motivation because members rely more on each other to accomplish tasks (Bandura, 1997). When faced with obstacles, teams with a high level of collective effectiveness persist in trying to solve problems (Bandura, 1997).

Among the scarce empirical evidence that has demonstrated the link between psychological capital and innovative behavior, studies by Sweetman *et al.* (2011) and Zubair and Kamal (2015), based on regressions, indicated a positive relationship between psychological capital and the creativity of collaborators. The works of Jafri (2012) and Abbas and Raja (2015) found a significant relationship between psychological capital and innovative behavior in the regression model; however, it explained between 4% and 5% of the variance of the dependent variable. Ratnaningsih, Prasetyo, and Prihatsanti (2016) found a significant correlation ( $r=.519$ ,  $p < .001$ ) between these two variables. Finally, the studies by Wojtczuk-Turek and Turek (2015), as well as Schuckert *et al.* (2018), using structural equation models, have demonstrated a significant effect of psychological capital on innovative behavior ( $\beta=.73$ ,  $p < .01$ ;  $\beta=.275$ ,  $t=4,436$ ,  $p < .001$ , respectively) explaining, therefore, 53% and 7.5% of the variance of innovative behavior, respectively. The above leads to the following hypotheses:

H3a: Psychological capital, at group level, positively influences the innovative behavior of the group.

H3b: Psychological capital, in the individual, positively influences the innovative behavior of the individual.

### *Strategic management and agreement*

From the perspective of strategic human resource management, the moment that employees perceive clarity and consistency in the message of strategic decision-makers and human resource practices, it is more likely that there will be consensus or agreement within the employees in the organization (Bowen & Ostroff, 2004). Consensus can be conceived of as the existence of agreement, among collaborators, in their perspective of the event-effect relationship, regarding the objectives foreseen by the human resource management system (p. 212). In particular, Holland, Gaston, and Gomes (2000) state that one of the key elements for a working group to assume responsibility, collectively, that solves a diverse set of demands is “to be very cohesive with clear goals” (p. 248). Referring to Fey and Denison (2003), and Denison, Janovics, and Young (2006), this study conceptualizes agreement as the ability of leaders and followers to reach agreements (even with different points of view) and to reconcile differences when they occur.

According to the idea proposed by Schneider (1987), goals maintain the interest of people in remaining in an organization and it further postulates that, through these goals, individuals interact. The degree of agreement on goals between individuals and superiors—a perspective called goal congruence—has been proven to be positively related to job satisfaction and organizational commitment (Vancouver, Millsap, & Peters, 1994). Similarly, in the area of small

and medium enterprises, Jing, Avery, and Bergsteiner (2014) have proven that a vision must be communicated and shared among leaders and followers, in order to obtain the benefits of increased performance. The reason for the above is that a shared vision influences attitudes to work, primarily job satisfaction.

In line with the above, Boswell (2006) postulates the importance of *vision alignment* in employees as a factor that affects their attitudes at work and, therefore, their performance. This factor represents the understanding of the collaborator of strategic objectives and, especially, of how to contribute to their achievement. The study proves that this last aspect is perhaps the most important to keep employees attached to the organization since it gives them a greater sense of belonging, consistency in setting of targets, and job satisfaction, more than the simple fact of knowing the strategic objectives.

For its part, the diversity of functions and tasks involved in the work of a team, in the absence of a shared vision among its members, can lead to conflicts and disagreements about the content of the tasks and the actions needed to undertake them (Revilla & Rodriguez, 2011). Sharing common goals and objectives would help to develop a sense of mutual responsibility, which in turn would lead to trust and commitment in the group, thus having a positive effect on its performance (Katzenbach & Smith, 1993). Furthermore, when employees understand what to do and what is expected of them, they experience greater job satisfaction as they acquire a sense of purpose, focus, and direction in their daily activities (Bart *et al.*, 2001). All of the above leads to the following hypotheses:

H4a: The strategic direction positively influences the level of agreement of the group.

H4b: The strategic direction positively influences the level of agreement of the individual.

#### *Agreement and innovative behavior*

Anderson and West (1998) agree that support for innovation can vary between working groups, depending on how it is organized and enacted. These authors believe that organized support—based on policy statements, personnel documents, or word of mouth—is not sufficient in groups; there must also be support through approval for group innovation.

In their literature review Kozlowski and Ilgen (2006) state that there is a link between group cohesion and group performance. Furthermore, this relationship is strengthened as the demands of the workflow of the group increase interdependence and require greater coordination of information and effort. Empirical studies have provided evidence of the contribution of teamwork, communication, and coordination between subjects as a background for triggering creativity (Luke, Verreyne, & Kearins, 2010; Shalley & Gilson, 2004). Other works have emphasized that legitimizing an innovative idea and supporting it in the implementation stage

are necessary to promote innovation (Hogan & Coote, 2014; Jamrog, Vickers & Bear, 2006; Jassawalla & Sashitta, 2002).

The ease of reaching agreements helps to develop a sense of common purpose and shared meaning, driving individuals toward improvement and innovation (Shalley & Gilson, 2004). All of the above leads to the conjecture that the more easily agreements can be reached, the more feasible it is to achieve the involvement and support of different individuals to work collectively, coordinate, and communicate adequately in the process of implementing an innovative idea. Consequently, these are the hypotheses:

H5a: The degree of agreement positively influences the innovative behavior of the group.

H5b: The degree of agreement positively influences the innovative behavior of the individual.

Figure 1 summarizes the two theoretical models proposed to be contrasted empirically in this research.

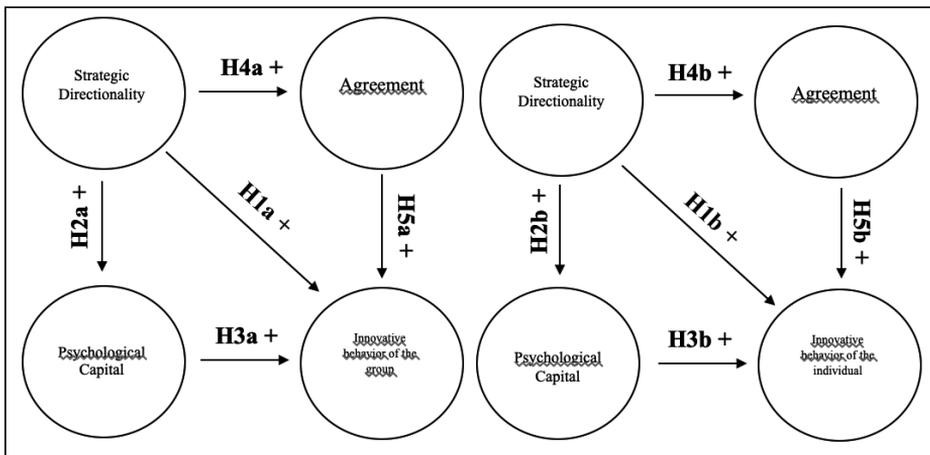


Figure 1. Theoretical inductor models of innovative group and individual behavior

## Methodology

### Sample

The study unit was consisted of public officials who are doing postgraduate work in public universities in Costa Rica on topics related to public management. This unit was selected because it facilitates the placement of public officials for the application of the measurement instrument. In order to obtain the sample, the study used nine Master's degree groups in three

Costa Rican state universities. The groups were visited to administer a questionnaire to the students present, provided that they met the condition of working in a public institution. A total of 231 public officials responded. Table 1 presents the characteristics of the interviewees.

As may be seen in Table 1, just over half of the respondents were women, a third of the respondents hold leadership positions, and most work in the health sector. At the institutional level, most are semi-autonomous, that is, public institutions that have autonomy from the central government for their management; for example Public Universities, Hospitals and other Health Centers, Public Institutions that provide insurance, electricity, water supply services, and Municipalities, among others. On the other hand, a small part of these institutions (20%) are from the Central Government, for example, the Ministry of Public Works, Ministry of Health, and Ministry of the Presidency, among others. It is noteworthy that, at most, 15% of the subjects belonged to the same institution. The average age of the interviewees is 37 years (SD=8.6); the average time spent working in the institution is 11 years, and the average time spent working in their current department is six years.

Table 1

Descriptive statistics of the interviewees, N=231

Categorical variables	Ratio		
<b>Gender</b>			
Female	58.0%	-	-
Male	42.0%	-	-
<b>Has a position of responsibility</b>			
Yes	33.0%	-	-
No	77.0%	-	-
<b>Activity of the institution</b>			
Health	61.0%	-	-
Infrastructure	6.7%	-	-
Education	6.7%	-	-
Other	25.6%	-	-
Quantitative Variables	Mean	Minimum	Maximum
Age	37.4	22.0	70.0
Years in the unit	6.0	0.17	27.2
Years in the institution	10.9	0.42	42.0

### *Definition of the latent variables*

Below is a brief description of how each of the study constructs were measured. Annex A comprises the details of the items used to measure them.

#### *Innovative behavior of the group*

In order to measure this, five items were taken from the scale proposed by De Jong and Den Hartog (2010) (e.g., new or improved work practices are systematically introduced in my department). However, two of them underwent significant changes in the pilot phase as a result of the application of cognitive interviewing (the procedure is explained in the next section). The items were assessed using a 5-point Likert-type response scale, from 1 = not at all frequent to 5 = very frequent.

#### *Innovative behavior of the individual*

Items were taken from the Scott and Bruce (1994) scale (e.g., looks for new working methods or ideas for new services), which are evaluated utilizing a 5-point Likert response scale, where 1 = not at all frequent and 5 = very frequent.

#### *Strategic directionality*

In order to measure this construct, three items were used from Denison *et al.* (2006) (e.g., in my department, we continuously compare our progress with the goals set). However, an additional one was developed by the researchers (My department is characterized by constant planning of the work we do). The four items are evaluated with a 6-point Likert response scale, where 6=very high or full similarity to the unit of work, 5=high, 4=high average, 3=low average, 2=low, 1=very low or no similarity to the unit of work.

#### *Collective psychological capital*

The psychological capital was measured with three items of the scale proposed by Walumbwa *et al.* (2011) (e.g., in my department there is optimism about the results we will obtain in the future with the work we do) and one item of our own that was added to the scale (When we face difficulties inherent to our tasks we are very insistent on carrying out what we propose). The same type of 6-point Likert response scale mentioned in the previous paragraph was used for the assessment.

### *Agreement*

Agreement was measured with two items from Denison *et al.* (2006) (e.g., when there is disagreement we work intensively to find win-win solutions) and another additional item, elaborated by the research team (generally people are willing to give up their particular interest to reach agreements in the group). The same type of 6-point Likert response scale mentioned in the previous paragraph was used for evaluation.

### *Marker variable to measure the risk of common variance bias*

It is noteworthy that the latent dependent variables of the study (innovative behavior of the group and innovative behavior of the individual) when measured with the responses of the same individuals who evaluate the constructs strategic directionality, psychological capital, and agreement, can generate the common variance bias when the relationships between the dependent and independent variables are analyzed. This bias corresponds to the spurious variance attributable to the measurement method rather than the variance attributable to the constructs that the measures represent (Podsakoff, MacKenzie, and Podsakoff, 2012). One way to control the effect of this bias is to incorporate a marker variable (a feature not related to the measures of interest) into the structural model. For this reason, a latent variable measured with three items was incorporated to evaluate the degree of noise in the work-space of the interviewee. These three items were: i) the work environment in my unit has a low level of noise, i) it is uncommon to experience auditory distractions in the work-space of my unit, iii) in my unit, it is easy to concentrate on tasks.

### *Procedures*

In the first phase, the items of the scales indicated in the previous section were translated into Spanish. For this purpose, the double translation technique (back-translation) suggested by Brislin (1986) was used, and in particular, the method followed by Beaton and Guillemin (2000). The data were processed following the format proposed by Vargas-Halabí, Mora-Esquivel, and Siles (2017). The above made it possible to complete the questionnaire, which, in a second phase, was subjected to a pre-test (Colton & Covert, 2007). For this purpose, the Cognitive Interview was used, as it is considered to be one of the essential techniques for identifying and correcting problems in questions in a questionnaire (Beatty & Willis, 2007, p. 287). Six subjects were interviewed. The protocol designed by Smith-Castro and Molina

(2011) and the format proposed in Vargas-Halabí and Mora-Esquivel (2017) were used. The main problems of item comprehension were identified and corrected. Then, data were collected, and the study proceeded to the next phase of data analysis.

In the third phase, the two measurement models and the two structural models proposed in Figure 1 were evaluated. PLS-SEM 3.0 software (Ringle, Wende, & Becker, 2015) was used to process the data, following the two-stage protocol recommended by Hair Jr. Hult, Ringle, and Sarstedt (2017), with suggested acceptable levels of parameters in each one of them. In the first stage, it was necessary to evaluate the two measurement models for each of the reflective latent variables, according to the following procedure: a) verify the threshold of the loads that measure the relationship between reflective latent variables and their indicators (outer loadings), b) assess the internal consistency of the measurement models, using Cronbach's Alpha and Composite Reliability (CR), c) assess the average extracted variance (AVE), to check convergent validity, d) analyze the correlations between cross-loads of latent variables, the Fornell-Larcker criterion, the heterotrait-monotrait (HTMT) of correlations between latent variables and the confidence intervals of the HTMT ratio (by bootstrapping), to obtain evidence of discriminant validity.

Once the reliability and validity of the measurement models had been checked, the predictive capacity of both proposed structural models was evaluated in a second stage using heuristic criteria (Hair Jr. *et al.*, 2017). To this end, the following were verified: a) the absence of critical levels of collinearity between each group of predictor variables according to Tolerance criteria and the Variance Inflation Factor (VIF); b) the statistical significance of the path coefficients of the model; c) the levels of determination coefficients ( $R^2$ ); d) the assessment of the effect size ( $f^2$ ) to measure the impact on the change in  $R^2$  in an endogenous latent variable by omitting exogenous constructs. Finally, a significance test of the mediation effects proposed in the structural models was carried out using the bootstrapping alternative, with the aid of the Smart-PLS 3.0 software, for the specific indirect effects and the total effects.

In order to control for the common variance bias in a PLS-SEM model, the guidelines of Rönkkö and Ylitalo (2011) were followed. According to these authors, the construct that evaluates the marker variable—degree of noise in this study—must be directly related to all endogenous variables of the structural model.

## Results

This section presents the results obtained from research models using the PLS-SEM technique in two stages. Initially, the essential indicators of the two measurement models will be presented and, subsequently, the results of the two structural models.

### *Measurement models*

Table 2 indicates that each reflective latent variable had items with loads greater than .7 (Chin, 1998; Henseler, Ringle, & Sinkovics, 2009; see columns 2 and 6, respectively, in Table 2). The Cronbach Alpha values of the latent variables were between .84 and .93, considered very good (DeVellis, 2012, p. 109). On the other hand, those corresponding to Composite Reliability were between .90 and .95, which exceeds the minimum desirable threshold of .7 (Hair Jr. *et al.*, 2017, p. 111). Consequently, measurements of reflective constructs present satisfactory levels of internal consistency (see columns 4 and 8 of Table 2). On the other hand, the AVE of each latent variable exceeds the threshold of .50 (Hair Jr. *et al.*, 2017, p. 115), revealing evidence of convergent validity and, therefore, that the constructs explain more than half of the variance of their items.

The Fornell-Larcker criterion to assess discriminant validity is fulfilled in both measurement models. Table 3 demonstrates that the root of the average variance extracted from each latent variable (on the diagonal) is greater than its correlation with the other latent variables. The above is an indication that each construct shares more variance with its associated indicators than with those of other constructs.

The functionality of the Fornell-Larcker criterion may present problems (Hair Jr. *et al.*, 2017). Therefore, the alternative solution proposed by Henseler, Ringle, and Sarstedt was also used (cited by Hair Jr. *et al.*, 2017, p. 118). The alternative solution consists in verifying that the confidence intervals of the HTMT values, generated utilizing bootstrapping, do not contain the value 1 for each pair of latent variables of the path model. As presented in Table 4, this criterion is fulfilled in both measurement models, suggesting that each pair of reflective constructs are, empirically, different.

Table 2

Criteria values for evaluating each of the measurement models

Item	Measurement models related to reflective constructs DEs, CPs, Ac, and CIG				Measurement models related to reflective constructs DEs, CPs, Ac, and CII			
	Load <sup>a</sup>	AVE	CR	Alpha	Load <sup>a</sup>	AVE	CR	Alpha
CIG		.78	.95	.93				
CIG_1 <sup>b</sup>	.84				-	-	-	-
CIG_2	.86				-			
CIG_3	.89				-			
CIG_4	.89				-			
CIG_5	.92				-			
CII						.65	.94	.92
CII_1	-	-	-	-	.81			
CII_2	-				.84			
CII_3	-				.82			
CII_4	-				.79			
CII_5	-				.86			
CII_6	-				.79			
CII_7	-				.82			
CII_8	-				.72			
DEs		.71	.91	.86		.71	.91	.86
DEs_1	.80				.80			
DEs_2	.89				.89			
DEs_3	.85				.85			
DEs_4	.83				.83			
Ac		.75	.90	.84		.75	.90	.84
Ac_1	.89				.89			
Ac_2	.86				.86			
Ac_3	.86				.86			
CPs		.73	.91	.87		.73	.91	.87
CPs_1	.91				.91			
CPs_2	.77				.78			
CPs_3	.88				.88			
CPs_4	.84				.84			

Note: <sup>a</sup>Corresponds to the outer loadings; <sup>b</sup>Numbers are assigned to each indicator of the corresponding reflective construct. DEs=Strategic Direction, CPs=Psychological Capital, Ac=Agreement, CIG=Innovative Group Behavior, CII=Innovative Individual Behavior, AVE=Average Variance Extracted; CR=Composite Reliability, Cronbach's Alpha

Table 3

Fornell-Larcker criterion for discriminant validity

Reflective latent variables	CIG – CII <sup>a</sup>	DEs	Ac	CPs
CIG- CII	<b>.88</b> - .81			
DEs	.65 - .23	<b>.84</b>		
Ac	.68 - .31	.73	<b>.87</b>	
CPs	.72 - .32	.79	.82	<b>.85</b>

Note: <sup>a</sup>Values on the left of the dash correspond to the CIG, while those on the right correspond to the CII. In bold is the root of the extracted variance; the remaining values are the correlations between the latent variables. DEs=Strategic Direction, CPs=Psychological Capital, Ac=Agreement, CIG=Group Innovative Behavior, CII=Individual Innovative Behavior.

Compliance with all the evaluation criteria of the reflective measurement models presented here provides sufficient support to conclude that the measures employed are reliable and valid; therefore, appropriate for carrying out the structural models.

Table 4

Confidence intervals of HTMT values

Relations	Measurement models related to reflective constructs DEs, CPs, Ac and CIG	Measurement models related to reflective constructs DEs, CPs, Ac and CII
Ac -> CI	[.68; .83]	[.20; .48]
DEs -> CI	[.64; .80]	[.13; .36]
CPs -> CI	[.72; .85]	[.21; .49]
CPs -> Ac	[.90; .99]	[.90; .99]
DEs -> Ac	[.79; .90]	[.78; .90]
DEs -> CPs	[.85; .94]	[.84; .94]

Note: DEs=Strategic Direction, CPs=Psychological Capital, Ac=Agreement, CIG=Group Innovative Behavior, CII=Individual Innovative Behavior

### Structural Models

#### Structural model referring to the innovative behavior of the group

The VIF values between each group of latent predictor variables in the structural model were between a minimum of 1 and a maximum of 3.91, below the threshold of 5 (Hair Jr. *et al.*,

2017, p. 194). The above suggests the absence of multicollinearity problems between predictive constructs. Table 5 shows that the results of the structural model display positive and statistically significant trajectory coefficients. These results indicate that strategic directionality has a positive influence on psychological capital (H2a), as well as on agreement development (H4a); in turn, the latter two constructs significantly boost the innovative behavior of the group (H3a and H5a). Furthermore, it reveals that strategic directionality also directly influences the innovative behavior of the group (H1a). Therefore, the hypotheses H1a, H2a, H3a, H4a, and H5a may be supported.

In general, the model indicates that strategic directionality explains 55.4% of the variance ( $R^2$ ) of agreement development and 66.4% of the variance ( $R^2$ ) of psychological capital; and, on the other hand, the model explains 55.6% of the variance in the innovative behavior of the group (all these statistically significant values  $q < .001$ ). Concerning the size of the effect, Table 2 reveals that the strategic directionality construct has a significant effect on the latent variables development of agreement and psychological capital, meaning that its exclusion in the structural model has a significant impact on its predictive capacity; however, there is a small effect on the innovative behavior of the group. On the other hand, the psychological capital and development agreement latent variables have a small effect on the innovative behavior of the group.

Moreover, in order to explore the possible mechanisms through which strategic directionality can better explain the innovative behavior of the group, specific indirect effects and total indirect effects were evaluated using bootstrapping offered by version 3.0 of Smart-PLS. As seen in Table 5, the results suggest that the effect of strategic directionality on the innovative behavior of the group through agreement development is significant ( $q < .01$ ), as well as the effect of strategic directionality on the innovative behavior of the group mediated by psychological capital ( $q < .001$ ). In this sense, it is possible to corroborate that working groups with clarity in objectives are an aligning element that enhances the effect of positive environments and the effect of the achievement of agreement in the members of the group on the innovative behavior in the groups. The above is confirmed by the degree of statistical significance that the total indirect effects provide ( $q < .001$ ).

Table 5

Path coefficients, significance level, and effect size				
Trajectory	Coefficient	IC 95%	f <sup>2</sup>	IC 95%
Direct				
DEs -> Ac	.730***	[.672; .785]	1.143 <sup>a</sup>	[.822; 1.160]
DEs -> CPs	.790***	[.744; .836]	1.662 <sup>a</sup>	[1.237; 2.317]
DEs -> CIG	.169*	[.000; .339]	.023 <sup>c</sup>	[.000; .096]
CPs -> CIG	.408***	[.229; .585]	.095 <sup>c</sup>	[.029; .208]
Ac -> CIG	.222**	[.073; .371]	.035 <sup>c</sup>	[.004; .105]
Specific Indirect				
DEs -> Ac -> CIG	.162**	[.053; .274]		
DEs -> CPs -> CIG	.323***	[.181; .468]		
Total Indirect				
DEs -> CIG	.485***	[.361; .607]		
Note: * $q < .05$ ; ** $q < .01$ ; *** $q < .001$				

According to Cohen (1998), cited by Hair *et al.* (2017, p. 201): <sup>a</sup>Large effect size (.35), <sup>b</sup>Medium effect size (.15), <sup>c</sup>Small effect size (.02). DEs=Strategic Direction, CPs=Psychological Capital, Ac=Agreement, CIG=Group Innovative Behavior, CII=Individual Innovative Behavior.

### *Structural model referring to the innovative behavior of the individual*

The VIF values between each group of latent predictor variables in the structural model were between a minimum of 1 and a maximum of 3.94, below the threshold of 5 (Hair Jr. *et al.*, 2017, p. 194). Unlike the previous structural model, the results indicate that the following direct effects are the only ones that present a direct and statistically significant relationship: strategic directionality has a positive impact, both on agreement development (H4b) and psychological capital (H2b) ( $q < .001$ ). On the other hand, psychological capital has a direct and positive influence on the innovative behavior of the individual (H3b). The above supports the H2b, H3b, and H4b hypotheses.

Contrary to the hypothesis, strategic directionality presents an inverse relationship with the innovative behavior of the individual, but not a significant one, which means that H1b is not supported. Finally, the development of agreement presents a positive, but not statistically significant, trajectory coefficient, so that the H5b hypothesis is not supported. As in the previous structural model, strategic directionality has a significant effect on agreement development and psychological capital and a small effect on the innovative behavior of the individual. Likewise, the development of agreement and psychological capital constructs reveal a small effect on the latent variable of the innovative behavior of the individual.

Among the possible mechanisms through which strategic directionality manages to explain the innovative behavior of the individual better, Table 6 suggests that neither of the two specific indirect effects give a better explanation of the innovative behavior of the individual.

Table 6

Path coefficients, significance level, and effect size

Trajectory	Coefficients	IC 95%	f <sup>2</sup>	IC 95%
Direct				
DEs -> Ac	.731***	[.673; .785]	1.147 <sup>a</sup>	[.826; 1.607]
DEs -> CPs	.790***	[.742; .836]	1.655 <sup>a</sup>	[1.223; 2.325]
DEs -> CII	-.109	[-.320; .105]	.005 <sup>c</sup>	[.000; .041]
CPs -> CII	.263	[.002; .525]	.002 <sup>c</sup>	[.000; .083]
Ac -> CII	.179	[-.043; .397]	.011 <sup>c</sup>	[.000; .057]
Specific Indirect				
DEs -> Ac -> CII	.131	[-.031; .294]		
DEs -> CPs -> CII	.208*	[.002; .422]		
Total Indirect				
DEs -> CII	.338***	[.162; .516]		

Note: \* $q < .05$ ; \*\* $q < .01$ ; \*\*\* $q < .001$

According to Cohen (1998), cited by Hair et al. (2017, p. 201): a) Large effect size, b) Medium effect size, c) Small effect size. DEs=Strategic direction, CPs=Psychological capital, Ac=Agreement, CIG=Innovative behavior of the group, CII=Innovative behavior of the individual.

Figures 2 and 3 present the direct trajectory coefficients of the measurement models for innovative behavior of the group and innovative behavior of the individual but controlling for the latent marking variable. By comparing the size and significance of the direct trajectory coefficients in Table 5 with those in Figure 2 and, similarly, those in Table 6 with those in Figure 3, it can be corroborated whether or not there is a common variance bias (Rönkkö & Ylitalo, 2011). According to these two authors, if the coefficients cease to be significant when controlled by the

marker variable, this implies the presence of bias. Therefore, the researcher should use the results controlling for the marker variable and correcting the standardized factor loads. In the case of the results of this research, it can be observed that the significance does not change; even the size of the trajectory coefficients varies slightly between those of Tables 5 and 6 and those of Figures 2 and 3. This finding serves as evidence that the common variance bias does not affect the results obtained.

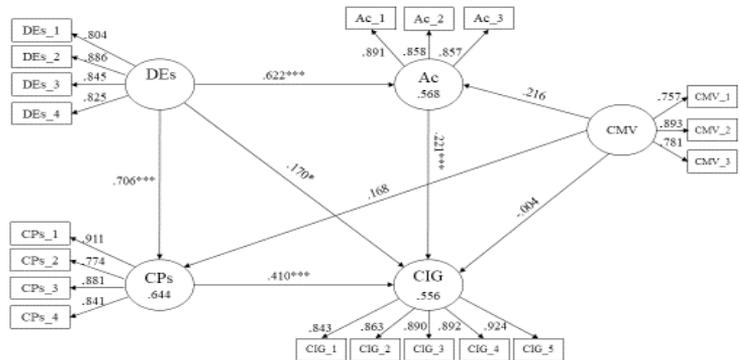


Figure 2. Structural inductor model of innovative group behavior controlling common variance bias.

Note: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

Des=Strategic Directionality, CPs=Psychological Capital, Ac=Agreement, CIG=Group Innovative Behavior, CII=Individual Innovative Behavior.

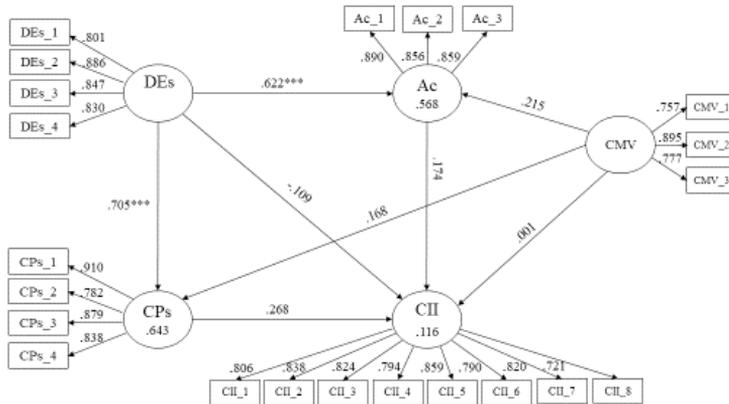


Figure 3. Structural model of inducers of innovative individual behavior controlling common variance bias.  
 Note: \* $q < .05$ ; \*\* $q < .01$ ; \*\*\* $q < .001$   
 Des=Strategic Directionality, CPs=Psychological Capital, Ac=Agreement, CIG=Group Innovative Behavior, CII=Individual Innovative Behavior.

## Conclusions

In order to contribute to the knowledge and discussion of the factors that influence the innovative behavior of individuals and working groups, this study analyzed how the network of relationships between the strategic direction of the working groups, the psychological capital of the group, and the ease of reaching agreements in the group, affect these two types of innovative behavior.

The results obtained support the hypothesis that strategic directionality has a positive influence on the innovative behavior of the group (H1a). This result is in line with other research findings on how working groups with clearly defined objectives and a clear strategy for the future are more likely to develop new working methods (Somech & Drach-Zahavy, 2011), and to display an innovative orientation (Amabile, 1997). In this quest to achieve objectives, new ideas can emerge (Shoham *et al.*, 2012), a focus and direction can be provided to discern

what needs innovation (Somech & Drach-Zahavy, 2011), flexibility can be provided to take risks involved in innovation (Moon, 1999), and planning can be done to carry out projects or ideas (Koch & Hauknes, 2005).

The study confirms that strategic directionality also indirectly influences the innovative behavior of the group through psychological capital (H2a) and agreement (H3a) since it is evident that strategic directionality directly influences psychological capital (H2a) and agreement (H4a). These constructs, in turn, indicate a direct influence on the innovative behavior of the group (H3a and H5a). Having clear directionality about what one wants to achieve and how to achieve it can be a means to facilitate the reaching of agreements to create common purposes and synergies (Gilson & Shalley, 2004). In turn, agreements and consensus are necessary for the development of innovation, since generally the implementation of a creative idea requires the participation of different individuals (Caldwell & O'Reilly III, 2003; de Faria, & de Alencar, 1996). In this way, if it is difficult to reach consensus in the groups, this might mitigate innovative collective behavior.

On the other hand, having clear directionality could foster positive attitudes in working groups (Luthans *et al.*, 2008), which explains the significant and direct relationship between strategic directionality and collective psychological capital. In turn, collective psychological capital has a strong association with the innovative behavior of the group. It has been demonstrated that optimism is associated with change, risk-taking, and goal fulfillment (Green *et al.*, 2004) and allows adaptation to adverse situations or challenges (Walumbwa *et al.*, 2011), such as those posed by innovation. Therefore, in a group with greater psychological capital, there may be a greater willingness to generate and implement innovative ideas.

Regarding the innovative behavior of the individual, the hypothesis of a direct relationship between the psychological capital of the group and the innovative behavior of the individual (H3b) was demonstrated, in contrast to strategic directionality and agreement (H1b and H5b). These findings suggest that both agreement and strategic directionality influence collective behavior and decisions related to driving innovation, but not individual behavior and decisions. A possible explanation for these results is that the items of innovative group behavior are more focused on efforts to implement innovative ideas, which may require group agreements and strategic directionality to support and legitimize the need to carry out an innovative idea, as well as the group work and planning needed for its implementation. Additionally, the items of innovative behavior of the individual are not so focused on implementation, but rather on the initiative of the subject to seek new ideas and be creative, which may be more associated with attitudes and traits of the individual than elements related to the strategic direction of the group or the ease of reaching agreements.

Another possible explanation for the lack of a direct relationship between agreement and strategic directionality with the innovative behavior of the individual could be related to the fact that the individual himself responds with innovative behavior, and perhaps due to the bias of social desirability his responses may be overestimated. However, this is a possibility that cannot be asserted from the data collected in this research.

#### *Implications for public management*

The results of the study suggest that a significant factor in encouraging innovative behavior by working groups within organizations is the establishment of a clear direction as to the objective to achieve as a group, as well as strategies for achieving objectives through continuous planning. These elements would not only directly affect the innovative behavior of the group, by giving directionality in which to innovate, but would also affect it indirectly, generating facilities to reach the agreements that are required to innovate and a positive psychological capital that allows the group to face the difficulties that arise when seeking to make changes.

In turn, the results suggest that, in order to encourage innovative behavior by individuals and groups, teams should focus on creating an optimistic and positive environment in which it is possible to achieve goals and overcome difficulties. In this sense, the fact that psychological capacities are measurable, developable, and manageable (Luthans & Youssef, 2004), awakens interest in the development of intervention programs with human resource managers (e.g., training) (Luthans *et al.*, 2006).

#### *Limitations and future lines of research*

A methodological limitation in the research has been the use of the same source of information to measure the innovative behavior of the individual and the group, in the same way, for the remaining constructs. This limitation can cause the common variance bias to inflate trajectory coefficients (Podsakoff *et al.*, 2012). In order to mitigate this bias, a different measurement scale was used for the constructs of innovative behavior, and the study attempted to control the effect of the bias by adding a marking variable in the analysis of the PLS model (Podsakoff *et al.*, 2012). Despite the use of these prevention methods suggested in the literature, it is possible to assert that the ideal mechanism for preventing such bias is to use a different source of information for the constructs of innovative behavior and a different one for the remaining constructs (Podsakoff *et al.*, 2012). Moreover, it would have been ideal to have measured the innovative behavior of the group based on an aggregate of the responses of the individuals who make up the group, for which it would be necessary to find the different working groups to apply the interviews among their members.

Another element is that both the Fornell-Larcker method and the confidence intervals of the HTMT values suggest that there is discriminant validity. The criteria were met close to the boundary between the psychological capital, strategic direction, and agreement constructs. Therefore, it will be advisable to add additional items that make it possible to establish a more marked discrimination.

The study was conducted with public officials, so an opportunity for future research would be to test these relationships in the private sphere and other cultural contexts, improving the methodological limitations identified, as well as studying not only innovative behavior but also the implementation of innovations.

A future question remains to be answered in this research, namely why strategic directionality and agreement have no direct relationship with the innovative behavior of the individual, but instead display a significant relationship with the innovative behavior of the group. While it is true that two possible reasons were conjectured in previous paragraphs (one, with the way of measuring innovative behavior and the other with a possible limitation related to the reporting unit), a future study could try to seek alternative answers to this concern. Furthermore, it could explore other constructs with the potential to influence innovative group behavior rather than individual behavior.

Finally, Anderson, Potočník, and Zhou (2014) mention the lack of studies that address this issue of innovation from a multilevel approach. In other words, the studies will need to analyze the effect of variables from the organizational, group, and individual levels on innovative behavior and the generation of innovation in groups and individuals. Consequently, from this approach, finding out how the variables, at their different levels, influence innovative behavior, as well as the interaction that exists between them, is posed as a challenge for future research.

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## Annex

Table A1

Latent Variable	Items	References
Innovative behavior of the group	CIG_1 My department systematically introduces new or improved working practices	De Jong and Den Hartog (2010)
	CIG_2 My department tries convincing people to support an innovative idea, systematically introducing new or improved working practices	De Jong and Den Hartog (2010)
	CIG_3 My department implements new or improved services for our users	De Jong and Den Hartog (2010)
	CIG_4 My department proposes original solutions to problems or difficulties that arise at work	De Jong and Den Hartog (2010)
	CIG_5 My department implements new or improved work processes	De Jong and Den Hartog (2010)
Innovative behavior of the individual	CII_1 Looks for new working methods or ideas for new services	Scott and Bruce (1994)
	CII_2 Generates creative ideas	Scott and Bruce (1994)
	CII_3 Promotes and defends new ideas before others	Scott and Bruce (1994)
	CII_4 Does research to implement new ideas	Scott and Bruce (1994)
	CII_5 Develops plans for implementation of new ideas	Scott and Bruce (1994)
	CII_6 Contributes to the implementation process of new ideas or projects	Scott and Bruce (1994)
	CII_7 Is innovative	Scott and Bruce (1994)
	CII_8 Seeks out decision-makers to support innovative ideas	Scott and Bruce (1994)

Strategic Direction- ality	DEs_1	In my department, we continually compare our progress with the goals set	Denison <i>et al.</i> (2006)
	DEs_2	This department has clear strategies to meet its goals	Denison <i>et al.</i> (2006)
	DEs_3	This department has a clear mission that gives meaning and direction to our work	Denison <i>et al.</i> (2006)
	DEs_4	My department is characterized by constant planning of the work we do	Original
Psychological Capital	CPs_1	In my department, there is optimism about the results we will obtain in the future with the work we do	Walumbwa <i>et al.</i> (2011)
	CPs_2	In my department, there is a sense of security that success will be achieved	Walumbwa <i>et al.</i> (2011)
	CPs_3	When we are faced with difficulties inherent to our tasks, we are very insistent on carrying out what we set out to do	Original
	CPs_4	In my department, we always look at the bright side of things regarding our work	Walumbwa <i>et al.</i> (2011)
Agreement	Ac_1	When there are disagreements, we work hard to find win-win solutions	Denison <i>et al.</i> (2006)
	Ac_2	Generally, people are willing to give up their particular interest to achieve agreements in the group	Original
	Ac_3	We find it easy to arrive at a consensus even in difficult topics	Denison <i>et al.</i> (2006)

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