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DOI: 10.2478/orga-2022-0014

# Psychological Capital and Organizational Performance: The Mediating Role of Organizational Ambidexterity

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**Background and purpose:** Today's dynamic environment is increasingly pressuring public organizations to be simultaneously flexible and efficient. The purpose of this study was to examine the mediating role of organizational ambidexterity in the relationship between psychological capital and the perfor-mance of public organizations that have bureaucratic limitations to their activity and are not as competitive as the private sector.
**Methods:** A questionnaire was developed and distributed among the employees of Management and Planning Organizations in 31 provinces in Iran, and a total of 373 questionnaires were returned. The data was analysed using CFA to validate the measures, and then the mediating effects of organi-zational ambidexterity was tested.
**Results:** The results indicated the significant relationship between psychological capital and organizational performance (B=0.55) and the positive mediation effect of organizational ambidexterity on this relationship (0.333).
**Conclusion:** The findings can help managers of public organizations to enhance their organizational perfor-mance by strengthening psychological capital and ambidexterity.

***Keywords:*** *Organizational ambidexterity; Psychological capital; Organizational performance; Public Organizations*

## 1 Introduction

The rapidly changing and increasingly competitive business environment has driven organizations to focus on efficient activities in the short and long term and gaining competitive advantages (Cao et al., 2009). In addition to the for-profit sector, these changes have also challenged government agencies to improve their ability to adapt to the environment. However, government agencies have high degrees of centralization and bureaucracy and are subject to various laws that put them under immense pressure to create stability and maintain balance. Meanwhile, due to environmental pressures in the service sector, the only way for these organizations to adapt is to develop their ability to simultaneously exploit existing assets and capabilities while exploring new, fundamental capabilities (Markides, 2013). This means that ambidexreity may be helpful to better adapt with the environment. Ambidexterity is the combination of both efficiency-oriented and noveltyoriented innovation practices (e.g., exploitation and exploration) for short-term success and long-term survival (Clauss, 2021).

While various studies have highlighted the important role of organizational ambidexterity in the growth and survival of organizations and its positive effect on organizational performance (Kauppila & Tempelaar, 2016; Junni et

Received: 16th March 2022; revised: 9th June 2022; accepted: 15th June 2022

al., 2013; Gibson & Birkinshaw, 2004), these studies have mainly focused on the private sector (Smith & Umans, 2015). There are very few studies on ambidexterity and performance in the public sector (Cannaerts et al., 2020; Ghanizadeh et al., 2020) with mixed results (Junni et al., 2013). Some studies have found a positive relation-ship (Gibson & Birkinshaw, 2004; Lubatkin et al., 2006), some a negative relationship (Atuahene-Gima, 2005) and some a contingent effect (Lin et al., 2007).

Public organizations face pressures for greater innovation and meeting pre-determined tar-gets (Plimmer et al., 2017). However, engaging in both innovation and optimization activities simultaneously can create tensions between them (Gieske et al., 2020), which requires public organizations to be ambidextrous. However, there is evidence suggesting that a U-shaped relationship exists between ambidexterity and performance (Yang & Atuahene-Gima, 2007), while a number of studies have found no relationship (Venkatraman et al., 2007). The dearth of evidence has led some to view ambidexterity as a public sector problem (Lee et al., 2012) and even question whether public organizations in general can be ambidextrous. While the term organizational ambidexterity itself may not have been used in the context of the public sector, its com-ponents have been considered in the literature (Smith & Omans, 2015). According to Bryson et al. (2008), public organizations can have the capacity and opportunity to adopt ambidextrous structures and cultures (Bryson et al, 2008), since environmental pressure for delivery of new services in the public sector force these organizations to innovate similar to the private sector. But in public organizations such as Iran's Ministry of Management and Planning, which is a highly centralized and beurucratic organization, ambidexterity is defined not by organizatrional performance, but also by the management's ambidexterious behavior. Organizations affiliated with the Ministry of Management and Planningin all the provinces of Iran have the same structure, but with different managers who must carefully adapt to environmental changes. Therefore, their ambidexterity could be considered for prediction of organizational level ambidexterity.

Individuals and managers are a key element in exploration and innovation in the public sector. Studies have shown that individuals play a fundamental role (Raisch et al., 2009) and that the characteristics, capabilities, and behaviors of the members of the organization should be considered to better understand organizational ambidexterity (Kauppila & Tempelaar, 2016). Managers of organizations in particular provide an important context for exploration and exploitation through their decisions and actions (Gibson & Birkinshaw, 2004). They play a more sig-nificant role than environmental forces in determining organizational outcomes, and their bounded rationality is reflected in their decisions and consequently organizational outcomes (Smith & Umans, 2015). Similar to the private sector, the managers and employees of public organizations work in a competitive environment and have to keep pace with changes in the environment. Psychological traits of these individuals are an important driver of innovation. For this reason, organizations are increasingly focusing on the psychological needs and psychological capital of their employees (Qiu et al, 2015). Psychological capital goes beyond human and social capital and is positive associated with work motivation and performance (Larson & Luthans, 2006) and could be a key factor in individual and organizational ambidexterity and improve performance through efficiency and innovation. Therefore, this study aims to consider the psychological capacities of individuals and managers as a useful approach to enabling public organizations to become ambidextrous through individual ambidexterity. In other words, the ambidexterity of public organizations should be expressed by the explorative and exploitative behaviors of the managers.

## 2 Theoretical Framework and Hypotheses

### 2.1 Organizational ambidexterity and psychological capital

Organizational ambidexterity challenges managers in organizations (Jansen et al., 2008). Managers play a crucial role in achieving organizational goals by allowing the organization to redeploy resources efficiently and effectively while pursuing new opportunities or respond to threats quicker than competitors (Hodgkinson et al, 2011). Together with the environment, they create an important context for ambidextrous behavior (Lavie et al, 2010) and should be able to flexibly shift between exploration and exploitation (Good & Michel, 2013), reconcile conflicting demands, balance seemingly contradictory forces in the organization (Jansen et al., 2008), and serve as the main driving force behind ambidexterity (Jansen et al., 2009). This role of managers and employees in public organizations is far more complex than in the private sector. Public sector actors are not only limited in terms of authority and decision-making, but also have different organizational missions that are not primarily related to competition with other organizations. Moreover, the managers of public organizations are accountable to various politi-cal and community stakeholders and thus operate under a great deal of pressure, which makes their ability to foster ambidextrous behavior much more important. This could be challenging as public organizations are under pressure to innovate (Nowacki & Monk, 2020) and public sector employees tend to resist innovation (Gieske et al., 2020). A review of the literature on innovation in the public sector shows that most studies have focused on the antecedents of innova-

tion and less attention has been paid to its actual outcomes (Gieske et al., 2019).

Adopted from Gibson and Birkinshaw (2004), Fiset and Dostaler (2017) suggest four ambidextrous behaviors (initiator, cooperator, broker, and multitasker) and explain how to create an organizational structure for ambidexterity to align and adapt at the individual level. Individual differences underpin the ambidextrous behavior of the members of the organization (Kauppila & Tempelaar, 2016, 2016; Raisch et al., 2009) and understanding them is essential to under-standing ambidextrous behavior at the individual level (Raisch et al., 2009). However, achieving individual ambidexterity is very difficult, since innovation and optimization require completely different structures and capabilities that can create conflicting challenges for each individual (Eisenhardt et al., 2010). These challenges affect emotions and, consequently, individual performance is affected because factors such as positive reinforcement, positive affect, and attitudes of employees (including managers) affect their performance (Luthans, 2002), and individual performance is a function of individual ability and motivation (Wright et al., 1995). However, despite documented role of emotions, there is still little known about what accounts for individual ability to manage conflicting demands (Eisenhardt et al., 2010) and the psychological characteristics that can be used as predictors of these behaviors have not received much attention (Kauppila & Tempelaar, 2016).

Luthans has developed the theory of psychological capital to explain how the psychological capacities of individuals can be measured, developed, and managed to enhance both individual and organizational effectiveness (Newman et al., 2013). Research suggests that high psychological capital can trigger innovative behaviors in the workplace (Avey et al., 2010) and look for alternative pathways to achieve goals when faced with obstacles. They actively work on creative ideas to solve problems and look at problems and opportunities from different angles (Zhou & George, 2003), and have the willpower to overcome the risks and challenges of failure. These individuals feel in control of their destiny, show resilience in the face of problems and adversity, expect positive incomes, develop innovative ideas (Sweetman et al., 2011), and pursue new and creative approaches to problem solving (Peterson & Byron, 2008).

Ambidexterity in public organizations such as government agencies is mostly influenced by the managers who play a key role in the decision-making process and in balancing the environmental pressure to explore and the internal pressure to exploit. They need to be more self-efficacious to have more work control and make better decisions (Narangerel & Semerci, 2020), a characteristic that is associated with their psychological capital. By being open to organizational change, individuals with high psychological capital are able to develop new paths to achieve goals, have a positive outlook on the future, and adapt to changes and problems (Youssef & Luthans, 2007). Psychological capital allows individuals to move beyond the challenges and setbacks that are inherent to creative work (Sweetman et al., 2011). In addition, psychological capital helps explain the behavioral differences between individuals and managers which could be useful for predicting resistance to or support of innovation (Ghanizadeh et al., 2020). Due to their positive affective and cognitive appraisals, individuals with high psychological capital persevere in the face of problems, find and implement more constructive and useful solutions to problems, and view the outcomes of their effort in a more positive light. Therefore we can expect the following:

*H1: Psychological capital has a positive effect on organizational ambidexterity.*

## 2.2 Ambidexterity and organizational performance

The performance of public organizations is a multidimensional construct (Andrews et al., 2010), which is evaluated based on criteria such as efficiency, effectiveness, quality, responsiveness, and legitimacy toward stakeholders (Yang & Panday, 2007). Public organizations are concerned about competitiveness, fiscal sustainability, the growing demands of citizens, and lowering of costs (Rinaldi et al., 2015) and need to adapt to changes to maintain legitimacy, improve performance, and create value (Damanpour et al., 2009). Of course, situations may arise where it is not possible to maintain or improve public service performance without breaking with established practices (Hartley et al., 2013). Tackling these challenges and the complex and evolving mix of technical and social factors require innovative ideas and unconventional approaches (Eisenhardt et al, 2016), since they are perceived by individuals as new (Rogers, 1995) and represent discontinuity with the past (Osborne & Brown, 2011). In addition to improving the performance of public organizations as an intangible organizational resource, innovation is increasingly recognized under new public management as a means for effectively addressing social challenges such as growing citizen expectations, globalization, and demographic and climate change as well as boosting economic growth (Cannaerts et al., 2020). Innovation in the public sector can take place in delivery, coordination, regulatory, and analytical areas (Lodge & Wegrich, 2014).

However, public organizations face tensions between pressures for innovation (Plimmer et al., 2017) and the demand for efficiency and accountability (Hartley et al., 2013). Instead of increasing their innovation capacity, managers of public organizations tend to focus on improving the ability of public servants to deliver, regulate, and coordinate tasks (Lodge & Wegrich, 2014) and streamlin-

ing internal and external operations to optimize efficiency (Nowacki & Monk, 2020). Bureaucracies have traditionally been organized around exploitation of existing resources and capabilities, and are often incompatible with explorative activities that produce innovation (Boukamel & Emery, 2017). They are characterized by centralized decision-making, standardized work processes, and high levels of specialization, and their structure stimulates exploitation, while suppressing innovation (Cannaerts et al., 2016). Hence, public organizations have always faced challenges in improving performance through innovation (Osborne & Brown, 2011). However, the public sector is urged to innovate and at the same time enhance efficiency and lower costs (Pollitt & Bouckaert, 2004) since relying on formal organizational routines is not enough to improve performance (Brown & Duguid, 1991). Public organizations must be both efficient and innovative to overcome today's challenges (Cannaerts et al., 2016) and finding the right balance between exploitation and exploration is essential to improving organizational performance (March, 1991).

Individual ambidexterity is a key factor in organizational performance (Kammerlander et al., 2015) that helps organizations overcome the structural inertia caused by the focus on exploitation, while preventing excessive exploration that is without results (Levinthal & March, 1993). Despite the emphasis of new public management on establishing exploration units in public organizations (Boukamel & Emery, 2017;) and despite the initial research on ambidexterity in the public sector (Smith & Umans, 2015; Plimmer et al., 2017; Gieske et al., 2019), there is little evidence on how public organizations can simultaneously balance efficiency and innovation (Smith & Umans, 2015) and little insights as to the conditions under which it can emerge in the public sector (Umans et al., 2020). While focus on optimization can improve the current performance of public organizations and allow them to provide existing services at a lower cost and with higher efficiency, pressures from the external environment require them to engage in explorative activities.

Although ambidexterity is a useful concept for understanding the non-financial outcomes of public organizations (Umans et al., 2020), it is difficult to explain its effects on performance (Junni et al., 2013). Disagreements seem to stem from the context in which it is studied, and the relationship between ambidexterity and organizational performance needs further investigation, especially in the public sector. Therefore, the second hypothesis is developed as follows:

*H2: Organizational ambidexterity has a positive effect on organizational performance.*

## 2.3 Mediating role of organizational ambidexterity

Psychological capital is an individual's positive appraisal of circumstances and probability of success based on motivated effort and perseverance (Luthans et al., 2007;). It gives individual the conviction to face challenges and difficulties and to recover from setbacks. Psychological capital contributes to an individual's organizational performance. However, the way in which psychological capacities transform into tangible outcomes such as high productivity and better organizational citizenship behavior is often mediated by other factors . For example, psychological capital helps individuals balance exploration and exploitation (Gibson & Birkinshaw, 2004) and enables them to mobilize their affective, cognitive, and positive organizational behavioral resources to organizational citizenship behavior and to achieve organizational goals (Pouramini, Fayyazi, & Yahyavi Ghasem Gheshlaghi, 2018). From this perspective, psychological capital helps improve performance by enhancing ambidexterity, and ambidexterity acts as a mediator between contextual factors and organizational performance to encourage behaviors needed to improve performance (Gibson & Birkinshaw, 2004). Employees with high levels of psychological capital are more resilient to tensions, conflicts, and stress and can make better decisions. Therefore, they will be more adaptive to change and make the right optimization decisions, which can ultimately lead to high behavioral ambidexterity and better performance.

Patel et al. (2013) showed that ambidexterity mediates the relationship between high-performance work systems and firm growth, and that firms with such systems achieve higher performance through ambidexterity (Patel et al., 2013). In addition, ambidextrous behavior has been shown to mediate the relationship between career adaptability and performance and facilitate effective service delivery (Affum-Osei et al, 2020). Ambidexterity also mediates the relationship between ambidextrous organizational culture and innovation outcomes (Wang & Rafiq, 2014), human resource flexibility and performance (Úbeda-García et al., 2017), and management team behavioral integration and performance (Lubatkin et al., 2006). Therefore, it can be assumed that:

H3: Organizational ambidexterity mediates the relationship between psychological capital and performance.

Given this background, the present study follows the conceptual model shown in Figure 1 in which the psychological capital of employees strengthens organizational ambidexterity and organizational ambidexterity improves the performance of public organizations.

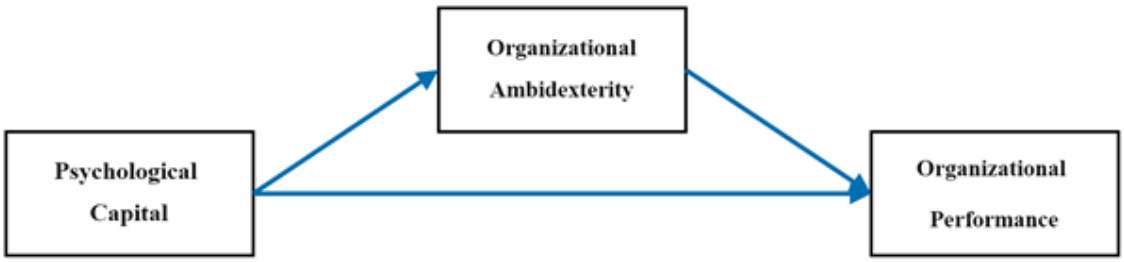



*Figure 1: Conceptual model*

# 3 Methodology

## 3.1 Sample and Procedure

The participants of this study are the managers of Management and Planning Organizations in the 31 provinces of Iran, which are responsible for planning and budgeting and should continuously evaluate the performance of their respective organizations and ensure that budget targets are met. These organizations are bureaucracies with centralized decision-making. Therefore, due to the similarity of tasks and uniformity of structures throughout the country, simple random sampling was used to select the participants in each province. To this end, the middle and top managerial of each organization was used for sampling (N = 644). Then, the questionnaire was emailed to the managers of each organization between March and May 2021Finally, 373 participants returned the questionnaire, of whom 68.4% were male and 31.6% female; 6.2% had a doctoral degree, 64.6% had a master's degree, 27.1% had a bachelor's degree, and 2.1% had an associate degree or lower; 58% were in the 40-50 years age group, and none of the participants was below 30 years of age. The Kaiser-Meyer-Olkin (KMO) index was 0.932 and chi-square was 3272.918, which indicate sample size adequacy.

## 3.2 Measures

### 3.2.1 Organizational ambidexterity

Ambidexterity is considered a paradox whereby its components, i.e. exploration and exploitation, create persistent and conflicting demands on an organization (Koryak et al., 2018). We used individual ambidexterity to measure organizational ambidexterity, because in public organizations that are highly centralized and bureaucratic, it is the ability of managers to behave ambidextrously that determines the organization's approach to exploration and exploitation, and it is the managers' innovative behavior that promotes creative and explorative activities in the organization. Therefore, we argue that organizational ambidexterity in government agencies is driven by the ambidextrous behavior of managers.

In the present research, ambidexterity is assessed using the questionnaire of Sharma et al. (2020), which consists of 10 items, 5 for exploration and 5 for exploitation, rated on a 5-point Likert scale. Examples of items in this section are "Our organization bases its success on its ability to explore new methods", and "Our organization continuously improves the reliability of its services." The items are rated from 1 for "Completely Disagree" to 5 for "Completely Agree". The Cronbach's alpha for the two subscales are 0.88 and 0.857, respectively.

### 3.2.2 Psychological capital

Psychological capital is one of the important concept in positive psychology that focuses on individual strengths and performance improvement in different aspects of life (Youssef & Luthans, 2007). In addition to the four main components of psychological capital, namely hope, efficacy, resilience, and optimism, many other positive psychological resources such as creativity, gratitude, spirituality, and courage can be included in the measurement of psychological capital (Luthans & Youssef, 2017). These eight components are adopted in the present research: 6 items for efficacy, resilience, optimism, and hope (Luthans et al., 2007a) with a Cronbach's alpha of 0.89, 0.89, 0.89, and 0.88, respectively; 12 items for courage (Norton & Weiss, 2009) with a Cronbach's alpha of 0.877; 6 items for gratitude (McCullough et al., 2002) with a Cronbach's alpha (0.82); 22 items for spirituality (Delaney, 2005) with a Cronbach's alpha of 0.94; and 4 items for creativity (Jaiswal & Dhar, 2015) with a Cronbach's alpha of 0.93. These items are rated on a 5-point Likert scale from 1 for "Strongly Disagree" to 5 for "Strongly Agree". Examples of items in this section are: "I feel confident in representing my work area in meetings with management"; "At the present time, I am energetically pursuing my goals"; "I can get through difficult times at work because I've experienced difficulty before"; "I always look on the bright

side of things regarding my job"; "I am grateful to many people"; "I tend to face my fears"; "I believe that all living creatures deserve respect"; "I seek new ways to solve problems."

### 3.2.3 Organizational performance

Organizational performance can be defined as the actual results of an organization as measured against its intended outputs. In the present research, organizational performance is measured using the scale of Gieske et al. (2019) with six items. Examples of these items are: "we deliver more quality against similar costs and time"; and "stakeholders are satisfied with the organization". These items are rated on a 5-point Likert scale from 1 for "Strongly Disagree" to 5 for "Strongly Agree". A Cronbach's alpha of 0.856 has been obtained for this scale by Gieske et al. (2019).

## 4 Results

### 4.1 Analysis results

Smart PLS and SPSS 20 were used to analyze the data. Before testing the hypotheses, the validity of the instrument was evaluated using convergent validity and discriminant validity. In addition, confirmatory factor analysis (CFA) was used to evaluate the measurement model.

Several goodness of fit indices such as relative fit index (RFI), normed fit index (NFI), and comparative fit index (CFI) that have been suggested for structural equation modeling (SEM) (Kline, 2015) were used to evaluate the fit of the proposed model. Table 1 shows the measures of central tendency and dispersion as well as the correlation of the variables.

*Table 1: Correlation index between variables*

| | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1 Exploration** | 18.672 | 4.154 | — | | | | | | | | | | | |
| **2 Exploitation** | 18.337 | 4.033 | .767** | — | | | | | | | | | | |
| **3 Ambidexterity** | 37.010 | 7.695 | .942** | .938** | — | | | | | | | | | |
| **4 Efficacy** | 24.209 | 5.107 | .307** | .380** | .365** | — | | | | | | | | |
| **5 Hope** | 23.643 | 4.413 | .390** | .384** | .412** | .688** | — | | | | | | | |
| **6 Resilience** | 23.270 | 4.271 | .454** | .422** | .466** | .591** | .648** | — | | | | | | |
| **7 Optimism** | 22.839 | 4.096 | .575** | .428** | .480** | .509** | .604** | .652 | — | | | | | |
| **8 Gratitude** | 23.396 | 4.677 | .313** | .315** | .334** | .546** | .600** | .587** | .570** | — | | | | |
| **9 Courage** | 44.766 | 6.850 | .441** | .438** | .468** | .585** | .589** | .650** | .581** | .554** | — | | | |
| **10 Spirituality** | 86.490 | 15.452 | .414** | .444** | .456** | .697** | .700** | .622** | .568** | .632** | .628** | — | | |
| **11 Creativity** | 16.265 | 3.214 | .352** | .362** | .380** | .477** | .484** | .434** | .393** | .438** | .498** | .553** | — | |
| **12 PsyCap** | 264.882 | 39.371 | .487** | .500** | .525** | .803** | .822** | .788** | .733** | .760** | .800** | .917** | .641** | — |
| **13 Performance** | 22.367 | 4.770 | .659** | .628** | .685** | .301** | .380** | .348** | .391** | .340** | .353** | .409** | .341** | .450** |

** Correlation is significant at the 0.01 level (2-tailed).

### 4.2 Discriminant validity of constructs

First, CFA was performed to test the construct validity of psychological capital, organizational ambidexterity, and organizational performance. To this end, two models were selected and compared. First, first-order CFA was performed and the results showed the validity of the eight components of the psychological capital (efficacy, hope, resilience, optimism, gratitude, courage, spirituality, and creativity) (NNFI = 0.95, CFI = 0.94 , NFI = 0.94, RMSEA = 0.042), the mediator variable organizational ambidexterity (NNFI = 0.94, CFI = 0.90, NFI = 0.91, RMSEA = 0.048), and the dependent variable organizational performance (NNFI = 0.91, CFI = 0.92, NFI = 0.90, RMSEA = 0.022), indicating that the model is a good fit.

In the second path, the structural equation model of the research was evaluated using standard errors and all factor loadings are greater than 0.05 (NNFI = 0.99, CFI = 0.99, NFI = 0.98, RMSEA = 0.056), thus confirming the overall fit of the model. In addition, divergent validity was tested by comparing the average variance extracted (AVE) for each construct with the square of correlation coefficients. AVE for each construct was greater than the square of the related correlation coefficients, indicating the divergent validity of the constructs. We also used Harman's single-factor test to check for common method bias, and the results showed that all correlation coefficients did not exceed 0.90 and that there was no common method bias. Table 2 shows the overall reliability of the constructs and the factor loadings, and Table 3 shows the results of the validity test.

*Table 2: Validity of the constructs and factor loadings of the items*

| Construct | Items | Loading |
|---|---|---|
| PsyCap<br>NFI = 0.94<br>IFI = 0.96<br>CFI = 0.94<br>Chi-square = 32.41<br>RMSEA= 0.042<br>Cronbach's α = 0.966 | Efficacy | .815 |
| | Hope | .809 |
| | Resilience | .751 |
| | Optimism | .653 |
| | Gratitude | .758 |
| | Courage | .745 |
| | Spirituality | .836 |
| | Creativity | .663 |
| Organizational Performance<br>NFI = 0.90<br>IFI = 0.92<br>CFI = 0.834<br>Chi-square = 10.55<br>RMSEA = 0.022<br>Cronbach's α = 0.966 | My organization has improved performance over the last five years for my work field on: | |
| | Efficiency (results remain the same or improve against lower costs) | .696 |
| | Quality (quality increases against similar costs and time) | .736 |
| | Effectiveness (we reach our goals more effectively) | .795 |
| | Collaboration (we reach our goals better by combining them with the goals of others) | .694 |
| | Legitimacy (stakeholders are satisfied with the organization) | .664 |
| | Future-proofing (we can face the future with confidence and expected future developments are included in policies and plans) | .645 |
| Ambidexterity<br>NFI = 0.91<br>IFI = 0.91<br>CFI = 0.90<br>Chi-square = 62.66<br>RMSEA = 0.048<br>Cronbach's α = 0.891 | Exploration | .596 |
| | Exploitation | .579 |

*Table 3: Validity test results*

| Subscales | CR | AVE | MSV | ASV |
|---|---|---|---|---|
| PsyCap | 0.952 | 0.714 | 0.276 | 0.276 |
| Ambidexterity | 0.898 | 0.470 | 0.469 | 0.469 |
| Performance | 0.836 | 0.462 | 0.469 | 0.336 |

*Table 4: Assessment of the structural model*

| | $R^2$ | $Q^2$ | F2 | VIF |
|---|---|---|---|---|
| Organizational Performance | **0.569** | 0.439 | 0.428 | 1.000 |

In the present study, SmartPLS 3.0 is used to examine the theoretical framework. Prior research reveal that the PLS technique is the best in handling both complex large and simple models, and there is no need to meet the normality criteria (Hair et al. 2016).

Cross-validated redundancy (Q2) as a measure of predictive relevance was used in this study to measure the effects of latent variables. All values must be greater than 0, and Table 4 shows that the present study satisfies this criterion.

VIF values are also considered as the reciprocal of tolerance. The resultsshow that all VIF values are less than 3.30 (Table 4). Therefore, the data set is not subject to common method bias.

In this study, the value of the coefficient of determination (R2 = 0.569) indicates that psychological capital and organizational ambidexterity together explain 46.9% of the variance in organizational performance (Table 4).

### 4.3 Hypothesis testing

Table 5 provides the results of testing the hypotheses. Regarding the first hypothesis, the results indicate the positive effect of psychological capital on organizational ambidexterity (F = 141.336, p = 0.000), and R indicates that this effect is significant (R = 0.525).

According to the results in Table 4, the second hypothesis for the positive effect of organizational ambidexterity on organizational performance is confirmed (F = 327.963, p = 0.000) at the 99% confidence interval (CI).. The results also indicate the significant effect of the components of organizational ambidexterity (exploration and exploitation) on organizational performance (R coefficient of 0.659 and 0.628, respectively). The relationship between exploration and organizational performance (B = 0.757) was stronger than the relationship between exploitation and organizational performance (B = 0.743). Table 4 also shows the effects of the mediator variable.

*Table 5: Structural model results*

| Variable | B | SE | t | P |
|---|---|---|---|---|
| PsyCap on Performance | .55 | .006 | 9.717 | 0.000 |
| Ambidexterity on Performance | .425 | 0.23 | 18.110 | 0.000 |
| Exploitation on Performance | .743 | .048 | 15.535 | 0.000 |
| Exploration on Performance | .757 | .045 | 16.891 | 0.000 |
| Variable | **Value** | **SE** | **Z** | **P** |
| Indirect effect and significance using normal distribution Sobel | 0.333 | 0.044 | 7.534 | 0.000 |
| Variable | **M** | **SE** | **LL95%CI** | **UL95%CI** |
| Bootstrap results for indirect effect Effect | 0.537 | 0.054 | 0.425 | 0.640 |
| Note: N = 373 Bootstrap sample size = 1000, LL = lower limit, UL = upper limit, CI= confidence interval | | | | |

Testing the significance of indirect paths using bootstrapping and the Sobel test showed that organizational ambidexterity sig-nificantly mediates the relationship between psychological capital and organizational performance at the 95% CI (LL = 0.425; UL = 0.640).

## 5 Discussion

Previous studies on organizational ambidexterity have mainly focused on the development of this ability at the organizational and team levels (Gibson & Birkinshaw, 2004), but this study sought to gain a deeper understanding of the psychological factors that underlie different behaviors among individuals and explore the relationship between the contexts of individual behaviors and development of ambidexterity in the organization.

The results showed that psychological capital can have a direct impact on the components of organizational ambidexterity, which is consistent with Kauppila and Tempelaar (2016). For example, Kauppila and Tempelaar (2016) highlight the significant role of psychological capital, including efficacy, in the capacity of individuals for ambidextrous behavior, because high levels of efficacy promotes ambitious goal-setting and greater effort, thus helping individuals to manage the challenges associated with paradoxical orientations and conflicting work demands. This is consistent with the findings of Katou (2021), with one difference in that Katou shows that ambidexterity is affected by human capital, which is itself positively influenced by the dynamically changing environment. This

indicates the importance of acquiring and strengthening capabilities for public sector organizations that enable individuals and managers to be effective in both optimization and innovation and gain mastery in dealing with existing tensions (Gieske et al., 2019) and the changing environment to achieve higher productivity. As another component of psychological capital, hope encourages individuals to persevere toward goals and redirect paths toward them if necessary. Especially in public organizations, past successes can give individuals greater hope in innovative ideas and help them better enforce laws in the face of change.

As expected, ambidexterity was associated with higher levels of perceived performance. This is consistent with previous studies that have found the positive effect of ambidexterity on performance (e.g., Junni et al., 2013; Plimmer et al., 2017; Gieske et al., 2019). Of course the level of analysis and the method of measurement can affect the relationship between ambidexterity and organizational performance (Junni et al., 2013). In public organizations, performance is defined as achieving public goals effectively and efficiently, while preserving present and future quality of public services and maintaining legitimacy among stakeholders (Verbeeten, 2008). Even when faced with diminishing financial resources, public organizations are expected to continuously improve the quality of their services to maintain public confidence (Pablo et al., 2007). Organizations that are able to simultaneously pursue exploration and exploitation are more likely to outperform those that focus on one of these at the expense of the other (Tushman & O'Reilly, 2013), because it will inevitably create problems and tensions (Gibson & Birkinshaw, 2004) that undermine long-term performance (Floyd & Lane, 2000). Lack of functionality of rules promotes ambidextrous behavior, while compliance burden is negatively associated with ambidexterity (Sharma et al., 2020). While public organizations are required to comply with the rules regardless of their burden, lack of functionality can stimulate search for new paths and more innovative approaches.

The results of the present research also showed the significant positive relationship between the components of ambidexterity and performance. This finding is consistent with the results of Gieske et al. (2020), and Gieske et al. (2019). To fulfill employee obligations, organizations not only must increase their performance in providing existing services, but also need to innovate (Nowacki & Monk, 2020). Acquiring and strengthening capabilities enable public organizations to both optimize and innovate and deal with existing tensions more proficiently (Gieske et al., 2019). Organizations with limited resources are more in need of balancing explorative and exploitative activities (Cao et al., 2009; Junni et al., 2013), which is essential to improving organizational performance (Damanpour et al., 2009). This is extremely challenging in public organizations that are accountable for government budgets, which could encourage them to focus more on exploitation than innovation to meet budget targets and avoid conflicts or even penalties. However, in a dynamic environment, excessive exploitation reduces the ability of the organization to effectively adapt to changes (Wang & Li, 2008) and in general. As such, performance improvement in the public sector largely depends on innovation, which does not receive enough attention in the current organizational discourse (Choi & Chandler, 2015; Osborne & Brown, 2011; Gieske et al., 2019) and requires a shift from overexploitation to ambidexterity.

According to the present findings, exploration has a stronger effect on performance than exploitation, which is inconsistent with the results of a number of studies. Damanpour et al. (2009) found that optimization has a stronger effect on performance than innovation, implying that public organizations often try to enhance their performance through continuous improvement of policies, processes, techniques, and services rather than by engaging in innovation due to its perceived risks and higher transaction costs (Damanpour et al., 2009; Gieske et al., 2019). The literature disproportionately emphasizes innovation, while the potential cost or risks are underestimated (Choi & Chandler, 2015). Public organizations usually have a high degree of formalization, which is positively associated with exploitative innovation, but not with explorative innovation (Jansen et al., 2006). These organizations have well-designed procedures, facilitate performance, encourage employee commitment, and reduce role conflict and ambiguity. Research on the effect of formalization on ambidexterity has yielded mixed results (Junni et al., 2015). Nonetheless, the positive effect of innovation is noteworthy and directly affects organizational performance as an organizational capability (Lin & Chen, 2007).

The results of this study also showed that organizational ambidexterity not only affects organizational performance directly, but also mediate the relationship between psychological capital and organizational performance. Psychological capital is a key construct in positive psychology, which focuses on the positive aspects of individuals instead of what is wrong or dysfunctional with them (Luthans et al., 2006) and improves performance and adaptability relying on the strengths of individuals and the organization (Luthans et al., 2007b; Pouramini, Fayyazi, & Yahyavi Ghasem Gheshlaghi, 2018). Psychological capital affects individual productivity and can be a source of competitive advantage for organizations (Pouramini, Fayyazi, & Yahyavi Ghasem Gheshlaghi, 2018). It is also positively associated with organizational performance (Luthans & Youssef, 2017), and this effect is reinforced by ambidexterity. Our findings in this regard are consistent with the results of Patel et al. (2013), Úbeda-García et al. (2017), and Affum-Osei et al. (2020), which have confirmed the mediation effect of ambidexterity on various organizational outcomes. As Gibson and Birkinshaw (2004) have argued, ambidexterity is not only an organizational capa-

bility, but also a meta-capability that mediates the relationship between various contextual features and organizational performance. Ambidexterity is a vital mechanism (Affum-Osei et al. 2020) that creates new capacities for the organization while strengthening other beneficial relationships. The overall model of the effect of psychological capital and ambidexterity on organizational performance is consistent with Katou (2021), who found that human capital management practices constitute an antecedent of organizational ambidexterity and organizational performance constitutes a consequence.

Finally, psychological capital not only plays a crucial role in the implementation of ambidexterity, but is also among the factors that directly and indirectly contribute to organizational success. Public organizations need to identify and evaluate different dimensions of psychological capital in their managers and employees, and promote and develop them by implementing short and long-term programs. These organizations should also take full advantage of psychological capital in their attempt to achieve organizational ambidexterity, and consider it when appointing individuals to management positions, which will be crucial to improving organizational performance.

This study has a number of limitations. Firstly, it uses cross-sectional data, which means that it fails to capture the dynamic interplay between psychological capabilities and ambidexteity.

Secondly, our findings are limited by the nature of the sample, which consists of government organizationas with higly centeralized decision-making processes. The results may be different in future studies on other industries, e.g., in private companies with decentralized management systems.

Thirdly, the data on the independent variable (psychological capital), the dependent variable (organizational performance), and the mediating variable (organizational ambidexterity) was collected using the same survey. Although this is a common practise in the field, we tested for common method bias and found no cause for concern (Podsakoff et al., 2003).

Future researhers are encouraged to replicate the proposed model in other organizations that compete with others to survive.

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