



# INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES



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To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v12-i7/14345>

DOI:10.6007/IJARBSS/v12-i7/14345

**Received:** 16 May 2022, **Revised:** 18 June 2022, **Accepted:** 05 July 2022

**Published Online:** 20 July 2022

**In-Text Citation:** (Al-Hajaia, 2022)

**To Cite this Article:** Al-Hajaia, M. (2022). The Interplay Amongst Internal Auditors' Psychological Capital, Creative Performance, and Internal Control Efficiency. *International Journal of Academic Research in Business and Social Sciences*. 12(7), 1084 – 1100.

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Vol. 12, No. 7, 2022, Pg. 1084 – 1100

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[www.hrmar.com](http://www.hrmar.com)

ISSN: 2222-6990

## The Interplay Amongst Internal Auditors' Psychological Capital, Creative Performance, and Internal Control Efficiency

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### Abstract

This study examined internal auditors' psychological capital relationship with their creative performance. It also investigated the total effect of such a relationship on internal control efficiency related to targets' achievement. The partial least squares structural equation modelling was employed to validate and test the study model, based on data collected from 118 internal auditors of companies listed on the Amman Stock Exchange. The main results indicate that internal auditors' psychological capital positively influences their creative performance, indirectly enhancing the degree of internal control efficiency in achieving targets related to financial reporting, operations, and compliance. This study offers empirical evidence on the psychological capital value as an enabler to engage in creative performance and support the perpetual endeavours of those charged with governance to boost internal control efficiency. Also, the findings highlight the importance of providing internal auditors with the required resources and facilities to enhance their psychological capital and performance.

**Keywords:** Internal Auditors, Psychological Capital, Creative Performance, Internal Control Efficiency, Targets Achievement

### Introduction

The early years' world financial scandals of this century have put more pressure on companies to sustain robust internal control that improves financial reporting integrity and transparency (Braithwaite, 2020; Gramling and Schneider, 2018), therefore meeting the interested parties' needs and expectations (Mnif and Znazen, 2020). Internal control is a comprehensive concept that involves the whole range of procedures, methods, and controls established by a company to increase the likelihood of achieving its business goals (Khelil and Khelif, 2021; Canonico *et al.*, 2015; Yin *et al.*, 2020). It also helps ensure a reliable presentation of financial information according to the applicable professional standards and regulations (Oussii and Taktak, 2018). Jordanian Corporate Governance Codes oblige banks, private limited liability and non-listed public shareholding companies, and listed shareholding companies to implement and maintain internal control (Cigna *et al.*, 2017). However, it has been argued that the mere

existence of internal control does not necessarily contribute to achieving business goals and excellence, and the focus should be on its efficiency and effectiveness as the main success generators (Hunziker, 2017). The internal audit function is responsible to independently report on the internal controls' effectiveness and efficiency to the governance parties with advice about the areas that need improvements (COSO, 2013). The internal audit is a vital controlling and consulting provider of a company (Kotb *et al.*, 2020). Its controlling role is seen as a governance 'watchdog' (Roussy, 2013), and a 'constructive critic' in its consulting role (Lakovic *et al.*, 2016). By playing these roles, the internal audit function can significantly help internal control to increase its degree of targets achievement as part of internal control efficiency, that is, by discovering the deficiencies, analysing the cause, and proposing a solution to overcome them (Kilic *et al.*, 2020; Lakovic *et al.*, 2016; Roussy, 2013). Internal control targets that the current study focuses on are related to financial reporting, operations, and compliance (Hunziker, 2017). However, business trends are changing rapidly (Kennerley *et al.*, 2003), and no guarantee that what currently represents internal auditors' ideal practice will lead to success in the future (Chambers and McDonald, 2013). Also, there is a renewed need to deliver objective analysis by internal auditors that those charged with governance can rely upon to enhance companies control mechanisms and smooth the process of overseeing or formulating corrective actions (Nicholson, 2019). Therefore, internal auditors should be responsive and adaptable to any change in the business environment to provide an objective analysis and appropriately report on the efficiency and effectiveness of internal control to support the entire corporate governance process in general and help internal control in targets achievement in particular (Oussii and Taktak, 2018). Creativity or Creative performance can be an enabler for internal auditors to improve their responsiveness and adaptability to changes and, therefore, strengthen their role in the corporate governance system (Ndou *et al.*, 2019; Reiter-Palmon and Kaufman, 2018). Creative performance is defined as the process of generating "insights, problem solutions, and ideas that are novel and potentially useful" (De Dreu *et al.*, 2012, p. 218). This process requires internal auditors to think unconventionally and challenge the existing circumstances within the framework of related professional standards and regulations, along with an organisational motivation to adopt novel ideas or solutions (Said-Metwaly *et al.*, 2017, Zain *et al.*, 2019). It also demands an internal auditor challenges firmly held practices and reframing cognitive models about how specific problem should be solved within the framework of the applicable standards and regulations (Madrid and Patterson, 2018; Said-Metwaly *et al.*, 2017, Sawitri and Mayasari, 2017). Previous studies indicated that creative performance is affected by employees' psychological capital because generating novel ideas or practical problems solutions relies mainly on individual employee or team efforts rather than on organisations (Gupta, 2014; Li *et al.*, 2019; Obeng *et al.*, 2021; Sweetman *et al.*, 2011; Yu *et al.*, 2019; Ziyae, 2015). Psychological capital is an employee's positive psychological status of development that involves four dimensions: self-efficacy, optimism, hope, and resilience (Luthans *et al.*, 2007; Ribeiro *et al.*, 2021). That is, (1) having confidence (self-efficacy) in challenging and making the required effort to excel in complicated tasks. (2) formulating positive expectations (optimism) about excelling now and in the future. (3) persistent toward goals and, when needed, readdressing directions to goals (hope) in order to excel, and (4) facing problems and adversities by bearing, undoing back, and reattempt (resilience) to achieve success (Luthans *et al.*, 2007). Accordingly, the current study attempts to contribute to the literature by:

- examining the influence of internal auditors' psychological capital (how you are) on their creative performance and,

- examining the total effect of such interaction on the degree of internal control targets achievement.

The remainder of this research after the introduction is organised as follows. Section 2 presents the literature review and hypotheses formulation. Next, section 3 introduces the research methodology. Section 4 shows the results. The final section discusses the results, concludes the research, discloses the limitations, and provides directions for future studies.

## Literature Review and Hypotheses Formulation

### Psychological capital and Creative Performance

Creative performance is related to producing new useful ideas and novel problem-solutions (De Dreu *et al.*, 2012). It entails behaviours wherein one's creative potential is expressed (Sweetman *et al.*, 2011). There is a growing interest in creative performance research with many published articles. Previous studies indicated that creative performance is a driver of innovation within companies (Sawitri and Mayasari, 2017), which is one of the companies success tools, and a lack of innovation thereby can significantly affect an enterprise's productivity (Aloini *et al.*, 2015; Ndou *et al.*, 2019; Obeng *et al.*, 2021). Researchers have empirically shown the value of creative performance for the companies' operation efficiency and effectiveness (Gupta, 2014; Li *et al.*, 2019; Obeng *et al.*, 2021; Sweetman *et al.*, 2011; Yu *et al.*, 2019; Ziyae, 2015). Several reasons are encouraging creative performance within the internal audit function. For instance, to help prevent and identify fraud in the rapidly changing business environment, the need for quick and efficient and more responsive auditing, to improve the root-cause analysis, providing practical problem solving, and formulation of practical guidelines to help management in improving performance and effectiveness of the company's operations (Gerstein and Friedman, 2017; Powell *et al.*, 2020). An enriched understanding of internal auditors psychological capital effect on creative performance will influence developing and maintaining creativity in companies (Lupşa *et al.*, 2020; Sweetman *et al.*, 2011). Psychological capital is described as "an individual's positive psychological state of development and is characterised by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success" (Luthans *et al.*, 2007, p. 3). Sweetman *et al.* (2011, p. 6) stated that creative performance "itself may be a high-risk activity because the generation of novel and useful ideas often fails". Internal auditors with high self-efficacy believe in their skills and are more likely to engage in risky and challenging tasks (Chakraborty *et al.*, 2018; Sawitri and Mayasari, 2017), such as involvement in creative activities (Sweetman *et al.*, 2011). In other words, greater self-efficacy scores are associated with augmented creative performance (Kim *et al.*, 2017; Tierney and Farmer, 2002). Moreover, efficacious internal auditors are most likely to deal with challenging tasks as activities to be mastered. In this manner, enthusiasm is increased, and creative paths to the problem-solving process are opened (Khelil *et al.*, 2018). Internal auditors with a high degree of hope, on the other hand, are most likely to be self-directed capacities to set and achieve objectives in such a manner that they remain motivated in the entire process (Ghafoor and Haar, 2021). They also have strong willpower in creating alternate mechanisms and integrate the generated mechanisms into creative mental tactics for problem-solving. Hopeful internal auditors can be described as independent and strongly



autonomous thinkers (Luthans *et al.*, 2007). This can lead to creative practice to achieve goals encouraged by resourcefulness and unconventional thinking. Hopeful internal auditors also can cope with day-to-day challenges more easily, and encountering a sticky situation may also become a motivator for finding a creative solution (Purwanto *et al.*, 2021). Optimists are defined by Carver and Scheier (2002) as “people who expect good things to happen to them” (cited in Kim *et al.*, 2017, p. 6). Therefore, optimistic internal auditors anticipate generating positive outcomes, leading to substantial cognitive and behavioural attitude to explore new avenues for creative problem-solving (Broad and Luthans, 2020). Optimists detach themselves from an undesirable lifestyle due to an optimistic reasoning style and are less likely to be disturbed by negative emotions. Nevertheless, for optimism to be operational, it is essential to be realistic (Snyder and Lopez, 2001). Resilience is defined “as a positive bounce-back reaction to either an adverse or eustressful event” (Luthans 2002, p. 702). The ability to positively adapt and step back to significant change and challenge is the core of this definition. Creative performance requires resilient internal auditors to step beyond the obstacles and challenges embedded in the creative performance routes and to react to the changing and dynamic environments in general (Li *et al.*, 2019). Thus, resilience might offer the necessary mechanism for staying strong in times of challenge with the need for creative problem-solving (Kim *et al.*, 2017). According to the above discussion, the current study formulates the following hypotheses.

**H1:** *Psychological capital has a positive influence on internal auditors creative performance.*

**H1a:** *Self-efficacy positively influences internal auditors creative performance.*

**H1b:** *Optimism positively influences internal auditors creative performance.*

**H1c:** *Hope positively influences internal auditors creative performance.*

**H1d:** *Resilience positively influences internal auditors creative performance.*

### **Psychological Capital, Creative Performance, and Internal Control Efficiency**

Companies managements are interested in boosting internal control efficiency (Wang *et al.*, 2021). Internal control is defined as “a broad concept that covers the entire range of procedures, methods and controls established by an organisation for the purpose of increasing the probability to achieve its business goals” (Hunziker, 2017, p. 400). Internal control efficiency is a wide-ranging model consisting of five dimensions: the degree of targets achievement, coordination efficiency, organisational flexibility, resources realism, and input-output ratio. It is about performing the tasks right and is directly connected to economic aims (Oberg *et al.*, 2017; Hunziker, 2017). The degree of internal control targets achievement is a measurable term connected to targets concerning financial reporting, operations, and compliance (Sweetman *et al.*, 2011). Previous studies indicated that internal control efficiency, including the degree of targets achievement, is affected by the tasks’ complexity (COSO, 2013; Donaldson, 2001; Doyle *et al.*, 2007; Jokipii, 2010; Pfister, 2009). Complexity in basic business techniques and tasks could create uncertainty and outrageous demands (Donaldson, 2001). In specific, lowered internal control complexity positively influences the efficient implementation of internal control actions and increase the degree of targets achievement (Doyle *et al.*, 2007). Pfister (2009) presented complexity as a driving factor of negative control effectiveness. Pfister (2009, p. 101) also add that “Complexity in structures, systems, regulations, and tasks can make internal control so complicated that individuals and groups are not able to design and execute controls properly. These failures often relate to a lack of an overall control concept in which risks are addressed and how controls relate to one another is clearly defined”. The current study expects internal auditors’ creative performance

to mitigate the complexity facing internal control through their creative evaluation and feedback of its effectiveness and efficiency (COSO, 2013). Also, creative internal auditors can reduce the complexity of internal control tasks by providing consultations and creative paths to discover the deficiencies, analysing the cause, and proposing a solution to execute controls appropriately, which in turn will increase the degree of internal control targets achievement (Lakovic *et al.*, 2016; Roussy, 2013). The current study proposes earlier that psychological capital will have a positive influence on internal auditors creative performance. More specifically, internal auditors with positive psychological capital are more likely to engage in risky and challenging tasks and generate more creative paths to the problem-solving process (Sweetman *et al.*, 2011). Furthermore, internal auditors with positive psychological capital have strong willpower to create alternate mechanisms and adequately deal with complexity. The present study anticipates that psychological capital will impact the internal control degree of targets achievement via internal auditors' creative performance. According to the above argument, the current study proposes the following hypotheses.

**H2:** *Internal auditors creative performance positively influences the internal control achievement of targets related to financial reporting (H2a), operations (H2b), and compliance (H2c).*

**H3:** *Self-efficacy through internal auditors creative performance, positively influences the internal control achievement of targets related to financial reporting (H3a), operations (H3b), and compliance (H3c).*

**H4:** *Optimism through internal auditors creative performance, positively influences the internal control achievement of targets related to financial reporting (H4a), operations (H4b), and compliance (H4c).*

**H5:** *Hope through internal auditors creative performance, positively influences the internal control achievement of targets related to financial reporting (H5a), operations (H5b), and compliance (H5c).*

**H6:** *Resilience through internal auditors creative performance, positively influences the internal control achievement of targets related to financial reporting (H6a), operations (H6b), and compliance (H6c).*

## **Research Methodology**

### **Data Collection Method**

Data was collected using a questionnaire survey. Two hundred questionnaires were distributed to internal auditors of companies listed on the Amman Stock Exchange in Jordan. One hundred eighteen usable for analysis questionnaires were returned, representing a response rate of 59%. Psychological Capital Questionnaire (PCQ) 24-item is used to measure the internal auditors' psychological capital. This questionnaire has undergone extensive psychometric evaluation and validation based on samples representing different business sectors. Each of the four psychological capital dimensions (i.e. self-efficacy, optimism, hope, and resilience) is measured by six items rated on a Likert scale. Permission and a copy of the questionnaire for research purposes are obtained for free from [www.mindgarden.com](http://www.mindgarden.com). Creative performance is measured by six items from Karatepe *et al* (2019) for manager assessment of employee creative performance rated on the Likert scale. Following Reiter-Palmon *et al* (2012), items were slightly rephrased as self-assessment, as opposed to manager assessment (e.g., *This employee carries out his/her routine tasks in ways that are resourceful* was changed to *I carry out my routine tasks in ways that are resourceful*). Internal control efficiency consists of five constructs: the degree of targets achievement, coordination

efficiency, organisational flexibility, resources realism, and input-output ratio (Hunziker, 2017). The current study focuses on the degree of targets achievement construct. According to Hunziker (2017), the degree of targets achievement can be represented by three latent variables reflecting different internal control objectives (i.e. targets related to financial reporting, operations, and compliance). Each of the targets achievement constructs is measured by four indicators rated on a Likert scale.

### Data Analysis

The present study used partial least squares structural equation modelling (PLS-SEM) to analyse the data. The PLS-SEM technique analyses the data of the paths model via two stages. In the first stage, it evaluates the measurement model to ensure its reliability and validity. The second stage examines the structural model to test the hypotheses (Hair *et al.*, 2017). Figure 1 presents the measurement and structural construction of the study model. The measurement model is represented by the multiple items measuring the latent variables. On the other hand, the structural model is shaped by the paths demonstrating the study hypotheses (see Figure 1). As stated earlier, the main hypotheses of the present study expect (1) Psychological capital to positively influence internal auditors creative performance, (2) Internal auditors creative performance to have a positive influence on the degree of internal control targets achievement, and (3) Psychological capital to have a positive influence on the degree of internal control targets achievement through internal auditors creative performance.

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**Please insert Figure 1: the study model**  
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### Results

#### Measurement Model Assessment

The current study employs Cronbach's Alpha and Composite Reliability (CR) benchmarks to assess constructs' internal consistency reliability (Cronbach, 1951; Hair *et al.*, 2017). Table I indicates that composite reliability and Cronbach's alpha values for all latent variables are higher than 0.7 and, therefore, within the acceptable range (Hair *et al.*, 2017). The validity, on the other hand, is examined using convergent validity criteria. Convergent validity is established when a group of indicators well represent a latent variable. In this regard, each latent variable's average variance extracted (AVE) value should be above 0.5 (Esposito Vinzi *et al.*, 2010). Table I shows that all the present study latent variables can explain more than 0.5 of their indicators' average variance.

Moreover, the indicators loadings on their latent variables were examined to ensure reliability at the indicator level. An item loading on its construct (latent variable) should be equal to or higher than 0.7 (Hair *et al.*, 2017). Table I indicates that indicators loadings on the related latent variables are above 0.7. Discriminant validity criterion (cross-loadings) was used to check that each latent variable exclusively captures signs that other latent variables not representing in the model (Henseler and Chin, 2010). Indicator loading on its latent variable should be higher than all its loadings on other constructs, in which loadings on non-related constructs (i.e. cross-loading) should be smaller than 0.4 (Hair *et al.*, 2013). In the present study, each indicator's cross-loadings are lesser than 0.4. Discriminant validity is further examined by comparing the square root of AVE of each construct with correlations with all other latent variables. The square root of each latent variable's AVE value should be higher than the correlations with other constructs (Hair *et al.*, 2017). These conditions were met,

and consequently, the discriminant validity requirements for the present study are fulfilled. Additionally, the variance inflation factor (VIF) criterion was used to assess collinearity among predictor constructs. An acceptable value of VIF should range between 0.2 and 5.00 (Hair *et al.*, 2017; Henseler *et al.*, 2009). The model assessment results indicated that VIF values are acceptable, and collinearity is not a concern in the present study.

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**Please insert Table I:** measurement model reliability and validity  
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R-squared values are inspected to assess the study model's predictive power. It also shows the total variance in the endogenous constructs that exogenous constructs can explain. R-squared's value ranges from 0.00 to 1.00, in which a value closer to 1 indicates a greater predictive power (Esposito Vinzi *et al.*, 2010). Hair *et al.* (2017) suggested that R-squared values of 0.75 and above, between 0.25 and 0.75, equal to or below 0.25 to be considered strong, moderate, and weak predictive power, respectively. In the current study, R-squared values for endogenous constructs CP, TRF, TOP, and TCO were 0.790, 0.558, 0.642, and 0.706, respectively. These results suggest a moderate to a strong predictive power of the study model.

### **Structural Model Assessment**

The study relationships' positivity or negativity, significance, and strength are assessed based on the paths coefficients. Path coefficient ranges from -1 to +1, whereas a value less than zero represents a negative relationship, and a value more than zero refers to a positive relationship. Hence, the strength of the relationship increases as the path coefficient value departure away from zero. The t-value of each path coefficient indicates its significance. That is, t-values higher than 1.65, 1.96, and 2.57 indicate a path significance at  $P < 0.10$ , 0.05, and 0.01, respectively (Hair *et al.*, 2017; Hair *et al.*, 2013; Vinzi *et al.*, 2010). The structural model assessment results in Table II show that H1 is supported, indicating a positive influence of internal auditors psychological capital on their creative performance. More specifically, H1a, H1b, H1c, and H1d are supported according to paths coefficients of 0.490, 0.540, 0.350, and 0.645 with associated t-values of 10.620, 12.595, 6.477, and 10.739, respectively, that are significant at  $P < 0.01$ . These results imply that the psychological capital dimensions of self-efficacy, optimism, hope, and resilience positively influence internal auditors creative performance. Similarly, H2 is supported, signifying a positive influence of internal auditors creative performance on the internal control degree of targets achievement. Particularly, H2a, H2b, and H2c are supported based on significant paths at  $P < 0.01$  with coefficients of 0.789, 0.449, and 0.424 with t-values of 17.680, 16.071, and 8.650, respectively. These outcomes suggest that internal auditors creative performance positively influences the internal control achievement of targets related to financial reporting, operations, and compliance.

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**Please insert Table II:** structural model assessment results (A)  
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Specific indirect effects values produced by PLS-SEM are used to assess the data's supportiveness of the 12 sub-hypotheses that proposing an indirect influence of psychological capital dimensions on internal control targets achievement variables through internal auditors creative performance. Table III shows that the specific indirect effects are significant



for all of the twelve sub-hypotheses. More specifically, H3a, H3b, and H3c (SE → CP → TRF, TOP, and TCO) are supported by significant paths coefficients of 0.530, 0.467, and 0.402, respectively. These results indicate a positive influence of internal auditors' self-efficacy on internal control achievement of targets related to financial reporting, operations, and compliance, via creative performance. H4a, H4b, and H4c (OP → CP → TRF, TOP, and TCO) proposed that internal auditors' degree of optimism will influence, via creative performance, the internal control achievement of targets related to financial reporting, operations, and compliance. Significant paths coefficients also supported these hypotheses (see Table III). Likewise, the results in Table III show support for H5a,b, and c (HO → CP → TRF, TOP, and TCO), as well as H6 (RE → CP → TRF, TOP, and TCO), suggesting a positive influence of internal auditors' degrees of hope and resilience on internal control achievement of targets related to financial reporting, operations, and compliance, mediated by internal auditors creative performance.

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**Please insert Table III: structural model assessment results (B)**  
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### Discussion and Conclusion

This study aimed at examining: (1) the effect of internal auditors psychological capital dimensions (i.e. Self-efficacy, Optimism, Hope, and Resilience) on their creative performance, (2) the influence of internal auditors creative performance upon the internal control achievement degree of targets related to financial reporting, operations, and compliance, and (3) the effect of each of the psychological capital dimensions via internal auditors creative performance on the internal control achievement degree of each of its targets (i.e. targets related to financial reporting, operations, and compliance). The results support all of the present study hypotheses. More specifically, each of the psychological capital elements associated positively with the internal auditors' creative performance. Also, the predictive power analysis showed that psychological capital dimensions predict a high percentage of creative performance. Amongst the psychological capital dimensions, resilience has the most strong positive influence on creative performance. This result can be justifiable since resilience enables internal auditors to unleash their human capability's latent strength and achieve success through their creative performance. Also, resilience is built upon cumulative experiences and positive bounce-back reactions to unfavourable outcomes, allowing internal auditors to positively move beyond classical performance and progress towards constructive deviation and creative performance. The second-ranked influential dimension of psychological capital towards creative performance is self-efficacy. This result suggests that creative performance is not just about the possession of matchless skills; instead, the skills should be associated with self-efficacy and positive beliefs regarding what can be accomplished with those skills (Sweetman *et al.*, 2011). The results also indicate that the optimistic and hope dimension can be viewed as drivers for creative performance. These results can be justified by considering the optimistic individuals' expectations about the future that it will be prosperous and successful either by others' behaviour or their own behaviour. Therefore, optimists are more able to incur risk and explore new paths for creative problem-solving. On the other hand, the hopeful individuals believe in and rely upon their own potential, which ensures that they remain motivated for working creatively to achieve a successful and satisfying future. These results align with one of Thomas Edison famous sayings: "*genius is one percent inspiration and ninety-nine percent perspiration*" (cited in

Sweetman *et al.*, 2011, p. 4). Edison succeeded in making a major lighting breakthrough from a carbonised cotton thread after several times of failures. That is, Edison's creative performance (i.e. "genius") resulted from much diligence and hard work (i.e., "perspiration"), characteristics as significant to attaining creative outputs today. Concerning the revealed positive influence of internal auditors creative performance on the internal control achievement degree of targets related to financial reporting, operations, and compliance. This result is also reasonable as the related professional standards require the internal audit function to evaluate the internal controls' effectiveness and efficiency with advice and consultations about the areas that need improvements. By doing this, creative internal auditors can provide internal control with creative pathways that help discover the deficiencies, analyse the cause, and draw a solution to execute controls appropriately, which will increase the degree of internal control targets achievement (Hunziker, 2017). Thus, it can be judged that internal auditors creative performance is among the crucial factors that lead to a high degree of internal control targets achievement, and internal auditors should be empowered to approach creativity in performing their work. Moreover, the results showed a positive influence of each of the psychological capital dimensions via internal auditors creative performance on the internal control achievement degree of targets related to financial reporting, operations, and compliance. This indirect effect can be justified and grasped by the logical confirmed direct influence of internal auditors psychological capital on their creative performance and the justified direct relationship between internal auditors' creative performance and internal control degree of targets achievement.

The general conclusion is that the internal auditors' psychological capital positively influences their creative performance, which would improve internal control efficiency. The current study provides insights for auditees different departments, those charged with governance, internal audit function, and Chief Internal Audit Executives concerning the positive role of psychological capital in boosting the creative performance and enhancing the internal control efficiency related to targets achievement. This highlights the need to provide internal auditors with the required resources and facilities that enhance their psychological capital and performance. The present study results could be of interest to those working on constructing a theory related to establishing comprehensive multidimensional measures for assessing creative performance and internal control degree of targets achievement. Even though the current study provided a valuable contribution to the existing literature, it has some limitations that could lead to novel future research directions. Whilst theoretical supports were presented for the associations between psychological capital, creative performance, and internal control degree of targets achievement at the stage of hypotheses formulation, the empirical examination was based on several not directly observable latent variables. That is, the present study focused on the influence of each component of psychological capital and internal control degree of targets achievement. Thus, future studies can combine the latent variable into second-order constructs and evaluate the overall interactions and effects. Future research, for an in-depth test of the study relationships, can also examine the influence of each of the latent variables components based on the linkage of the current study. The study model was tested based on data collected from 118 internal auditors of Jordanian companies listed on the Amman Stock Exchange. In fact, there are aspects of the Jordanian business environment that are very similar to what exists in some other developing countries, and the study results may be generalisable to some extent within this context. Thus, what should be considered is the extent to which the study results can be generalised beyond Jordan borders to developed countries. Future research can examine the study model within

developed countries and provide comparable results to what has been generated in the present study.

This study could be of interest to different parties for development and excellence purposes, such as those charged with governance, internal audit function, and Chief Internal Audit Executives, who could gain a deep understanding of the internal auditors' psychological capital effect on creativity and efficiency. Moreover, companies managements are perpetually interested in boosting internal control efficiency. In this regard, internal auditors can contribute to achieving this interest through a creative evaluation of internal control. This study offers empirical evidence on the influence of internal auditors' psychological capital upon their creative performance and the indirect effect on internal control efficiency related to the degree of targets achievement. It also offers insights into the value of psychological capital dimensions (i.e. self-efficacy, optimism, hope, and resilience) as enablers for internal auditors to engage in creative performance and enhance internal control efficiency.

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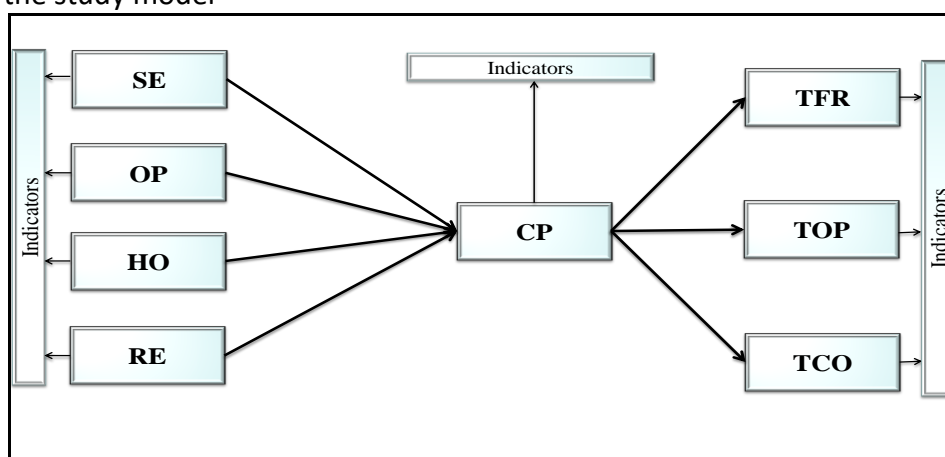
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Figure 1: the study model



Note: SE = self-efficacy; OP = optimism; HO = hope; RE = resilience; CP = creative performance; TFR = achievement of targets related to financial reporting; TOP = achievement of targets related to operations; TCO = achievement of targets related to compliance.

Table I

*Measurement model reliability and validity*

Constructs and Indicators	Lo ad in g	A l p h a	C R	A V E
<b>Self-Efficacy (SE)</b>		<b>0.816</b>	<b>0.819</b>	<b>0.663</b>
SE1	0.740			
SE2	0.919			
SE3	0.858			
SE4	0.735			
SE5	0.755			
SE6	0.795			
<b>Optimism (OP)</b>		<b>0.836</b>	<b>0.832</b>	<b>0.698</b>
OP1	0.857			
OP2	0.794			
OP3	0.808			
OP4	0.786			
OP5	0.894			
OP6	0.719			
<b>Hope (HO)</b>		<b>0.901</b>	<b>0.924</b>	<b>0.675</b>
HO1	0.784			
HO2	0.802			
HO3	0.898			
HO4	0.907			
HO5	0.940			
HO6	0.733			
<b>Resilience (RE)</b>		<b>0.828</b>	<b>0.794</b>	<b>0.589</b>
RE1	0.795			
RE2	0.755			
RE3	0.829			
RE4	0.914			
RE5	0.796			
RE6	0.764			
<b>Creative Performance (CP)</b>		<b>0.784</b>	<b>0.804</b>	<b>0.592</b>
CP1	0.702			
CP2	0.710			
CP3	0.834			
CP4	0.783			
CP5	0.840			
CP6	0.905			
<b>Targets Related to Financial Reporting (TFR)</b>		<b>0.750</b>	<b>0.833</b>	<b>0.565</b>
TFR1	0.859			
TFR2	0.811			
TFR3	0.722			

TFR4	0.754			
<b>Targets Related to Operations (TOP)</b>		<b>0.838</b>	<b>0.855</b>	<b>0.642</b>
TOP1	0.914			
TOP2	0.924			
TOP3	0.930			
TOP4	0.903			
<b>Targets Related to Compliance (TCO)</b>		<b>0.735</b>	<b>0.898</b>	<b>0.516</b>
TCO1	0.744			
TCO2	0.815			
TCO3	0.822			
TCO4	0.780			

Table II

*Structural model assessment results (A)*

Hypothesis	Path	Path coefficient	T-value	P-value	H supported?
H1a	SE → CP	0.540	12.595	0.000	Yes
H1b	OP → CP	0.490	10.620	0.000	Yes
H1c	HO → CP	0.350	6.477	0.020	Yes
H1d	RE → CP	0.645	10.739	0.000	Yes
H2a	CP → TRF	0.789	17.680	0.000	Yes
H2b	CP → TOP	0.449	16.071	0.000	Yes
H2c	CP → TCO	0.424	8.650	0.000	Yes

Note: SE = self-efficacy; OP = optimism; HO = hope; RE = resilience; CP = creative performance; TFR = achievement of targets related to financial reporting; TOP = achievement of targets related to operations; TCO = achievement of targets related to compliance.

Table III

*Structural model assessment results (B)*

Hypothesis	Path	Path coefficient	T-value	P-value	H supported?
H3a	SE → CP → TRF	0.530	11.314	0.000	Yes
H3b	SE → CP → TOP	0.467	11.253	0.000	Yes
H3c	SE → CP → TCO	0.402	8.513	0.000	Yes
H4a	OP → CP → TRF	0.481	9.594	0.000	Yes
H4b	OP → CP → TOP	0.500	14.560	0.000	Yes
H4c	OP → CP → TCO	0.561	13.245	0.000	Yes
H5a	HO → CP → TRF	0.382	7.86	0.000	Yes
H5b	HO → CP → TOP	0.389	7.267	0.000	Yes
H5c	HO → CP → TCO	0.439	10.326	0.000	Yes
H6a	RE → CP → TRF	0.605	14.734	0.000	Yes
H6b	RE → CP → TOP	0.618	18.211	0.000	Yes
H6c	RE → CP → TCO	0.704	15.480	0.000	Yes

Note: SE = self-efficacy; OP = optimism; HO = hope; RE = resilience; CP = creative performance; TFR = achievement of targets related to financial reporting; TOP = achievement of targets related to operations; TCO = achievement of targets related to compliance.